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Zayandehrud River Speaks Reading the Riverine Landscapes of Seventeenth-Century Isfahan

Sahar Hosseini

University of Wisconsin-Milwaukee

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ZAYANDEHRUD RIVER SPEAKS
READING THE RIVERINE LANDSCAPES OF SEVENTEENTH-CENTURY ISFAHAN

by
Sahar Hosseini

A Dissertation Submitted in
Partial Fulfilment of the
Requirement for the Degree of

Doctor of Philosophy
in Architecture

at

The University of Wisconsin-Milwaukee
May 2018
ABSTRACT

by
Sahar Hosseini

The University of Wisconsin-Milwaukee, 2018
Under the Supervision of Professor Manu Sobti

Along with London, Rome, Paris, Istanbul, St. Petersburg, Beijing and other celebrated cities that dotted the landscape of early modern world, 17th-century Isfahān has been acknowledged for its impressive urbanity. As such, numerous books and articles have attempted to unravel its rich history. However, scholarship on 17th-century Isfahān has often framed the city within the narrative of grand architectural projects that were inspired by one man’s political ambitions, and realized by powerful individuals. Because of this explicit focus on human agency, the architectural narrative of Isfahān has often overlooked the significance of the city’s distinct natural setting, and its effect on the form, direction, and nature of urban development.

In this dissertation, I look at the urban landscape of Isfahān in light of the intertwined agency of man and nature. I argue that given the topographical conditions and dry and harsh climate of the Persian Plateau, 17th-century Isfahān developed in a way that reflected its essential and multi-dimensional relationship with the nearby Zāyandihrūd River. Indeed, as the major source of water, it was the river and the network of hydraulic infrastructures associated with it that facilitated the fabrication of the verdant suburbs of Isfahān and instigated its unprecedented southward development during this period. This southward physical development, in turn, inspired further integration of the city and the river: Physical interventions created new platforms for social engagement with the river around which old rituals were revived and new ones were invented,
thereby causing the river to become further intertwined with the royal and public life of the city. Consequently, I maintain that the significance of the river far surpassed its status as a mere source of water. In effect, the river and its associated infrastructures offered new sites of royal display, public leisure, and social interaction for the cosmopolitan public of the city.

This highly fabricated and closely managed landscape of new developments in 17th-century Isfahān was more than a sponsored architectural project intended to symbolize the political and ideological aim of its patron. Neither should these developments be considered the natural response to environmental conditions of the area. Rather, what came to architectural fruition in 17th-century Isfahān was inspired by the cultural conception of the water and verdure in the mind of the public and new elites of the city, who prompted a physical and cultural dialogue with the Zāyandihrūd River.
To Rahi ....
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TIMELINE FOR SAFAVID MONARCHS

Shāh Ismā‘il (1501-1524)  Capital in Tabrīz

Shāh Tahmasb (1524-1576)  Capital in Tabrīz and later Qazwīn

Shāh Abbās I (1587-1629)  Capital in Qazwīn (Shortly) in 1598 began the construction of his capital in Isfahān

Shāh Safī I (1629-1642)  Capital in Isfahān

Shāh Abbās II (1642-1666)  Capital in Isfahān

Shāh Suliymān (1666-1694)  Capital in Isfahān

Soltan Husiyn (1694-1722)  Capital in Isfahān
## TRANSLITERATION

For transliteration of Persian and Arabic words I am using the Encyclopedia Islamica’s System of Transliteration of Arabic and Persian Characters:

<table>
<thead>
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<th>Consonants</th>
<th>Short Vowels</th>
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<td>ء ʾء</td>
<td>z k ـ a</td>
</tr>
<tr>
<td>ب b ب</td>
<td>zh g ـ u</td>
</tr>
<tr>
<td>پ p پ</td>
<td>s l ـ i</td>
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<td>ت t ت</td>
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<td>ث th ث</td>
<td>ص š n</td>
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<tr>
<td>ج j ج</td>
<td>ض d ه ای ā</td>
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<tr>
<td>چ ch چ</td>
<td>ط ـ w و ū</td>
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<td>ح h ح</td>
<td>ظ z ـ y ی</td>
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<td>خ kh خ</td>
<td>غ gh</td>
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<td>د d د</td>
<td>ف f نو aw</td>
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<td>ذ dh ذ</td>
<td>ق q یٰ ay</td>
</tr>
<tr>
<td>ر r ر</td>
<td>ة a; at (construct state)</td>
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<td>ال al- ال</td>
<td>(article)</td>
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ACKNOWLEDGMENTS

Throughout the course of my PhD I have acquired many educational, intellectual, and professional debts. Consequently, it would be impossible to thank all the people who have assisted me navigate this journey. The first in the long list of my thank-yous is to my advisor Manu Sobti. It was during our lengthy conversations about the Oxus River that I developed an interest in rivers. He has never stopped inspiring and pushing me to think big and bridge connections between multiple disciplines. Without his advice and support this dissertation could not have reached fruition.

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into the socio-cultural life of communities, but also his care and mentorship has been an invaluable resource throughout my years in the graduate school. Additionally, I gratefully acknowledge the friendship and assistance of the buildings-landscapes-cultures community at Milwaukee and Madison. I particularly cherish the friendship, continuous encouragement, and intellectual comradery of Nader Sayadi and Kate Malaya.

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including National Cartographic Center, Iran Cultural Heritage, Handcraft and Tourism Organization in Isfahan and Mazandaran, and Research Institute of Cultural Heritage and Tourism in Tehran. Special thanks to Mr. Ramezanpour and Mr. Hosseini who facilitated my research in Safavid Gardens in Farah Abad and Behshahr.

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Introduction

One of the most vital urban centers in early modern Eurasia, Isfahān, located in present-day central Iran, has long exhibited the magnificence and sophistication of grand ceremonial capitals such as Istanbul and Papal Rome. As the capital of the mighty Safavids, Isfahān has inspired the admiration of many visitors and attracted the attention of generations of scholars. Indeed, there is no shortage of impressionist passages and works on the city’s architectural monuments and treasures. From accounts of 17th-century European visitors and extending all the way to the works of contemporary scholars, attention to architectural features of Isfahān has been central to the studies that attempted to capture the importance of Isfahān in the history of Persianate, and more broadly, Islamicate world.

Though scholars have approached Isfahān from a range of perspectives, most of these studies have directed their gaze towards the grand Naghsh-i Jahān Miydān and its associated buildings, streets, and gardens. Conversely, few studies have paid attention to the natural features of the area—and, in particular, to its celebrated waterway: the Zāyandihrūd River. In fact, in narratives of Isfahān, the Zāyandihrūd has occupied only a marginal position and its many nested stories have remained relatively untold. Interestingly, such scholarly neglect contrasts sharply with generations of people who living in Isfahān or passing through it praised the wonders of the
Zāyandihrūd River. Travelers admired its life-giving quality, and poets paid tribute to its delightful water, restorative breezes, and beautiful scenery.¹ Most notable of all is the poetry of the renowned 17th-century poet, Sā’eb Tabrīzī, which gives us a fuller sense of the importance of the river in the minds and cultural memories of the 17th-century inhabitants of the city. He vividly describes the revitalizing aroma of the river in spring, its enchanting vistas, and delightful waters.² The river is so entrenched in the image and memory of Isfahān that, when feeling homesick in India, Sā’eb remembers his hometown by expressing his yearning for the Zāyandihrūd River.³

For the people living in the Persian Plateau, water has historically been both critical and scarce; as such, its availability (or lack thereof) has had direct consequences on the livelihood of its populations. Most importantly, access to sources of water has been a mandatory requirement for a productive agricultural economy. Within the arid and semi-arid landscape at the center of the plateau, whenever water has been available oases and urban enclaves has emerged. This critical role of water in the livelihood and economy of this plateau endows the Zāyandihrūd River, which represents the major source of water for the Isfahān region, with special meaning, symbolism, and

1 Specifically, several medieval Muslim geographers including Ibn-i Rustah (10th century), Ibn-i Hawqal (10th century), Hamzah Isfahāni (10th century), Māfarūkhī (9th century), Hamd Allah Mostowfi (13-14th century), and Yaqut Hemavi (12th-13th century) did mention the Zāyandihrūd River as the major waterway in the region of Isfahān, and especially noted its importance to the prosperity of the city and its surrounding villages. For more information, see Varham, Gholamreza, "Joghraphiyay-i Tarikhī Ye Zāyandihrūd." Faslnameh-Ye Tahghīghat-i Joghrāphiyyaye 17, (1369 1990/1): 124-141.

2 mishavad jān tazih az būy-i bahār-i zindihrūd / zindih Migardad del az siyr-i kenār-i zindihrūd

3 In his poem “ khoshā roozī ke manzil dar savād-i Isfahān sāzam/zi vasf-i zindih rudash khāmeh rā vasl al-lisan sāzam/nasim āsā bi gird-i sar begardam char bāghash rā / beh har shākhī ke benshīnad dil-i man āshyān sāzam” Sā’eb expresses desire to return to his hometown, and the Zāyandihrūd River and Chahārbāgh are two signature elements in Sā’eb’s recollection of the city.
critical importance—all of which had bearings for the ways this essential watercourse was imagined and treated by the people.

While the economic importance of the Zāyandihřūd cannot be overstated, whenever water has been available, inhabitants of the plateau also created streams, pools, and gardens to ameliorate the harsh weather conditions. In the always thirsty desert landscapes of the region, water has always been viewed as a precious and wonderful commodity. The use of water in gardens, pavilions, kiosks, and interior settings created spaces for meditation and repose.\(^4\) In a religious context, too, water was depicted as an integral element of heavenly delight and an essential substance for cleansing and purification. Fountains, rivers, and rain were praised as God’s benevolence towards his creatures.\(^5\)

Therefore, water found expression in various aspects of the society’s communal life, ranging from political and socio-economic relations to cultural and ritual activities. As a result of water’s pervasive influence over the centuries, study of cities and urban communities in the Persian plateau, and particularly Isfahān, calls for a re-evaluation of these issues through the lens of water. How did the people overcome the scarcity of water in the plateau? How did these people manage the little available water in a manner that enabled them to build magnificent cities such as Isfahān, which competed with splendid European or East Asian cities of the time that were not challenged by similar water shortages? How did their water management practices influence the form and

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character of their cities? How did the people’s cultural perceptions of water resources influence
the manner in which they shaped their built environment?

**Current State of Research**

In prior examinations of the city of Isfahān, most scholars have been concerned with
identifying the stages and dates of morphological transformations and directions of urban growth,
as well as the location of specific elements such as city gates, buildings, palaces and gardens.
Earlier works such as Golombek’s exploration of primary sources, or Gaube and Wirth’s fieldwork
and documentation of the urban fabric of the city, attempted to establish dates for the development
of urban fabric of Isfahān and the sequence of its growth. In a similar fashion, Mahvash Alemi
consulted historical documents—most notably sketches and descriptions of European travelers—to re-imagine the physical structure of the city and, particularly, its Safavid gardens. Together,
these scholars have made valuable contributions in helping us imagine the lost landscape of the
city. It must be noted, however, that their work has principally focused on morphological
reconstruction and formal analysis of the urban fabric.

Examining the urban fabric, or segments of it, has also been a favored pursuit for historians
of the Safavid Period—several of whom have examined urban construction projects in Isfahān in

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6 Heinz Gaube, Eugen Wirth, *Der Bazar Von Isfahān.* (Wiesbaden: Reichert, 1978) & Lisa Golombek,


terms of the vision and political motives behind them. In particular, transfer of the capital to Isfahān, and construction of the new plaza have been subjects of discussion and disagreement among scholars. One of the more contentious issues concerns the date for the transfer of the capital to Isfahān—and by association, the construction projects that transformed the city into a grand ceremonial capital.  

Galdieri, Haneda and McChensey explored various phases of Abbās I’s monumental construction campaign for its political implications. McChesney’s influential article, “Four Sources on Shāh Abbās’s Building of Isfahān,” introduced three less-explored Safavid texts that shed light on urban construction in 17th-century Isfahān. Using these sources, he criticizes prior assumptions (set out by Andre Godard) concerning the political motives behind the construction campaign in Isfahān and, instead, illustrates the social and economic inspiration that drove this growth. Haneda’s article, *Maydan et Bagh*, discredited the firmly held assumption that the Naghsh-i Jahan royal plaza was constructed based on the model of old miydān; instead, he argues for the presence of Naghsh-i Jahan garden and a miydān prior to the beginning of the grand construction campaign. Though not an architectural historian, Haneda has also illustrated the

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11 Wilber, Golombek, Gaube and Wirth all certified the assumption that new royal palace was constructed based on a pre-existing model visible in Maydan-I Kohneh of Isfahān. For critique of this assumption see Masashi Haneda,
architectural topography of 17th-century Isfahān, as well as the dual structure of its urbanism as it corresponded with the sometimes contentious relationship between old prominent Isfahāni families and Safavid notable figures and courtiers that lived in the new city. 12

Stephen Blake, on the other hand, concerned himself with what he called social architecture. Viewing the built environment from outside the realm of architecture history, Blake expressed his interest in the built environment of the city as a text, that “reflects the social system and the ways in which the system is expressed, reproduced, and experienced.”13 Despite his intent to analyze and interpret the built environment as a text, the book remains mostly descriptive with little opportunity for decoding the built environment as reflection of the social and political life of the city.14

As an art historian, Susan Babaie approached the examination of the urban fabric of Isfahān from an ideological point of view. Examining the spatial relationships and visual culture of new architectural developments in Isfahān, Babaie considers the emerging architectural language and syntax as an embodiment of the religious and political aspirations of the Safavids. While her extensive work on Isfahān, its palatial architecture, murals, and visual culture has made significant contributions to the field, her ideological reading of the urban fabric of Isfahān as the symbolic


13 (Blake 1999), p XV.

14 Despite some valuable information that Blake provides, this book remains descriptive rather than analytic and suffers from factual mistakes, misinterpretations, and some simplistic generalizations of certain information he recovers from primary sources. Specifically, in parts his loose interpretations of certain information represents a source of mistakes and inaccuracies. For a critique of this book see (Babaie 2000, 478-482).
manifestation of the Imami Shi‘i model of kingship is reductive. Specifically, her interpretation of the city as the symbolic manifestation of the theological concerns of its patrons reduces the complexity of the process of space production, leave space for acknowledging the many other elements and factors that contribute to the making of urban landscape. Nonetheless, her excellent observations, discoveries, and analysis makes her book, *Isfahān and its Palaces*, a major and critical work for any future study of 17th-century Isfahan.

A more recent work by Ali Emrani takes a different approach to the city. Here, the author looks at the streets and gardens as the structural spine of the new city, which directed the growth of the suburbs. Emrani’s examination of the Chāhārbāgh Streets (Chāhārbāgh-i Abbāsi & Chāhārbāgh-i Khājū), as well as the gardens bordering these avenues, took on a familiar and repeatedly-discussed subject. However, in rendering the process of urban growth in Isfahān, he recovers important information from less-examined primary sources to portray a more nuanced picture of the gardens that lined these streets. His novelty, in particular, lies in his approach to examining these streets—not for their architectural and experiential properties—but as infrastructural elements that facilitate urban growth and determined its direction.

In reviewing these works, besides using them as a foundation for my own research on Isfahan, I intend to suggest alternative ways for understanding and re-imagining the city. In almost

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15 This is not to undermine the scholarly depth, or in anyway discredit Babaie’s work, but to highlight the shortcomings of her framework when it comes to examining the city. For her excellent book about Isfahān and its architectural culture, see Susan Babaie, *Isfahān and its Palaces, Statecraft, Shi‘ism and the Architecture of Conviviality in Early Modern Iran*. Edinburgh Studies in Islamic Art., edited by Robert Hillenbrand. (Edinburgh: Edinburgh University Press Ltd), 2008.

all of these works, the depiction of the city is encompassed in a monumental narrative of building and construction – subject only to the will of its high-status patron/s. City inhabitants, their roles, and their experiences are often absent from these pictures, as is the natural context that determined and governed many aspects of Isfahān’s urbanity. What remains unaddressed is not limited to the impact of natural ecology on the ways that human agents shaped their built environment; human agency is also reserved for the powerful and the wealthy.¹⁷ The city, however, is a significantly more complex system. It is not a simple agglomeration of buildings; neither is it distinct from the everyday experiences of its inhabitants. Furthermore, beyond its immediate fabric, a city is interlinked with the larger natural context and resources that sustain it. To capture this multiplicity, the study of a city requires engagement with its landscape in various scales, from broadly regional to intensely human.

Furthermore, given the centrality of Miydān-i Naghsh-i Jahan in the urban life of 17th-century Isfahan, studies of the city of Isfahān have tended to privilege the famous royal plaza and its associated architectural enterprises, thus consolidating the monumental narrative of city building. Other significant city landmarks, including Chahrabagh Street and the royal gardens, have also been often examined for their aesthetic value and architectural merit. Despite frequent references to the Zāyandihṛūd River as Isfahān’s backbone and raison d’etre for the city’s existence

¹⁷ An exception to this approach is Babak Rahimi’s excellent work on early modern public sphere in Isfahān. In his book, *Theater State and the Formation of Early Modern Public Sphere in Iran: Studies on Safavid Muharram Rituals, 1590-1641 CE*, Rahimi engaged with the urban culture of Isfahān through the discourse of ritual and embodied performance. Contextualizing Muharram performances in the changing religious and political landscape of the Safavids, he offered a fresh view into the public spaces of Isfahān as sites of formation of public sphere in early modern Persia, coupled with the active role of ordinary people who participated in Muharram rituals and, through their actions, produced alternative public spaces. See: Babak Rahimi, *Theater State and the Formation of Early Modern Public Sphere in Iran: Studies on Safavid Muharram Rituals, 1590-1641 CE*. (Leiden; Boston: Brill, 2012)
and prosperity, the river, its landscape, and its interaction the city—not to mention its position in the social life of the city and collective imagination of its inhabitants—have yet to be systematically examined.

A number of essays and book chapters, all written in Farsi, have discussed some aspects of the river’s presence in the city. For example, Zahra Ahari talked about the “order of water” as a determining factor in the morphology of the city. However, the documents she employs to substantiate this claim are limited to a brief description of water channels that meander through the fabric of the city, coupled with a few illustrations documenting the configuration of water in terms of how it became incorporated into a number of public institutions. Unfortunately, she didn’t directly engage with the river. More problematic is her conceptualization of these water canals as part of what she labels as “Isfahāni Style of Urbanism.” As I illustrate in Chapter 1 & 2, the water canals of Isfahān were not unique to this location; indeed, similar agricultural infrastructures existed in many other cities across the Persian Plateau. Their direct integration into the fabric of the city of Isfahān resulted from the southward development of the city over pre-existing agricultural lands along the river. Therefore, Ahari’s analysis of the complex water-city relationship remains confined to theoretical notions and is not substantiated with sufficient historical documents and evidence.

In his book chapter, “The Gardens of Safavid Isfahān and Renaissance Italy,” Mohammad Gharipour also suggests that the growth of Isfahān towards south was based on a network of three

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19 See Chapters 1 and 2 of this dissertation
water canals that supplied water to residential neighborhoods and urban quarters. Gharipour’s observations, while interesting, tend to be lost within the larger context of his chapter, which principally provides a comparative analysis of gardens and public spaces of 17th-century Isfahān and Renaissance Italy. Unfortunately, the broader scope of his article does not leave much space to delve into details and further explore the relationship between water canals and urban growth in Isfahan.20

A more substantial work on the Zāyandihrūd River and its impact on Isfahān was carried out by Muhsin Abarī. He provides a detailed analysis of Tūmār -i Shiykh Bahāyī – an old script that documents the schedule for the distribution of water in Isfahān prior to the introduction of the modern water pipe system. Although adding to the scholarship about the Zāyandihrūd River, Abarī didn’t fully engage with the relationship between the water distribution plan and development of the city. However, his valuable work made a major contribution to the field by enhancing our understanding of the content of the Tūmār and its logic and structure – thus facilitating further examination of the ramifications that the implementation of the Tūmār had for the city.21

While the Tūmār mainly documents the water distribution plan and how it allocated water to the city, it also sheds light on the social and physical infrastructure that facilitated water distribution throughout the city and its environs. In their article, Hanjar-i mādī: Nezam Modiriyat Ab dar Isfahān-I Doreh Safavi, Ghayyumi and Mahmoudian use the Tūmār in conjunction with

20 I am grateful to Mohammad Gharipour for generously sharing the manuscript of his book chapter “The Gardens of Safavid Isfahān and Renaissance Italy” prior to its publication.

21 See Hasan Hosayni Abarī, Zayandah-Rud Az Sarchishmih Tā Murdāb, (Isfahān: Gulha, 2000), &

historical accounts to discuss the social system that facilitated the distribution of water in the city of Isfahān throughout the 17th century. Given the seasonality of the river, and critical role that this social system played in distribution of water, Ghayyumi and Mahmoudian’s valuable essay opens up new doors for discussion of water management in the city, and the impact it had on the economy, urban landscape, and private and public life in the city.

Riverine Narratives of Isfahān

Despite the critical position of the Zāyandihrūd River in the history of Isfahān, there remains a gap in the scholarly literature that begs for more current analysis of the river’s pervasive impact on the social, cultural, and economic landscapes of the city. In this dissertation, therefore, I examine the Zāyandihrūd River as a lens through which to investigate the unprecedented development of Isfahān during the 17th-century. The following questions, in particular, have guided this analysis. What distinguished 17th-century Isfahān and its riverine landscapes from both the preceding and proceeding periods? In what ways did the river contribute to the economy, the public realm, and the royal life of 17th-century Isfahān? How did the cultural perception and social conception of the river/water define the manner in which the public and urban elites imagined, planned, shaped, and used the riverine landscape of Isfahān? How did the built environment and architectural composition around the river orchestrate/facilitate interactions with it?

In light of these questions, my study of the riverine urban development of Isfahān emerges at the cross-section of architectural history, landscape history, material culture studies and environmental history. Integration of these fields with their particular methodological approaches
distinguishes this study of Isfahān, and Safavid urban history, from prior scholarship on the subject. It raises new questions, invokes fresh insights, and requires innovative methodological approaches to study these complex relationships. Therefore, I integrate theories and methodologies from different fields, ranging from landscape, geography, and anthropology, to art history and material culture studies. The possibilities offered by this interdisciplinary approach not only distinguishes my work from many previous studies that have examined Isfahān’s urbanity, but also has ramifications for the study of other pre-modern Muslim cities.

Considering the intertwined relationships between human agency, nature, and the built environment, I will, through this investigation, frame human agency and natural context as mutually influential factors. In other word, the ways in which the local inhabitants manage the river and interact with it through their built environment is not simply a response to environmental challenges and necessities. . . but neither is it distinct from their environmental conditions. A society’s knowledge, beliefs, and cultural practices and perceptions – some imported from external sources and others shaped over many centuries of human inhabitation in the region – determine its attitude towards the river. These cultural believes and practices have, in turn, been profoundly affected by environmental conditions.22 By placing the river at the center, I view the life of Safavid Isfahān as an entanglement of nature and culture through which I seek to elucidate the multifaceted role of this legendary waterway.

22 In the last decades of the 20th century, various theories from different fields have raised the issue of continuity between nature and culture, considering their divide a human construct produced in the post-enlightenment era. Various aspects of this issue is explored by scholars from different disciplines including but not limited to Brian Massumi (Parables for the Virtual: Movement, Affect, Sensation-chapters 1&9), Bruno Latour (Politics of Nature: How to Bring the Sciences into Democracy.), Philip Descola (Beyond Nature and Culture) etc.
As a trope that is integrated in economic, political, ritual, royal, and public life of the city, the river provides a rich source for a multifaceted and multi-scalar examination of urbanism in Isfahān. In employing water as the core requirement for development of any urban settlement, this described focus on the hydraulic landscape of the city allows the dissertation to move beyond the familiar (and often clichéd) stylistic and aesthetic narratives of architectural history. In effect, not only does this approach reveal aspects of urban life and development ignored in earlier research, but also adds to our understanding of the multifaceted process of urban genesis.

Multi-Scalar Study of the River-City Relationship

The major source of water in the region, the Zāyandihrūd River, deeply impacted various aspects of urbanity in Isfahān—from sustaining its agricultural economy and supporting its growth and development, to framing its public urban life. Therefore, from the regional scale all the way to the intimate human scale, the river was interwoven with the life of the inhabitants of Isfahān. It is because of this multi-dimensional relationship between the city and its river that I designed this study across various scales—each of which captures one aspect of city-river relationship in Isfahān. Specifically, on a regional scale I examine the social and physical hydraulic infrastructures that controlled the flow of the river, and the ways in which they supported the agricultural economy that sustained the landlocked city of Isfahān. On an urban scale, the focus is on the role of the Zāyandihrūd and its associated infrastructures with respect to directing/determining the morphology and social structures of 17th-century suburban developments in Isfahān. The following chapters examine yet another scale of influence—namely, the architectural layout of royal and
public institutions and how the built environment was constructed to enact certain regimes of visual and corporeal interactions with the river.

To carry out this multi-scalar examination of city-river relationship, I employ the capacity of landscape for interpreting the built environment from a variety of angles. Landscape allows me to view the city beyond a mere agglomeration of buildings. At one level, landscape enables me to study the city by imagining it as a continuum, extending well beyond city fortifications, but also interconnected with the agricultural estates that were established beyond its immediate boundaries. Furthermore, it is through an examination of landscape that I approach the city in terms of specific infrastructures that facilitated the exploitation of natural resources.23

Since the early 20th century, geographers such as Jean Brunhe and his disciple, Vidal de La Blache, advocated for the principle of “terrestrial whole,” within which human and nonhuman (animals and natural features) influenced each other and were all active in shaping the geographical phenomena of a region. This approach demands that a region’s inhabitants and the surrounding geographical features, flora, and fauna should be considered as interrelated, and, thus, studied as a whole.24 In recent years, studies such as William Cronon’s book, Nature’s Metropolis, has brought the city to the attention of environmental historians, again has increased scholarly interest on the linkages that human agency creates between a city and its broader natural context.25

23 In this area, my study is informed by recent discussions on landscape urbanism, as well as the importance of designing the city in the scale of landscape and multi-functional infrastructures vs. individual buildings.


On the other hand, within the fields such as landscape architecture and urban theory there is a growing interest in the conceptualization of the city in terms of infrastructures that facilitate its function and access to resources that lie beyond its immediate vicinity.\textsuperscript{26} Moreover, theoreticians of landscape urbanism also advocate for changing our unit of urban analysis: replacing building blocks with landscape. Because as a framework landscape facilitates greater control over large-scale urbanism, it enables the integration of natural processes, large scale infrastructural constructs, and socio-cultural processes into the study of cities—and in so doing bridges the gap between architecture and urban planning. Such an approach also equips designers and scholars with appropriate tools to address the issues that neither architecture nor urban planning is prepared to do.\textsuperscript{27}

Research on historical urban landscapes in Iran, and more broadly the region that is currently defined as the Middle East, has been very limited; moreover, what is known is scattered across diverse fields of inquiry.\textsuperscript{28} Over the past three decades, scholars have attempted to interconnect the study of gardens, city, and geography in a more cohesive way. At the forefront of

\textsuperscript{26} Planetary urbanisation theory, and in particular the works of the Harvard Urban Theory lab under the direction of Neil Brener, have explored ways to shift from examining urban form to investigating urbanization processes. Through their mapping practices they explore both political-economic and socio-environmental relations. However, the location and morphological configuration of a city and its fabric falls outside their purview. The issue of infrastructure as a means to conceptualize and design the city has also been vividly present in discussion of landscape urbanism. For an example of this discussion see Stanley Allen, "Infrastructural Urbanism" in On Landscape Urbanism, edited by Dean Almy, (Austin TX: Center for American Architecture and Design University of Texas at Austin School of Architecture, 2007).


these attempts, scholars such as Attilio Petruccioli and Fairchild Ruggles introduced and employed various capacities of landscape for studying the region’s built environment. Ruggles’s innovation lies in exploring the interpretive capacity of landscape and employing it to bridge between various fields—from agriculture to critical theory, and art and architecture history. Petruccioli, on the other hand, has been instrumental in introducing mapping and other graphic techniques for examining, analyzing, and interpreting regional urban landscapes.

In the 1970s, geographers and anthropologists have also shown interest in exploring the cities of the Persian Plateau and their complex territorial relationships with water. Among them, Michael Bonine paid particular attention to the relationship between water systems and the morphology of Iranian cities such as Yazd. Unfortunately, the 1979 revolution and the difficulties of conducting fieldwork in Iran hindered the attempts of Bonine and other scholars to continue their work in Iran. Three decades later, in his book, “Iranian Cities : Formation and Development”,

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29 Wescoat, "Between Garden and Geography," 31-34.


31 As Wescoat has identified, early on in his scholarship Petruccioli explored the power of exploded axonometric and annotated maps as methods to interpret and present his fieldworks on the site. Wescoat, "Between Garden and Geography," 32.

Masoud Kheirābādi also viewed the local water system as a major factor influencing the morphology of cities in the Central Persian Plateau.³³

In Isfahān, where the very existence of the city was intertwined with water, agriculture was only one domain where water played a major role. Incarnated as fountains, cascades, and streams, water also adorned public and private spaces of the city of Isfahān. The banks of the river and the river itself hosted various public and private leisure activities of the court and the public. This spatial and corporeal relationship with water, mediated through the emerging built environment, offers critical insights into the position and treatment of the river in both the everyday and ceremonial lives of the city. In this scale, I zoom into the scale of architecture and human body to examine spatial relationships, space production, and embodied experience of various groups who inhabit the space.

By overcoming the longstanding limitations of architectural discourse and its focus on aesthetics, architect, and style, I am able to examine the built environment of the city for its experiential and social functions.³⁴ In doing so, theories and methodologies from the disciplines of art history and anthropology enrich the study of the cultural significance of the river and how it informed activities of ordinary people and urban elites as they positioned themselves in relation to the river. How did the built environment frame their interaction with the river? And what was the role and place of the river in their construction activities and urban life?


³⁴ My discussion of local inhabitants and their interactions with the river as facilitated by the built environment is informed by geographical approaches to space and embodiment, and, in particular, Henri Lefebvre’s famous work: Henri Lefebvre, *The Production of Space.* Translated by Donald Nicholson-Smith, (Oxford: Blackwell Publishers Inc, 1992).
Sources and Methods

As I engage with the river across these various scales, I need a wide variety of sources to create a more nuanced picture of this topic. As a result, I draw from a wealth of primary local and foreign sources – some inform my work across various scales, and some only apply to a particular issue. Primary historical accounts often supplied by Safavid courtiers, as well as those written in the 19th-century, represent major sources of critical information. These more localized textual materials are further enriched by accounts of several Europeans who visited Isfahan throughout the 17th century. The built environment that remains from that period also represents an essential source of information for my work. Aerial photographs, historical maps, satellite imagery, and historical photographs complement the information recovered from written sources and existing landscape.

Local textual sources include Safavid histories in the form of court chronicles, such as Alam ara-ye Abbasi (1560-1633/4), Rowzat al-safaviyeh (1614/5-1627/8), Ruzname Molla Jalal (1629), Afzal al-Tavarikh (written between 1608-1639), Tarikh-I Jahan Aray-I Abbasi (started 1645/6), Qisas al-Khaqani (1629-1666), Khold-i Barin (6th and 7th Hadigheh) or Iran dar zaman-I Shâh Safi and Shâh Abbâs dovvom (1667/8), and several other later accounts. Moreover, state documents such as Tadkhirat al-Muluk, endowment deeds, and royal decrees are another group of textual sources that inform this research.

Travel accounts by 17th and 18th century travelers, such as Pietro Della Valle (1586-1652), Garcia De Silva Y Figuera (returned from Persia in 1624), Adam Olerious (1599-1671), Cornelis Le Bruyn (1652-1726/7), Sir John Chardin (1643-1713), John Fryer (1650-1733), Jean-Baptiste Tavernier (1605-1689), Engelbert Kaemfer (1651-1716), and letters sent by missionaries staying in Isfahan serve as a major source of information for re-imaging Isfahan during this period.

This research employs visual sources including miniatures, sketches, drawings, and maps, which were produced by foreign visitors such as Kaempfer, Pascal Coste (1787-1879), Chardin, etc. They constitute additional sources of information to better visualize the written descriptions and historical narratives. This research also employs contemporary and historical maps of the city, especially the 1851 Russian map and 1923 map compiled by Sayyed Reza Khan, to imagine the pre-modern city and project the recovered information from the texts. Additionally, 19th-century photographs are used to render and imagine the lost landscape, especially when they record vanished buildings on the banks of the river. Among them, this dissertation employs photographs taken by Antoin Sevruguin (1830-1933) (residing in the Freer Gallery of Art and the Arthur M. Sackler Archives), as well as photographs taken...
My methodology involves extensive fieldwork and in-depth analytical readings of the built environment, as well as primary textual and visual sources. Text-based sources not only offer insights in terms of the social experiences of inhabitants and the manners in which the space was constructed and used, but also bear information about the physical form and spatial configuration of the built environment that is lost to the passage of time. In other word, they enable me to re-imagine the lost landscape, which is then mined for what it reveals about the function and position of the Zāyandihrūd River in 17th Isfahān.

In interpreting the information recovered through fieldwork and archival research, I employ “interpretive cartography” as a tool to explore relationships that are otherwise impossible to see. Moving from a large regional scale to the scales of architecture and human body, my examination of the built environment goes beyond the static and representational capacity of architecture by exploring spatial relationships, the dynamic role of space, and the range of lived experiences the built environment has accommodated. By utilizing this multifaceted approach, my dissertation research offers a new way to re-imagine the city of Isfahān and its architecture as a product of its intertwined material and cultural interactions with the river.

**Dissertation Chapters**

With the help of these diverse sources and methodology, I discuss the city-river relationship in Isfahān through five chapters. In Chapter 1, I investigate the central role that rivers by the German Ernst Hoeltzer (1835-1911) (currently residing in Iranian Cultural Heritage Organization Documentation Center).
played in the genesis and development of cities located within the Persian Plateau. Particularly, I illustrate the significant role of physical and social hydraulic infrastructures that managed the water of Zāyandihrūd River to support the agricultural economy that was critical for sustaining the livelihood of most cities in the region. Building upon these discussions, in Chapter 2 I focus on the city of Isfahān and how river-based infrastructures folded Zāyandihrūd River in the process of urban development. For example, I demonstrate how the development of the newer southern suburbs of Isfahān was facilitated by investment in new hydraulic infrastructures, coupled with thoughtful incorporation of the existing ones.

Over the next three chapters I expand the scope of discussion beyond the utilitarian function of the river and delve into the position of the river in the royal and public life of the city of Isfahān. A royal city par excellence, 17th-century Isfahān is best known for its elaborate public and royal gardens and promenades, which served as sites of recreation and relaxation for the court and the public. Within a conventional scholarly framework, where city and nature are viewed as two distinct realms, the Zāyandihrūd River is rarely addressed as a possible extension of these urban spaces.

Examining the ritual life of 17th-century Isfahān that took place on and near the Zāyandihrūd River, in Chapter 3 I present the river as an active site of urban public life in Isfahān—a site that fostered rich interactions between people of various ethnic, class, and religious backgrounds. Chapter 4 focuses on the significance of the river for the royal household. It explores the design, layout, and establishment of the now-vanished Safavid royal complex of Saʿādatābad (Abode of Felicity) on either side of the river. Constructed between 1655 and 1660, this complex represents the first royal attempt to directly engage with the Zayadehrūd River. I argue that by transforming the river into a lake and delineating it with gardens and bridges all around, the river
became the core of the Sa’ādatābad Complex, directing its spatial arrangement and architectural configuration. Finally, in the fifth chapter I explore how—for the first time in the region—the 17th-century Safavids employed an infrastructure such as a bridge to extend the public urban spaces of Isfahān over the surface of the river. Scrutinizing technical details, architectural layout, and decorations enables me to demonstrate the multi-functionality of the bridge as a dam, a royal pavilion, and a public space. By focusing on the Khājū Bridge, which encapsulates the multi-functional relationship between the city and the river, this chapter ties together all the previously discussed issues; and established the river as yet another focal site of royal and public life of the city that complemented Chāhārbāgh Street and Naghsh-i Jahān Plaza.
CHAPTER 1

River and the Agricultural Economy of Cities in the Persian Plateau

As an insightful witness to the many urban projects that embellished Isfahān in the early decades of the 17th century, Iskandar Munshī praised the city for its pleasant climate and numerous water streams that meandered around its streets, considering them important incentives that attracted Shāh Abbās I to Isfahān. One can only imagine the value of these water courses when, after many hours of riding in the sunny, barren landscape of the plateau expanding over hundreds of miles, a traveler is charmed by a green oasis and finds the opportunity to cool off under the shadow of a tree that rests along a refreshing stream.

Branching off from the Zāyandīhrūd River, these streams were central to the hydraulic system that facilitated the existence and prosperity of Isfahān for several centuries. But how unique was the city of Isfahān and its relationship with the Zāyandīhrūd, when considered within the larger context of urbanity in the Persian Plateau? How was the city’s treatment of water similar or

different from the practices long established in the region? What were various methods for harnessing the water of the Zāyandihrūd River, and to what extent did they impact the prosperity or misfortune of the city and its hinterlands?

Using these questions as a springboard, this chapter examines the relationship between Isfahān and its river within the larger context of riverine urbanity in the Persian Plateau, laying the groundwork for a more focused treatment of Isfahān in the ensuing chapters. Chapter 1 also addresses broader issues such as climatic and geographical conditions that so intensely impacted life on the Persian Plateau and made water, and particularly rivers and their efficient management, critical for the establishment and development of Isfahān and other cities in the region.

City and Its Hinterlands: The Interrelated Whole

The French historian Jean Aubin was correct when he argued that works on the urban history of Iranian cities should reconsider the walled city as the standard unit of analysis. Rather, urban historians should look at the intramural fabric of the city as inseparable from the larger territory that lied beyond urban fortifications. As he further explained, one would be hard pressed to identify a medieval (pre-industrial) metropole in the region which did not adjoin a vast agricultural and horticultural territory capable of producing the majority of the food consumed by the city.

Interest in a “terrestrial whole” as a framework of analysis has been around since the early 20th century. Introducing the concept, geographer Jean Bruhn wrote:

The earth’s surface cannot be divided into isolated areas; there may be broad natural divisions, but there are no small closed fields. A single mountain does not form a whole; neither is a city an independent unit area, for it depends upon the soil on which it rests, upon the climate which plays upon it, upon the whole vast contributing area from which it draws its substance and life; nor is a river an individual thing which can be considered apart from the land through which it flows. 40

Thanks to the incredible advancement of technologies for the transport of people, goods, and information in the 21st century, contemporary cities can rely on far-distant resources that may be located thousands of miles away. Such systems are now often examined in the larger context of planetary urbanism.41 While different in scale and nature, this interconnectivity should also be at the heart of the examination of pre-modern cities.

Indeed, for pre-industrial cities the proximity of places of food production and consumption was a major issue influencing the size and prosperity of a city. The slow pace of transportation in the pre-industrial world made reliance on long distance transportation of food supplies largely impractical. Culinary products such as spices and dates, which were important commodities of transnational trade routes, were transported in relatively small quantities and were considered


luxury products. In contrast, for basic food supplies, the city had to rely on its productive hinterland.

Compared to the cities of the Persian Plateau, the responsibility of feeding a European city was much less dependent on the productivity of the immediate hinterland. The large number of navigable rivers that flowed throughout the European continent facilitated the transportation of grain and other such essential supplies from more distant places. In London, for example, it was relatively inexpensive to transport grain by water from settlements adjoining the Thames Estuary. Water transportation was especially valuable when the price of bringing agricultural products from far-flung locations was cheaper than producing them in the landward hinterlands—as was the case in the Muslim cities of Al-Andalus, which regularly received supplies from North Africa.

In comparison with urban centers within European continent, for cities situated far from any navigable waterways, the hinterlands and their ability to supply the local population with essential agricultural goods played a more crucial role. Even in times of shortage or drought, inland European cities and those along the Mediterranean could still rely on produce and grains that were shipped from other regions. In 17th-century Persia, however, this was not a reliable option due to a number of factors; these include the absence of navigable waterways, the patchy nature of urban settlements and the large distance between them, and the natural obstacles along land routes that hindered an adequate level of agricultural connectivity. Specifically, caravan traffic routes simply did not have the capacity to transport large quantities of food and related products—and certainly


43 Derek Keene, "Feeding Medieval European Cities, 600-1500", E-Seminar at the Institute of Historical Research, University of London, 1998.
not to the extent that it could address famine conditions brought by harsh climate and seasonal fluctuations. As such, cities and their productive hinterlands did, by necessity, form a self-sustaining enclave that also paid taxes to the central system as one unit.44

Throughout the plateau where favorable micro-climates and the presence of water facilitated agricultural production, small oases emerged. The landscape of the plateau, therefore, largely consisted of interspersed green enclaves that were connected via transportation routes. Reading through the accounts of medieval geographers, one can imagine these enclaves as series of different size settlements grouped together. A city was often the commercial, political and administrative center of an enclave, receiving its basic food supplies from the surrounding villages and towns. In other words, throughout the Persian plateau existed a network of interrelated sites, where city, town, and villages were all parts of an extended, and mutually-dependent, urbanized region.

As a result of this interdependence, the size of a city and its population corresponded to the size of the agricultural estates in its vicinity. This factor represents a major obstacle for the growth of cities in the region, especially those located at the heart of the plateau where water was scarce. While dry farming was practiced in some eastern and western parts of the plateau (Kurdistan and eastern Khorasan), a large proportion of the plateau, and particularly in central areas located in semi-arid and arid climates where rainfall was inadequate, agricultural production required a reliable additional source of water for irrigation.45 It is for this reason that irrigation played a


significant role in the genesis and morphological characteristics of urban settlements all over the plateau.\textsuperscript{46} Indeed, innovations in the provision and management of water had a direct impact on the form, size, and prosperity of cities—so much so that according to the anthropologist Brian Spooner, the urban revolution in the Persian Plateau was an aftermath of the invention of the \textit{Qanāt} technology, which tapped underground mountain water sources, and ensured access to a steady supply of water all year long.\textsuperscript{47}

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\textbf{Strategy for Growth: Investment in Hydraulic Infrastructure}
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Detailed information about the origins and development of various irrigation technologies is limited. However, archeological evidence, coupled with the continued use of old infrastructures and practices, do shed light on the manner in which irrigation technologies and infrastructures contributed to the genesis and development of human settlements in the plateau.

Apart from the basin irrigation system, which relied on capturing the overflow of river water during the flood season, most other systems depended on a network of canals that distributed water from its source. The source of water varied according to the geographical and hydrogeological characteristics of each region. In more arid places such as Yemen, water canals were fed by reservoirs and pools filled with rainfall and runoff. Tapping underground sources of water
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\textsuperscript{47} Brian Spooner, "City and River in Iran: Urbanization and Irrigation of the Iranian Plateau." \textit{Iranian Studies} 7, no. 3 (1974): 681-713.
(qanāt) was a later introduction. However, the most common and earliest system of canal irrigation depended on the surface water, specially the water obtained from rivers.

Archeological evidence points to the southern Mesopotamia, which corresponds to the Iranian province of Khuzastan and Iraq, as the birthplace of this practice. Here, around the 6th millennium BC, an irrigation system was developed based on the Mesopotamian river systems. Throughout these plains, an extremely labor-demanding system of canals distributed the water from the Euphrates and Tigris rivers into the agricultural lands of the region. Archeological surveys in the region have confirmed the presence of an elaborate irrigation system that supported a network of agricultural settlements. Furthermore, an examination of tax revenues in the early Islamic period attests to the high productivity of agriculture in this area. Similar irrigation systems were in use in other parts of the Sassanid Empire, such as in the Mughan plain (north-west Iran), which relied on water from the Aras river. All in all, it appears that during the ensuing five centuries after the appearance of the riverine system in Mesopotamia, and later with the arrival of

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49 Peter Christensen, The Decline of IranShāhr: Irrigation and Environments in the History of the Middle East, 500 B.C. to A.D. 1500. see Ch. 4, 5, & 6: 49-72.

50 The Mesopotamian water system has long been subject of archeological investigations. More recently, remote sensing and high-quality satellite images have also become important sources for further exploration of these canals. For a classical example of work on pattern of urbanization in Mesopotamia, see: Robert Adams, Patterns of Urbanization in Early Southern Mesopotamia, (Andover, MA: Warner Modular, 1972).

51 Christensen, Decline of IranShāhr:145.

the Arab army, this river-based irrigation system was introduced all over the Persian plateau and beyond, all the way to Central Asia and the Mediterranean world.  

Over the centuries, the city of Isfahān sustained itself with the support of a similar hydraulic system. In effect, Isfahān owes its birth to ZayanahdehRūd River— the largest river that flows in the heart of the Persian Plateau. The river originates in the highlands of the Zagrus mountain range, with snowmelt providing a substantial amount of water during the winter and spring seasons, and flows through the flat plains of the plateau. It is within these plains that the river has historically nurtured numerous agricultural settlements, villages, and towns—all of which paid homage to the city of Isfahān.

Since ancient times a river-based hydraulic system that relied on a network of sams and canals distributed the water of Zāyandihrūd in the seven districts (bolukat) of Isfahān. Dams were used to keep the water level high so that, with the help of gravity, it could then flow into the canals. The canals then carried water to agricultural fields and hinterlands, as well as to urban and suburban gardens and their artificial lakes and pools. This hydraulic network, as the learned German traveler Kaempfer (1651-1716) described it, was divided on a hierarchical basis, with each component identified by a special term. The largest waterways directly branching from the river were called mādī. These were the primary arteries that diverted the river water towards

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53 Brian Spooner, "City and River in Iran: Urbanization and Irrigation of the Iranian Plateau." *Iranian Studies* 7, no. 3 (1974): 681-713. Some scholars, such as Peter Christensen, have argued that the decline of prosperity in the Mesopotamia during the medieval period was partially due to a long-term neglect of irrigation system and decline of agricultural productivity. See Christensen, *Decline of IranShāhr*.

54 According to medieval sources Isfahān was consisted of nine districts (bolukat) seven of which relied on the water of the river. The two others, Ghohab and Barkhar districts depended on water from wells and qanats.
specific settlements. Smaller branches known as jadval diverted water from the mādīs, and still narrower streams called Jūy branched off from the jadvals to deliver water to farms and houses.\(^{55}\)

In Persia, since the pre-Islamic period, expansion and upkeep of the regional irrigation system was considered part of the responsibilities of a good king. These measures were considered necessary for the development of agriculture, which was taxed and thus constituted a major source of revenue for the state. Advice literature sources from those written in the Sassanid period such as the Tansar nāmeh, and extending all the way to the 17th-century works such as Raudt al-Anwār-i Abbāsi, put an emphasis on the foundation of new agricultural settlements and expansion of irrigation networks.\(^{56}\) The pre-Islamic advice book, Tansar nāmeh, praises the Sasanian king, Ardishīr I, for expanding the water infrastructure. Drawing on the example of pre-Islamic kings, others such as Ghazālī (1058-1111) and Nizām al-Mulk (1018-1092) used their pen to inform the Turco-nomad conquerors, unfamiliar with the sedentary agriculture-based culture of Persia. Their works represent attempts to persuade the king to support agriculture by investing in the establishment of canals and extracting underground waters.\(^{57}\)

It was under the influence of these learned advisers that a resurgence in investment in hydraulic infrastructures in the Persian Plateau occurred during the post-Mongol period. Indeed,


the flourishing of the Khurasan region during the Timurid period was, to a large extent, a result of the systematic approach of Timurid sovereigns to agricultural development and investment in the irrigation system of the area.\textsuperscript{58} Shāhrukh, Sultān Abū Sa’īd, and Sultān Husiyn all invested in the construction and restoration of irrigation networks in Merv and the Herat region. The result of these activities was crucial for reclaiming land and increasing the acreage of arable land and cultivation in these regions.\textsuperscript{59}

Likewise, in the Safavid period, investment in the hydraulic infrastructure was a critical state undertaking. Although these projects were carried out in various parts of Persia, they were typically close to major cities – likely to ensure further productivity and growth in these areas. In line with their religious policies, Shāh Isama’il and Shāh Tahmasb both invested in Shi’i holy sites in Iraq, reviving existing canals and founding new ones in the holy city of Najaf.\textsuperscript{60} Later on, in the vicinity of Najaf, Shāh Abbās I financed a project for recovery of the canal that his predecessors had diverted from the Euphrates, which involved extending the canal all the way to the courtyard of the mosque in Kūfa.\textsuperscript{61} Similar attempts were made in other Shi’i holy cities of Iran. In Khurasan, for example, renovation of the Gūlasb Water Canal and its extension to the Shi’i shrine in Mashhad

\textsuperscript{58} Subtenly, \textit{Timurids in Transition}, p 116-19.

\textsuperscript{59} For detail information, see: ibid, 122-128.


was designed to encourage further improvements and growth of the city. The reign of Shāh Abbās I also evidenced investment in the construction of dams such as the Quhrūd Dam outside Kāshān or the Sarāb Dam near Shirāz. He was well-aware of the critical importance of hydraulic infrastructures for the success of cities that would inevitably attract pilgrims, merchants, artisans, and the wealth that accompanied them, into the Safavid territory.

**Riverine Irrigation in the Plateau: Center vs. Peripheries**

Despite a number of commonalities between riverine hydraulic systems, the rivers along the peripheral regions of the plateau were quite different from the ones streaming at its heart. In Khurasan and Central Asia, the major suppliers of irrigation water were the larger rivers that functioned as the backbone for an intricate network of hydraulic infrastructures. For example, in the oasis of Marv, the irrigation system was comprised of canals that diverted from the Murghāb River. In 15th-century Herat, as well, an elaborate network of water canals distributed the water

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62 Abbās I also employed other strategies such as walking to the city, investing in the architecture of the shrine, and making large endowments to the shrine to advocate pilgrimage to the city in order to further strengthen his religious stronghold. For discussion on Safavid activities in Mashhad shrine, see May Farhat, "Islamic Piety and Dynastic Legitimacy, The Case of the Shrine of Ali-Al Reda in Mashhad" (10th to 17th Century). Ph.D. dissertation, 2002.

63 The Safavid slave general Allāhverdīkhān established the Sarab Dam over the Kur river. From there, a canal (Nahr-i Abbāsī) carried the water to the plain of Shiraz, leading to further growth of the city of Shiraz. See Molla Jalal al-din Mohammad Monajem Yazdi and Seyf Allah Vahidnia, *Tarikh-i Abbāsī Ya Roznameh-‘i Molla Jalal*, (Tehran: Intesharat-i Vahid, 1988), 211-12.

64 Most rivers on the peripheries of the plateau such as Axus, Aras, and Euphrate were permanent, at the heart of the plateau most rivers such as Zāyandīhrūd and Qumrūd were seasonal.

of Hari-Rūd. In a similar manner, Bukhārā and its suburbs were also nourished by canals that diverged water from the Zarafshān River. Branching off from the Zarafshān, the Shari-i Rūd Canal entered the city from the east, and was then was divided into smaller branches that delivered water to pools located at the center of various neighborhoods all around the city. Several other canals, which meandered all over the Bukhārā Oasis, supported farmlands and orchards outside the city.

At the center of the plateau, in places such as Qum, Simnān, and Qazwīn, surface water was less readily available. Rivers that originated in the mountain highlands and reached the alluvial plains and deserts at the center of the plateau were less able to support agrarian societies. Unlike larger rivers on the periphery of the plateau, the rivers that streamed in the center were much smaller and often seasonal; hence, they often required complementary provisions. In Qazwīn, the city and its productive hinterlands relied on a web of seasonal rivers, complemented with supplemental water derived from the nearby qanāts (Figure 1-3). Similarly, in Simnān, several qanāts supplied an auxiliary source of water to the nearby Āb-i Simnān River, boosting its water capacity prior to it reaching the city and its agricultural estates.

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66 Terry Allen considers the location of these waterways as the single most important factor in the topography of habitation in the oasis. See Terry Allen, Timurid Herat, (Beihfte Zum Tübinger Atlas Des Vorderen Orients, Wiesbaden: Reihe, 1983).


68 Depending on underground waters, qanats were the most reliable resource of water, especially during the dry season when the water of rivers would diminish. Cities such as Yazd and Kerman entirely relied on an extended network of qanats. However, because of the skilled labor involved in establishing and maintaining them, upkeep of these underground networks was very costly. Therefore, when surface waters were available, qanats and wells only served as supplemental sources of water.

69 In Simnān, the water was then directed into six pools where it was stored prior to its redistribution to specific neighborhoods.
Whether at the center or the periphery of the plateau, access to water was a determining factor in the productivity of land; thus, areas with easier access to water typically produced higher yields of crops and grain. As a result, regulating the distribution of water was extremely critical. Medieval Arab and Persian geographers such as Istakhrī, Ibn-i Hawqal and Al-Maqdīsī inform us about the highly-organized distribution system in the Persian Plateau—one that was intensely regulated in terms of water distribution and canal upkeep. In fact, an area’s share of water resources was predetermined and often recorded in tractates/prescripts.

Examples of existing water prescripts from the past not only facilitate a better understanding of the system of water distribution in the region, but also reveal some of the peculiarities of each city. In Simnān, the 15th-century Deed of Qazī Rukn al-Dīn records both the direction of water circulation in the city, as well as the share that each neighborhood received over a regularized 15-day cycle. A 17th-century document also records policies for water distribution and the associated rituals for distributing water in public institutions of the city.

For the city of Qazwīn, the existing document has not yet been properly dated. Judging from the seal of Karakī that appears in various places throughout the document, the Iranian expert on traditional water systems of the Persian Plateau, Javād Safī Nezhād concluded that the

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71 This document is known as Ab-I Sehr and is kept by the Motamedi Family in Semnān. See Moahmmad Ahad Panahi, *Shiveh Sonati-i Taghsim-i Ab Dar Semnān*, 90-95.

72 Some people consider the seal of the 16th-century scholar Karaki that recurrently appears in the Tūmār as evidence to date the Tūmār to this period. Others prefer the existence of the Mongol seal and the name of Hamd Allah Mostofi as evidence to relate the document to the 14th century. For further discussion of this debate, see the introduction in Mohammad Javād Safī Nezhād, *tahlil va tafsir-i toomar-i abyari-i gharn-i hashtom*, (Qazwin. Tehran: Vezarat-i Nirou, 2002).
document had been prepared (or amended to an older prescript) sometime in the 16th century. However, it must be noted that he identified the prescript as a copy or modification of a practice that had already existed during the first half of the 14th century when Hamd Allāh Mustawfī had lived and his family owned properties in Qazwīn.

Strict controls on water distribution were not confined to cities such as Simnān and Qazwīn, whose nearby rivers were small and seasonal. Water supplies from larger rivers, such as the Hari-Rūd, which flows from the mountains of central Afghanistan towards Herat, were also regulated based on a distribution plan. Risāleh-i Tařīq-i Taqṣīm-i Āb-i Qulub– the 16th-century document that recorded the apportionment of the Hari-Rūd’s water at that time, reflects this practice. According to its author, Ghāsem ibn-i Yūsif-i Abūnasr-i Hiravī, who was charged with preparing the document, his task was to alleviate the ongoing conflicts regarding the division of water. According to Abūnasr-i Hiravī, the new canals and water infrastructures that the Timurids had established in the region created new arable lands, which then made the earlier, 14th-century document subject to tension and disagreement (Figure 1-2).

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73 Nur-al-Din Abu’l-Ḥasan Ali b. Ḥosayn b. Abd-al-Ali (1464-1533) was a major Imamite jurist who was invited to the Safavid region by Shāh Ismā’il, but gained major recognition and power during the reign of Shāh Tahmasb. For more information, see Rula Jurdi Abisaab, Karaki, encyclopedia Iranica: http://www.iranicaonline.org/articles/karaki, access, 7/18/2017.

74 Safi Nezhād believes that the Ilkhanid document had been part of the Khaje Rashid al-din’s reforms for reviving agriculture after the previous devastating years in the post-Mongol Persia. He concludes that this distribution plan was originally prepared in the 14th century and was endorsed by the Mongol sovereign Uljayto; hence, the Mongol seal adorns the scroll. The Seal of Karaki suggest that that document underwent later intervention, modification, or repair. Any later intervention demanded the approval of the estate-associated scholar, such as Karaki; therefore, his seal appears on the scroll. Safi Nezhād, tahlil va tafsir-i toomar-i abyari-i gharn-i hashtom, 92.

In a similar manner, the water of the Zāyandihrūd River, which irrigated the lands in the region of Isfahān, was distributed according to a predefined plan. Today, the only available document describing the distribution of Zāyandihrūd’s water is Tūmār-i Shiykh Bahāyī. For quite a long time, the document was believed to be a 17th-century record prepared by the famous Safavid scholar and mathematician, Shiykh Bahāyī.76 Reference to the name of Shāh Tahmasb and preparation of document per his order had further reinforced this theory.77 However, a more critical examination of the text of the Tūmār in recent years has led to alternative opinions. As Abarī rightly points out, political titles and names that are mentioned in the document, including *mu‘tamed al-dawlih* or *sadr-i a’zam*, are indeed titles that did not become common until the 19th century (Qajar dynasty). This more recent information has led scholars to conclude that the document was last modified in the 19th century, if not later.78

Furthermore, much like other cities in the plateau, the distribution of water in Isfahān dates back to centuries well before the Safavid and Qajar periods. In fact, the medieval geographer, Ibn-i Rūsta, associates the establishment of this distribution system to Ardishīr-i Bābakān (180-242 AD) in the 3rd century AD.79 During the centuries following the establishment of the original plan, Isfahān and many other cities in the plateau underwent decades of war, changes in political power,

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77 Unfortunately, until recently scholars paid scant attention to the obvious time difference that existed between Shiykh Bahāyī and Shāh Tahmasb’s reign. The idea, initially published by Lambton, dominated the field for a very long time without much critical consideration. For introduction of the Tūmār, see Ann, K.S. Lambton, "The Regulation of the Waters of the Zayandeh Rud," 663-673.


periods of growth, and periods of decline—all of which could have directly (and significantly) impacted the state of hydraulic infrastructures and systems of water distribution. Depending on the needs of the city and the state’s economic and social policies, new canals may have been constructed and water share distribution may have changed, causing the existing plan to be modified.

Consider, for example, the cases of Qazwīn and Herat and their hydraulic policies and infrastructures. The addition of new canals in the Herat region created problems that the old water distribution plan was unable to address, thus heightening the need for a new plan. In Qazwīn, too, the Safavids amended the document that was originally prepared under the IlKhānids to address existing conditions in the 16th century. In a similar manner, the Shīyḵ Bahāyī Tūmār can be considered a modified version of a previously existing regulation. What we can ascertain at this point is that according to the text of the Tūmār, at least two water canals, which were instrumental in facilitating the grand architectural campaign in Isfahān during the 17th century, were both founded after the establishment of the original water distribution plan. We can, therefore, be quite certain that the original plan pre-dates the 17th century; moreover, the current document—

80 The 19th-century author, Mohammad Mīhđī Isfahānī, who had consulted a manuscript of Resaleh-i Mahasen-i Isfahān (which is an 11th-century local history of the city), refers to a lost section that included accounts of the distribution of water, excavation of canals, and demand for more water. If available, this lost section would have been a valuable asset shedding light on the state of water distribution in the medieval period. See Hassan Husiyni Abarī, "Rabete-i Tūmār-i Shīyḵ Bahāyī Ba Taghsim-i Sonnati-i Ab-i Zāyandihrūd": 7.

81 For more discussion on dating the Tūmār and the original water distribution plan, see Chapter 2 of this dissertation. In the text of the Tūmār there are references to the canals that were constructed after the original distribution plan and had no share from the river. Often in such conditions, the establishment of new canals required the construction of a new qanat or ensuring the existence of another source of water that would compensate for the water used by this canal.
although last modified in the 19th century, in general reflects the continuation of practices established prior to the 17th century.

Social and Physical Infrastructure, Working Hand in Hand

Regardless of who developed a water distribution plans (and when), the presence of these plans did not automatically guarantee their implementation. Rather, a collaborative social infrastructure facilitated the execution of these plans and provided oversight with respect to their implementation. According to Kaempfer, “mīrāb-bāshīs had] close control over the irrigation network, since the water [was] not always flowing in these professionally constructed conduits. Rather, it mov[ed] in these canals with a special care and providence, in predetermined times and days, and even only once a week.”

Mīrāb bāshī, the agent directly assigned by the government, was in charge of overseeing the implementation of the water distribution schedule and addressing any disputes among the water shareholders. According to the Safavid administrative manual, Dastūr al-Mulūk, the status of the mīrāb-bāshī placed this individual within the circle of courtiers, very close to the king. During the year he would oversee the distribution of the water of the Zāyandihrūd River and ensure that it reached the shareholders, based on their conventional share. The Safavid state manual also put

82 Kaempfer, Dar Darbar-i ShāhanShāh-i Iran, 188.

83 Composed by Moḥammad Raḥī Anšāri (known as Mirzā Raḥī’ā) who had the title of Mostawfi al-mamālek (accountant-general), a high-ranking position in the central administration at Isfahān, dastur al-muluk is one of the only two administrative manual sthat exist for the Safavid period, which reveals valuable information about the social infrastructure and central administrative system during the Safavid period.
mīrāb-bāshī in charge of selecting, removing, or even replacing the mādī sālārs, who were people specifically charged with the task of managing individual water canals, opening or closing gates, and directing water to specific properties. In the case of any disputes over water shares, mīrāb-bāshī was also responsible for judging and resolving the issue based on the administrative court documents.84

Any attempts to intervene in a water distribution arrangement was not tolerated. As Chardin and Tavernier both noted, individuals who took the risk of opening a channel and redirecting water to their own property outside their assigned timeframe were harshly punished and had to pay huge fines.85 Tavernier tells the story of two Europeans whose attempt to deceive the system and use water outside their allotted time almost cost them their estate, and despite the king’s favor towards the Europeans, the two had to pay massive fines.86

The collaborative nature of this infrastructure, which functioned as a partnership between the state and the community, was key in ensuring its success. Indeed, included in the list of responsibilities of the mīrāb-bāshī was to ensure that the local communities carried out their responsibilities to maintain the region’s hydraulic infrastructures.87 Furthermore, according to the text of the Tūmār pertaining to the implementation of a regional water regulation plan, mīrāb-


86 Tavernier, The Six Voyages, 156.

87 Mirza Rafi’a, Dastur Al-Moluk, p 575.
bāshīs also relied on the help of mādī-salars and mardān-i qāsid, all chosen from the community.\(^{88}\)

The collaborative nature of water distribution, as documented in a number of diverse sources, also stands in contrast to Wittfogel’s long-criticized theory that viewed control over large-scale irrigation systems as the power engine for despotic institutions.\(^{89}\)

**Water Distribution and Crop Cultivation**

Similar to fluctuating water levels over the course of seasons, rigorous control over the distribution of Zāyandihrūd’s water was also seasonal. During the cold and rainy season (generally from mid-fall to mid-spring), shareholders were free to use as much water as was available to them. Regulations only applied to the dry season when the water of the river was more limited, and the irrigation of gardens and farms became more essential to the community’s survival. Therefore, the distribution plan was prepared and implemented for the hot and dry season. Specifically, limitations were put in place beginning from the 75\(^{th}\) day of spring to mid-fall—equal to the span of about 165 days (Figure 1-6). Thus, over the course of approximately five and a half

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\(^{88}\) According to Abārī’s definition, while Mādī salars were present as the representative of the mīrāb-bāshī, mardān-i qāsid represented the water shareholders and ensured their right is protected. For more detailed description of the responsibilities of Mādī salars and mardān-I qasid, see Hasan Husayni Abārī, Zāyandihrūd Az Sarchishmih Tā Murdāb, (Īṣfahān: Gulha, 2000), 202-210.

\(^{89}\) Over the last several decades Wittfogel’s theory has been challenged and criticized by many scholars. Anthropological studies have also illustrated the role of private sector and community in water management in pre-modern Iran, for example see Brian Spooner, "Politics, Kinship, and Ecology in Southeast Persia." *Ethnology* 8, no. 2 (1969): 139-152. For Wittfogel’s work see Karl A. Wittfogel, *Oriental Despotism : A Comparative Study of Total Power*, (New York: Vintage Books, 1981).
months, shareholders received water based on a spatio-temporal plan that was devised in the Tūmār.

This spatio-temporal plan meant that each district (and thus shareholder) was entitled to a particular amount of water within a particular time frame. Such a scheme required a high degree of knowledge in multiple disciplines, since it involved not only calculating the share of water, but also the time that each district would receive water. For example, the water distribution scheme for Herat was prepared by Qasem ibn-i Yūsif, who was a knowledgeable person in the field of mathematical and geometric computation, as well as agriculture and gardening. Given the scarcity of water and its critical role in agricultural production, efficiency was at the heart of the plan. The goal was to minimize water waste while maximizing the productivity of the land. Moreover, the amount and timeframe for receiving water would have direct consequences for the agricultural production of each district—and not all areas were treated equitably. Isfahān, for example, featured a distribution plan that privileged some districts over others. As illustrated in Figure 1-6, during the 165-day long dry season, the district of Rūdashtin (in yellow) received the exclusive allocation of river water for 30 days; in Barā’ān (red region), water was sent to residents there for just 7 days. For the remaining 128 days of the dry season, water was assigned to upper stream districts and the city (green and blue areas).

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90 Space does not allow us to go into details about the techniques and devices for calculating water share.

91 Qasem Ibn-i Yusef was also the author of famous Agricultural manual, Irshād al-Zirā’a. He appears to have also authored books on mathematics and geometrical computation. For discussion on Irshād al-Zirā’a and Qasem ibn-i Yusef, see Subtelny, Maria Eva. "A Medieval Persian Agricultural Manual in Context, the Irshād Al-Zirā’a in Late Timurid and Early Safavid Khorasan." Studia Iranica 22, no. 2 (1993): 162-217.
It must be noted, however, that this arrangement was almost certainly motivated by important geographic characteristics of the region—namely, the quality of soil and the distance from the spring of the river. By eliminating the need for the water to travel downstream throughout the dry season to Barā’ān and Rūdashtin, the plan prevented the wasteful evaporation of water as it made its way to those more distant regions. Thus, the solution was to dedicate two special periods for sending the entire allocation of river water all the way to lower stream lands. This plan would ensure that, after a long journey, when water arrived in these lands it was at a sufficient level and pressure so that it could overflow into the canals that branched off from the river, and travel long these waterways to reach the allocated agricultural estates.

Furthermore, the quality of soil determined the types of crops grown in each district, which also gave rise to a specific water regimen. The earliest information that we have about the crop cultivation pattern in the region of Isfahān is from the description of Mohammad Mehdi Isfahāni, Nesf-i Jahan fi Tarif-i Isfahān. Although he does not provide us with exact data or numbers, his information is sufficiently descriptive to enable us to suggest some estimations. Nonetheless, his account represents the earliest and most comprehensive information that can help us re-imagine an overall picture of crop cultivation in the entire region of Isfahān in the 19th century. On the positive side, the fact that both the Tūmār and Isfahāni’s descriptions reflect early to mid-19th-century practices, we have a better setting for examining issues of water share and harvest side by side.

While we can presume that both water distribution and crop cultivation in the 19th century were, to some extent, a continuation of practices established in the 17th century, it would be methodologically unsound to extrapolate data from the later period as an indication of what transpired during the 17th century. However, the picture that emerges from analyzing this more
recent data sheds new lights on the ways that the water distribution plan likely functioned to support agricultural activities, as well as affected the prosperity of certain regions at the expense of others.

By processing and overlaying the information that I recovered about the share of water from the Tūmār, and about crop cultivation from Isfahāni’s account, I have charted the share of water and corresponding agricultural production in each region. If we carefully look at the diagrams in Figure1-7 and Figure1-6, we realize that as we move from west to east, not only does the water share for each region decreases, but the dependency of regional produce on water also diminishes. For example, the most western district of Lanjānāt, which was entitled to the largest amount of water and enjoyed a fairly regular water supply cycle, produced a large amount of rice, which is a crop that requires a great deal of water. The smaller amount of fruit produced in that region also required a considerable amount of water. Moving west, we arrive at the district of Mārbīn where three-fourth of its lands were dedicated to fruit-producing gardens. Though the cultivation of fruit may demand less water than rice, compared to cereal and beans, fruit production does require a reliable source of water on a somewhat regular basis. It is still a highly water consuming produce. Beside the amount of water they demand, fruits are also sensitive to water and require regular irrigation.

Moving eastward on the chart, we arrive at Isfahān and Jay—locations were all types of harvests were produced, but in smaller quantities. Indeed, from Jay eastward we see indications that tighter water restrictions were implemented. Unlike the district to its west, the land in the Jay
district was mostly dedicated to farms rather than gardens.\footnote{The exception was south of the river where royal gardens such as Hezār Jarīb, Saadat Abad etc. produced a good variety of fruits including plums, apricots, peaches, and grapes.} While fruits were produced in the gardens of Jay in smaller quantities, area farms yielded wheat, barley, and beans. Small quantities of rice, excellent cotton, and large amounts of vegetables were also grown in this area. With the city of Isfahān located close by, Jay was an ideal location for providing the city with a good variety of foodstuffs and other commodities that it consumed.

Departing Jay and moving further eastward, we can visibly see the change in the pattern of crop cultivation. Specifically, the regions east of Jay were more likely to raise crops such as barley, wheat, and other grains that played an essential role in feeding the population—but demanded less water.\footnote{In this district, wherever well water was available, nightshades such as tomato, eggplant, potato, etc. were also produced, but, as mentioned, they were dependent on a water source other than the river.} Indeed, in 17th-century Persia, wheat was harvested through both dry and irrigated farming.\footnote{Willem Floor, \textit{The Economy of Safavid Persia}, (Wiesbaden: Reichert Verlag, 2000), 252.} The area of Karāraj was mostly occupied by farms, which, besides cereal, also produced opium, some cotton, vegetables, and good-quality corn.\footnote{Cultivation of opium expanded in the latter half of the 19th century, following innovations in the refining process that were introduced into the Persian market; the growing demand in China and Europe for opium also translated into a thriving market. Heidi Walcher, “Isfahān, Viii-Qajar Period”, \textit{Encyclopedia Iranica}, online edition, 2012, \url{http://www.iranicaonline.org/articles/lsfahan-viii-qajar-period} (accessed on 4/14/2017).} Moving eastward, in Barā’ān and Rūdāshtin, wheat and barley constituted the majority of harvest products in the area. In short, as one moves from west to east, the share of water supplied to these regions shrinks—as does the cultivation of thirstier crops that are more dependent on water.\footnote{96}
As noted, a region’s share of water and crop cultivation pattern also corresponded to the quality of soil in the region. The less saline and richer soil of the western districts, as described by Isfahānī, tended to yield high quality rice and the juicier fruits that were consumed in the city. Particularly, harvesting high quality rice, which became a major component of meals in the Safavid palace, had to be taken quite seriously. According to observations made by European travelers, fruit occupied a major part of the Persian diet. And recall that Barā’ān and Rūdashtin were grain-producing areas, and thus important for bread preparation, which was the chief source of carbohydrates for the majority of Persians.

Regions where the water supply was more restricted (e.g., those in the lower stream regions) were not only impacted in terms of the nature of local agricultural production, but also in terms of the built environment. In particular, consider the condition of Barā’ān and Rūdashtin during the medieval period as reported by accounts of medieval geographers, as well as in light of the remaining architectural landmarks still available to us. When Ibn-i Hawqal was writing in the 10th century, the water of the Zāyandihrūd River was exclusively dedicated to Barā’ān and Rūdashtin for 9 days per month. Additionally, during the planting season (spring) for 40 days they

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97 In comparing the only existing source on the culinary culture of Persia during the Timurid period and the cookbooks produced during the Safavid period, Shirin Mahdavi concludes that while rice appears as an essential element of Safavid dishes rice recipes are scarce in pre-Safavid sources. See Shirin Mahdavi, "Women, Shi'ism and Cuisine in Iran." In Women, Religion and Culture in Iran, edited by Ansari, Sarah F. D. Martin, Vanessa, 10-26, (London: Routledge, 2011). & Rudolph Matthee, "Patterns of Food Consumption in Early Modern Iran." Oxford Handbooks Online. 15 Sep. 2017.
would direct water to the area.\textsuperscript{98} This generous water share stands in stark contrast to the water share indicated in the Tūmār, which over the span of five and a half months of the dry season only allocates 30 days of water to Barra’an and Rūdashtin districts. Since the Tūmār reflects the practices already in place (at least in the early 17th century), there should have been a major change/modification in the structure of the water regulation between the 10th and the 17th century.

In descriptions of districts in the eastern end of the Zāyandihrūd, where the river vanishes in the Gāw Khūnī Lagoon, the 12\textsuperscript{th}-century writer, Māfarūkhī, provides some information about the region of Rūydasht (i.e., Rūdashtin).\textsuperscript{99} In his view, “Rūydasht district which is the largest district of Isfahān, is a district including blessed and fruitful lands and streams of running waters, and its population are among the princes and grandees, and administrator heads, and respectful lords…..” The western neighbor of Rūydasht, Barā’ān, which is another district in the lower stream of the river, was equally, if not more, populated and prosperous. In his 13\textsuperscript{th}-century geographical and cosmographical masterpiece, Hamdallāh Mustawfī also indicated the presence of about 80 villages in the Barā’ān region, and 60 villages in the Rūydasht region.\textsuperscript{100}

In addition to written accounts, the architectural evidence remaining from the period under Seljuq and Mongol rule is a testimony to Māfarūkhī and Mustawfī’s claim about the eminent economic and social status of these lower stream districts during the medieval period. A limited


\textsuperscript{100} Hamd Allah Mostofi, ed. Mohammad Dabirsiaqi, \textit{Nozhat Al-Qulūb}, (Qazvin: Hadis-i Emrūz, 2003), 92-3.
number of architectural elements that survived the passage of time also testify to the state of prosperity in the lower stream districts of Zāyandehrūd River during the medieval period. These include the mosque and Minaret of Barsyān with its Seljuqid inscription and another Seljuqid minaret (550-668 HGH) located on two opposite sides of the river, the Minaret of Gar (13th century) built by one of the grandees of Barā’ān, the Kai Mosque and the 15th-century Dashti and Aziran mosques located on the southern bank of the river.

However, the fertility and fortune that was evidenced in the Barā’ān and Rūdasht region during the medieval period apparently did not persist in the proceeding centuries. By the time of the Safavids in the 17th century, despite the region’s proximity to the capital, we do not observe any reports or evidence that testify to the same level of wealth and prosperity. Indeed, while Isfahān was the center of architectural activity in the 17th century; in contrast, no significant buildings were recorded to be built in the lower stream districts of Barā’ān and Rūdasht. Safavid construction activity was limited to minor renovations and additions to earlier existing structures, such as Barsyān Mosque.\textsuperscript{101} One cannot help but wonder what could have caused such a drastic change of fortune? Did a change in the share of the water of these lower stream districts hinder their development and prosperity? Are there political reasons behind this misfortune?

While we cannot be certain about the origins for this change in fortune, what we observe here is likely a parallel process. Perhaps the decrease in the water share to Barā’ān and Rūdashtin

\textsuperscript{101} A Safavid Carvansarai in Barā’ān is perhaps an exception. However, the caravanserai should be viewed in light of the state strategy to facilitate movement and transportation, and encouraging the trade in its territory. Therefore, in this line we can’t interpret the Safavid caravanserai in par with Saljuq and Mongol mosque and minarets, which are public institutions and testimonies to the flourishing agriculture-based settlements in the area.
was responsible for the decline of its prosperity and fame after the 15th century. Alternatively, one could also conjecture the opposite—that some other socio-political trend occurred in the region that shifted the center of power away from the eastern districts and caused their subsequent marginalization in terms of available water resources. Exactly when and why this change took place requires more research and exploration.

However, the picture that emerges demonstrates the central role of the Zāyandihrūd in the agricultural economy of Isfahān. A thoughtfully devised and well-executed plan for the distribution of water was essential for providing the supplies consumed in the constantly growing capital that also frequently hosted the court and its splendid feasts. While such a plan would maximize the efficient use of water, other supplemental measures had to be instituted to improve the network of hydraulic infrastructures and create new growth possibilities in the region.
Located at the center of the Persian Plateau with its harsh climate and desert landscape, development of Isfahan and its 17th century verdant suburbs required a steady source of water.
Figure 1-3: Water resources for the city of Qazvin. In Qazvin, the city and its productive hinterlands relied on a web of seasonal rivers, which were complemented with supplemental water derived from the nearby qanats. Illustration Credit: Sahar Hosseini, after Mohammad Javad Safi Nezhad, *Tallil Va Tafsir-i Toomar-i Abyari-i Gharn-i Hashtom, Qazvin*, (Tehran: Vezarat-i Nirou, 2002).
Figure 1-4 - Originating in the highlands of Zagros Mountains, Zayandehrud River flows into the flat plains of Isfahan. It is within these plains that the river has historically nurtured numerous agricultural settlements, villages, and towns – all of which paid homage to the city of Isfahan.
Figure 1-5 - Historically six districts of Isfahan received most of their water requirement from the Zayandehrud River. Districts of Lanjan & Alanjan, Marbin, Isfahan and Jay, Kararaj, Bara’an, and Rudashtin were mainly supported by a network of canals that distributed water of Zayandehrud River, while Barkhar and Quhab relied on underground sources of water.
Figure 1-6: Water Distribution Plan During the Dry Season. Similar to fluctuating water levels over the course of seasons, rigorous control over the distribution of Zayandehrud’s water was also seasonal, with tight regulations over the dry season when the water of the river was more limited. Moreover, some of these districts also employed qanat and wells to tap into underground water resources.
Fig 1-7 - Pattern of Crop Cultivation in the districts of Isfahan that had access to the river’s water. As we move from west to east, not only does the water share for the region decrease, but the dependency of regional produce on water also diminishes. The picture that emerges from overlapping the crop production and water share of each district sheds new lights on the ways that the water distribution plan likely functioned to support agricultural activities, as well as affected the prosperity of certain regions at the expense of others.
CHAPTER 2

Hydraulic Infrastructure: Weaving the River and The City

Paradise on the Earth Relies on Water

In the multi-volume description of his time in Persia, Chevalier Chardin expressed his astonishment about the size and prosperity of the city of Isfahān. How could a city as large as Isfahān, despite its distance from the sea and in the absence of any navigable river, be blessed with such a large volume of harvests, he asked? For a city that had to rely solely on the agricultural production of its hinterlands to feed its population, the fact that Isfahān was able to grow to the size that it did and support such a large population in the mid-17th century represented an incredible attainment. European travelers who visited the city in the 17th century estimated city’s population to be between 200,000 and 500,000. Even if these numbers are overestimations, the comparison

102 Jean Chardin, *Voyages De Mr. Le Chevalier Chardin, En Perse, Et Autres Lieux De L’Orient*, V. 3, (Amsterdam: Lorme, 1711), 83.

103 Herbert (in 1627-29; p. 126) estimated the population to be around 200,000. A couple of decades later, Olearious estimated the population of Isfahān to be 500,000. Jean Chardin maintained that the city of Isfahān was as large as London at the time, which suggests a half a million inhabitants. See Jean Chardin, *Voyages*, p. 4, & Thomas Herbert, and William Foster, William, *Travels in Persia, 1627-1629*, (New York: R.M. McBride, 1929),126, &
these visitors drew between Isfahān and large cities in Europe, such as Rome and London, testifies to the resources and engineering ingenuity required to supply the local population with the variety of produce and grain products that were readily available in the markets of Isfahān.

The major difference between Isfahān and these European metropoles, however, was the distance of Isfahān from any navigable waterway that could facilitate the transportation of food and raw supplies from afar—which was an amenity that cities such as London, Paris, and Rome easily enjoyed.\textsuperscript{104} Moreover, given the location of Isfahān in the middle of the Persian Plateau—particularly given the fact that the area is typified by a harsh climate and desert landscape—the fact that it profited from such a productive hinterland is even more astonishing. As discussed in Chapter 1, we can credit the Zāyandihrūd River for the region’s prosperous agricultural production, which was able to sustain the city of Isfahān over generations.

In addition to the presence of productive farmlands that produced rice, cotton, wheat and barley, the city itself was surrounded by a ring of gardens. In contrast to the congested fabric of the old city with its narrow twisty-turny alleyways, the new neighborhoods that flourished over the course of the 17th century were laid out with wide streets and large numbers of gardens

\textsuperscript{104} In Europe, in light of the limited transportation systems in the pre-modern world, navigable rivers and arteries facilitated the transportation of grain and other such supplies from more distant places. For example, in London, it was still economically viable to import grain by water from settlements adjoining Thames; the same being true for Paris and the utility of the Seine. In south Spain (in Andalusia), grain was often shipped from North Africa due to the ease of transport across the Mediterranean. For a broader discussion of these issues, see Keene, Derek. "Feeding Medieval European Cities, 600-1500," Institute of Historical Research, University of London; and James A. Galloway & Margaret Murphy (1991) “Feeding the City: Medieval London and its Agrarian Hinterland,” The London Journal, 16:1, 3-14.
featuring numerous fruit trees that also supplied shade for the locals. The end result was a landscape that contributed to a government-regulated agro-urbaniy.\textsuperscript{105} The “New City,” as it was known to the locals, was a new productive zone that blurred the boundaries between the city and hinterland.\textsuperscript{106}

Equally important to the productivity and attractiveness of the region were measures taken by the government to facilitate the making and maintenance of this green urban fabric. In the hot and arid climate of the region, the creation of this rich landscape was only possible through large-scale investments in improving, expanding, and managing a complex irrigation system that was dependent on the nearby Zāyandihīrūd River. Building on discussions presented in Chapter 1, this section examines how the unprecedented growth of Isfahān in the 17\textsuperscript{th} century was intertwined with investment in, and utilization of, the hydraulic infrastructure of the city, which further linked the success of the city with this critical waterway.

The capital of an empire on the rise, 17\textsuperscript{th}-century Isfahān grew, by necessity, to accommodate the large number of people who moved to the region from all over the empire and beyond. Among them, many were elites associated with the Safavid court—and whether living in Isfahān or in nearby provinces, many of them built splendid residences that most often featured lovely gardens. In that front, Isfahān followed the examples that were earlier set in capital cities

\textsuperscript{105} Almost every European visitor who entered a Persian garden commented on the large number of fruit trees that grew in these gardens. Abdi Beg’s poetical description of the royal gardens of Qazwin also testifies to the importance of fruit trees in any Persian garden.

\textsuperscript{106} Describing the initial phase of Abbās I’s construction campaign south of the old city, Junabadi states that the people of Isfahān referred to the new developments as “New City.” See Junabadi, tr. Gholamreza Tabataba’i Majd. \textit{Rowzat Al-Safafiviyeh}, (Tehran: Bonyad-i Moghoofat-i Dr. Afshar, 2000),762.
such as Herat, Tabrīz, Qazwīn etc.\textsuperscript{107} For example, in Qazwīn a large portion of Shāh Tahmasb’s royal city of Sa’ādatābad was dedicated to the garden-residences of his courtiers.\textsuperscript{108} Similarly, Timurid elites in Herat had developed expansive suburbs dotted with splendid gardens and \textit{takhts}.\textsuperscript{109} Following the Turco-Persian practice of residing in gardens, garden became the \textit{de-facto} element of new development in Isfahān, with decisive impacts on the urban spaces, urban morphology, and the direction of growth.\textsuperscript{110}

Central to the greening of Isfahān was ensuring the provision and delivery of water to these gardens. Indeed, discussion about the verdant and fertile landscapes of the “New City” of Isfahān should begin with a discussion of the complex and intensely managed water infrastructures that made such developments possible. How did the location of river and existing hydraulic infrastructures influence urban growth in Isfahān? What was the state’s policy about the water infrastructure in Isfahān? What, exactly, were the new hydraulic infrastructures that facilitated such developments?

\textbf{The Southern Suburbs of Isfahān:}
\textbf{From Isolated Gardens to Green Neighborhoods}


\textsuperscript{110} This was the model in Herat and Qazwin, but in Isfahān there was more integration between the suburban gardens and the city. Available scholarship has typically concentrated on royal gardens, with less concern for many other similar suburban gardens constructed by elites and courtiers. For a study of elite suburban gardens in Isfahān, see Ali Emrani, \textit{The Role of Gardens and Tree-Lined Streets}. And for Herat, look at Terry Allen, \textit{The Catalogues}. 
Throughout much of the medieval period, the city of Isfahān kept its distance from the river. In effect, growth of the city during this period remained confined within the limits of its 10th century Buyid (934–1062) fortifications. Available information about the period between 10th and 17th centuries is sparse and, at best, sketchy. In the absence of reliable archeological evidence, we must rely on existing literary sources, which provide us with some rough information about Isfahān under the rule of the Buyids (934-1062) and the Saljuqs (1037-1194). But when it comes to the period during which the city was under Mongol and Timurid control, sources are completely silent about the condition of the city.

Based on literary sources during the 10th and 11th centuries, gardens and palaces were scattered all over the extramural landscape of the city. The Buyids established palaces and mansions along the banks of the river, and Seljuqs constructed grand gardens outside the city. However, the nature of these extramural developments were quite different from what was to happen during the 17th-century expansions. Both Buyid and Seljuq gardens and palaces were located with a considerable distance from the city, and were somewhat scattered across the landscape. Indeed, they functioned as individual units with no obvious, or even necessary, bond with the city. In contrast, the 17th-century suburbs of Isfahān were different. Unlike the remote

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112 Ibid. The Mongol conquest of Isfahān in 1226 started a period of decline and depopulation that lasted until early 14th century when Ghazan Khan initiated waves of tax and land reform. Not long after, the massacre and looting that took place by Timur in 1387 and his son JahanShāh in 1453 were in particular disastrous for the city of Isfahān.


individual gardens of prior centuries, these garden-mansions were components of newly established neighborhoods. For example, in a neighborhood such as Abbās Abād the area’s gardens and large mansions were located within easy striking distance of important public institutions such as mosques, markets, schools, baths, etc. In effect, these mansions and their splendid gardens became an extension of the city of Isfahān.

Essentially, medieval Isfahān featured a bi-partite spatial configuration, whereas the 17th-century suburbs of Isfahān developed as a continuum. During the medieval period, the residential city remained confined to its 10th-century fortifications, while the ruling class established their estates far from the city and closer to the river. However, during the 17th-century phase of urban growth, Safavid sovereigns never attempted to reconstruct the old fortifications or even build a new, all-encompassing structure. With the deterioration of the old walls, there was no physical boundary between the new and the old.

In preparation for the capital that would represent the grand empire that Shāh Abbās I envisioned, construction activities were targeted for expanding the city towards the south. Along with the establishment of new neighborhoods and gardens on both sides of the river, grand streets (khyābāns) were constructed to ensure convenient connection between the old and the new. Early on, Chāhārbāgh Street (Khyābān-i Chāhārbāgh) was founded as the central spine of these developments. This famous (and still existing) street connected the Naghsh-i Jahān Garden complex to the suburban Hezār Jarīb Garden (Figure 2-3). Indeed, Chāhārbāgh Street linked the residential-administrative center of rule known as the Naghsh-i Jahān complex to the royal pleasure garden establishment of Hezār Jarīb. Along the street, the king and his military and
bureaucratic elites established awe-inspiring gardens. The tall, richly decorated portals of these gardens provided a majestic frame for the royal processions and evening strolls of Isfahāni elites.

Another key element of Abbās I’s urban scheme is represented by the two major suburban neighborhoods that were established exclusively to host the new population brought from the disputed north-western borders of the empire. In contrast to the winding and narrow alleys of the medieval city, these new neighborhoods featured wide streets and delightful waterways that meandered through the streets. Together with the royal complex and elite gardens that stretched along the Chāhārbāgh Street, these new neighborhoods directed the southward development of the city towards and beyond the Zāyandihrūd River.

With the selection of Isfahān as the political capital, coupled with the Shāh’s grand vision for the city and its population, the growth of the city was inevitable. But why would the city develop towards the river as it did? In considering the topography of the Isfahān plain, note that the city did not face any natural barriers toward the north, west, or east. As a matter of fact, apart

115 Chardin claims that these gardens were established over old vineyards—but there is no other written or archeological evidence to support this claim.

116 Many have argued that the relocation of these populations was not simply a war tactic, but also an economic strategy towards boosting Safavid trade (see Chapter 3 of this dissertation). The new neighborhoods not only facilitated Shāh Abbās I’s intention to populate his capital with wealthy merchants, but also brought influential families and individuals from the strategic contested north-western regions close to the state and its watchful eyes. Therefore, the new neighborhoods were designed to appeal to these population, and at the same time protect the capital’s wealth and prosperity. As a result, layout and location of these neighborhoods was not random or accidental; rather, the layout of their construction was intentional, well-considered, and pre-planned. For more information about the Julfa Neighborhood, see Ina Baghdiantz-MacCabe, "Princely Suburb, Armenian Quarter or Christian Ghetto? The Urban Setting of New Julfa in the Safavid Capital of Isfahān (1605-1722)." Revue Des Mondes Musulmans Et De La Méditerranée no. 107 (Jan 1, 2012): 415-436, https://doaj.org/article/acaf6eac796640a6a4604e4f8a61b505.

117 This was later followed by the establishment of Charabgah-i Khājū Street and Khājū Neighborhood west of the city.
from the river, the only topographic barrier for urban growth in Isfahān was the Suffeh Mountain, which closed off the Isfahān plain in the south.

The first possible explanation for the growth pattern of Isfahān—the issue of military defense—is insufficient to wholly justify the city’s expansion toward the south. Indeed, the obvious indifference of the Safavids towards building new fortifications, or even repairing the old fortification, demonstrates their lack of concern for defense as a determining factor in planning their city. Furthermore, unlike many cities in South-East Asia, Europe, or Americas, where rivers were major arteries for trade and transportation and therefore a magnet for agglomeration of people, the seasonal nature of the Zāyandihrūd River and its unnavigability disqualified Isfahān as a port.

On the other hand, when thinking about the major river cities of the world, the most urgent concern that tended to keep settlements away from developing on or near riverbanks was the issue of flooding. In the case of the Zāyandihrūd, however, this issue seems to not have been a major concern. While medieval geographers, 17th-century local and foreign accounts, as well as 20th-century records report occasional flooding of the Zāyandihrūd River, it would appear that flooding was, at best, a minor concern. Writing in the 10th century, Hamzih Isfahāni reported two such floods—but with a 30-year gap between them.118 In the foreign and local accounts of Isfahān during the 17th century, we come across few occasions where heavy rain and flooding of the river imposed any serious damage and/or loss of buildings near the river and along Chāhārbāgh Street.119


119 The author of Jahan Aray-‘i Abbāsi reports heavy rain and a flood in mid-November of 1654, but doesn’t provide any details about the damage it brought to the city and building. See Mohammad Tāhir Vahid Qazwini, ed. S’aeed Mir Mohammad Sadeq, Tarikh-i Jahan Aray-‘i Abbāsi (Abbāsnameh). Tehran: Pazhooheshagah-i Ulum-i Insani va
Overall, therefore, issues such as flooding and the importance of the local waterway for the city’s trade and transportation, which are critical to the discussion of most river-cities, simply do not apply to Isfahān in any significant way.

With the garden-city model that dominated the vision for the new Isfahān, the decision for southward expansion of the city seems to have been the most logical direction. The proximity to the river not only meant better air and views, but it would also ensure easier access to the water that was critical for maintaining the green landscape that distinguished the new city from the old one. As historical evidence suggests, prior to the 17th-century expansions, the area between the city and river was mostly occupied by agricultural lands and gardens, and thus presumably equipped with water infrastructures that could be easily utilized.\footnote{\textit{Motale\'at-i Farhangi}, 2005. 588. More than a decade after that in November, 1666, Chardin described a heavy rain and ice storm that resulted in some river flooding—sufficiently serious to damage houses, gardens and the streets of the city. He estimated that the damage to royal buildings was about 100,000 eco. See Chardin, “Voyages. V.1”, 279. The next mention of flooding that I found appears in the accounts of Du Bruyn in April of 1699. See Cornelis De Bruyn, \textit{Travels into Muscovy, Persia, and Part of the East-Indies}. London: 1737), 200.}  

Indeed, when thinking of Isfahān and its relationship with the Zāyandīhrūd, an abundance of water should not concern us; rather, it is the relative scarcity and seasonality of the water supply that has impacted the development of this city. Establishing large gardens blessed with a plethora of fruits, vegetables and flowers, and embellished with the graceful flow of water and playful dance of fountains and waterfalls, required reliable access to a steady supply of water. Both European visitors and Persian chronicles admired the streams of water that wandered through the streets of the newly established neighborhoods of the city. Moreover, Abbās Abād neighborhood was famous for its large gardens. Similarly, in Julfā, Armenians were ordered to incorporate\footnote{\textit{Motale\'at-i Farhangi}, 2005. 588. More than a decade after that in November, 1666, Chardin described a heavy rain and ice storm that resulted in some river flooding—sufficiently serious to damage houses, gardens and the streets of the city. He estimated that the damage to royal buildings was about 100,000 eco. See Chardin, “Voyages. V.1”, 279. The next mention of flooding that I found appears in the accounts of Du Bruyn in April of 1699. See Cornelis De Bruyn, \textit{Travels into Muscovy, Persia, and Part of the East-Indies}. London: 1737), 200.}
gardens into the layout of their houses. Tavernier described streams that ran along the two major streets of Julfa, which provided Armenians with the water needed to maintain their gardens. Access to water canals was absolutely necessary to ensure the upkeep of these gardens.

**Extending Hydraulic Architecture:**

**Beyond the Private Domain of Gardens and into the Public Spaces of the City**

These water canals, that distributed water all over the plain of Isfahān, not only supported the cultivation of farms and gardens, but also adorned private and public institutions of the city. Access to running water was a privilege for public institutions such as mosques, madrasas, sarāy s, etc. In looking at the first detailed map of Isfahān (1923), it is easy to recognize the proximity of mills, mosques, and schools to these canals. Water was also integrated into the architecture of these institutions, as evidenced by the fact that interior spaces of structures such as Sarāy -i Mukhles, Jaddih Buzurg, Jaddih Kūchak Madrasas, and Mullā Abdullāh Madrasa still bear

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121 Iskandar Munšī, *Tarikh-i Ālam Ārā-y-ī Abbāsi*, (Tehran: Amir Kabir, 1972), 668. Iskandar Munšī’s reference to “Khānih hay-i be taklīf bagcheh dar” suggests the presence of a required arrangement to build these houses following a layout that incorporated a garden, which in turn entailed necessary access to water for all the households. This also tangentially suggest the policy of the government to encourage more gardens, and further productivity of fruits, vegetables, etc.


123 In Isfahān, most houses relied on well water for their household use. Per the testimony of the author of Nesf-i Jahan fi Tarif-e, Isfahān bath houses also relied on well-water. Indeed, even if they were located close to a water canal, they would be unlikely to utilize the water from the Zāyandihrūd. See Muhammad Mihdī Isfahānī, ed. Manūchihr Sutūdih, *Nesf-i Jahan Fi Ta’rif-i Isfahān*, (Tehran: Intesharat-i Amir Kabir, 1990), 55 & 79.
evidence of this interconnection (Figure 2-4). These water canals were meticulously interlaced with the architecture of the building in order to provide water for cleansing and purification or/and creating a captivating sensory experience for the visitors.124

New urban public spaces of the city were also adorned with spectacular water features that were fed by these canals. For instance, the water canal that circulated around the major plaza of the city—the Naghsh-i Jahān Miydān—received its water from the Fadin Canal (mādī-i Fadin). The water canal and line of trees that were planted alongside it provided a delightful space in front of the shops and coffee houses. Together, they created an excellent setting for the locals and visitors to sit, rest, and socialize in the major plaza of the city. Leaving the plaza, the water then flowed into the courtyard of Mullah Abdullāh Madrasa and filled its central pool before being redirected to the eastern neighborhoods of the city (Figure 2-4).125

Not far away, the Jūy-i Shāhi Canal (mādī-I Jūy-i Shāhi) fed the course of another waterway that streamed along the Chāhārbāgh Street. European travelers repeatedly expressed their amazement at the water features they saw along this street. According to Chardin, seven pools of differing sizes and geometrical shapes were positioned along the northern section of the Chāhārbāgh Street, and an octagonal raised platform in the middle of the second pool offered a delightful respite from the heat.126 On the axis of the street, water flowed in a stone canal, moving

124 Just recently several underground canals were also discovered during construction activities in the Chāhārbāgh Street and near the Imam Mosque at the Naghsh-I Jahan Maydan. Archeological reports and evaluation have not yet become available, but early news suggests that the canals at least extended along the length of the Naghsh-i Jahān Miydān and the Safavid Jame Mosque.

125 Mohammad Mihdī Isfahāni, Nesf-I Jahan, 72. This is also visible in the Reza Khan 1923 map of Isfahān.

126 Chardin, Voyages, 57-58.
from one pool to another. Along the street, fountains and waterfalls created amazing water acrobatics and cooled off the weather by spraying water into the air. Additionally, for several months of the year this enchanting setting was enhanced by the practice of sprinkling water over the pavement to alleviate the hot and dry climate of Isfahān.

A London doctor and research traveler, John Fryer (1650-1733), noted the presence of gentries who rode and walked along the street every evening, engaging in all sorts of activities such as “making matches for shooting, hunting and coursing.” Many would sit in the coffee houses near a pool, consuming coffee, tea, sherbet, and smoking tobacco. Considering the extreme climate of the plateau, the capacity of these running waters to alleviate the sometimes-enervating conditions of sunny summer days of Isfahān made these spaces delightful settings for leisure activities.

The water features that adorned the Naghsh-i Jahān Miydān and Chāhārbāgh Street of Isfahān were not new elements, even in the 17th century. Indeed, they were crucial architectural features that had embellished private gardens, mansions, and palaces for centuries. What distinguished Isfahān was the incorporation of these hydraulic elements in the public domains, such as miydān and streets of the city. Along Chāhārbāgh Street, the air cooled by the fountains, the enchanting sound of dancing waters, and the platform raised within the pool offered distinct sensory experiences. Similarly, the spatial configuration of the water canal that streamed around

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128 Charidn, *Voyages*, 58.

the plaza formed distinct spaces within the larger space of the plaza. It created enclaves within the open-air space of the plaza, which were ideal for sitting, smoking, drinking wine/coffee, and making conversation—all the while enjoying a rich sensory experience. Presence of these micro-spaces and the kind of activities and interaction that they promoted demonstrates that the grand street and miydān of Isfahān did not simply represent the king and his power - but also created highly desirable spaces of leisure and sociability for the cosmopolitan population of the capital.

**Defining Urban Growth within the Framework of Infrastructure**

The expanding neighborhoods and gardens of Isfahān and the city’s captivating public spaces are not new topics in the scholarly literature. However, previous studies have often treated them as individual designed objects, focusing on identifying the architectural style/components of a given structure, street, plaza or garden. To be accurate, some studies have also considered the sensory experiences that may have transpired within these spaces, but such sources are limited. Similarly, the attention to water has also been limited to its decorative and symbolic significance. Thus, not only is a more comprehensive study of the hydraulic architecture/water features of Isfahān is long overdue, but a more nuanced understanding of the city’s hydraulic landscape is also merited.

With the exception of some recent works—notably, Ali Emrani’s discussion of streets as an underlying system of urban development in Isfahān—studies addressing infrastructures such as Chāhārbāgh Street or Khājū and Allāhverdīkhān Bridges have tended to limit their focus to the architectural merit and aesthetic value of their subject. This lack of attention to infrastructure has also lead the scholarship to ignore the water network in Isfahān as a subject worthy of scholarly
attention. The water infrastructure necessary for the establishment and maintenance of Isfahān’s
gardens and public institutions has only been mentioned in passing references; indeed, it has never
been examined in any systematic way. As a result, our knowledge about these water sources has
remained confined to uncritical repetition of quotes from foreign and/or 19th-century sources.

While a “traditional” architectural framework enables us to reimagine the gardens and
structures that disappeared long ago—and to some degree examine their material, aesthetic, and
spatial properties—this framework is not equipped for addressing the intertwined relationships of
these individual projects with the larger natural and man-made landscape of the city. Therefore,
in the following section, my examination of gardens, buildings, public spaces and their water
features goes beyond their captivating architectural, aesthetic and sensory qualities. Rather, I look
at these individual projects as part of a larger system of landscape, which only became possible
through the support of a highly controlled and managed hydraulic infrastructure that relied on the
Zāyandihrūd River. More specifically, my aim is to provide a nuanced picture of the hydraulic
infrastructure system that enabled the making of Isfahān as we know it.

130 The studies of scholars such as Mahvash Alemi, Susan Babaie, and Bignoli have provided the necessary
foundation for imagining these gardens and urban landscapes as they stood during the 17th century. This is not to
discredit their highly valuable work, but to use their work as a stepping stone to move to a more nuanced
understanding of the landscape as a system.

131 Water canals, known as mādī are well known features of Isfahān’s urban landscape, but no serious scholarly
work has been done to understand their relationship with urban landscape of Isfahān. They were often considered to
be exceptional features of Isfahān without recognizing the parallels that existed between them and river-based canals
or streams that carried water of qanats in many other cities. The present chapter does not claim to be a
comprehensive account, however it is pioneering a critical examination of this hydraulic infrastructure and its role
in urban development of Isfahān through cross examination of multiple sources. In doing so while it only scratches
the surface, it takes the necessary first steps for future more-thorough studies.

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In the context of 17th-century Isfahān, the city’s infrastructure is a difficult subject to address. Firstly, a significant portion of the physical evidence has disappeared, making an archeological examination of the landscape long overdue. Secondly, relying on available textual materials is also challenging, not only because of the lack of trustworthy sources, but also due to the variations in names and name changes that took place throughout the last four centuries. Moreover, unlike written accounts of gardens and buildings, which were the common subjects of the observations made by Europeans at the time, the infrastructure was often invisible. In fact, historical accounts make so few and fragmentary references to the city’s water infrastructure that this avenue of investigation, if based solely on historical records, can be considered challenging at best. As a result, further exploration involving a systematic study of available materials is required in order to paint a fuller picture of Isfahān’s hydraulic infrastructure.

Acknowledging these limitations, I cross-examine the existing textual materials with historical and contemporary maps and documents in order to render a preliminary picture of the state of the hydraulic infrastructure, as well as any auxiliary projects, that facilitated the growth of suburban development in Isfahān. The conclusions reached here should be considered tentative and hypothetical. Despite these shortcomings, I believe that this is a necessary, critical, and significant step forward to foster further discussion on the state of the hydraulic infrastructure in 17th-century Isfahān.

In order to do so, I rely on a multitude of primary foreign and Persian sources, which are then cross-referenced with the information provided by a document known as Tūmār -i Shiykh
Bahāyī (or the Tūmār, for short). All the information recovered from these texts are charted over custom-made maps, which generated by cross referencing historical maps and first aerial photographs of the region. Critical analysis of this information, subsequent comparative data, and an interpretative evaluation of findings helped me to establish a number of facts and offer a number of hypothesis for future consideration.

Tūmār-i Shiykh Bahāyī is one of the most valuable sources of information, which has not yet received much attention from historians. As discussed in Chapter 1, dating the Tūmār is a matter of conjecture; and, yet, it is a critical step for utilizing it as a historical document. I remain convinced by Abarī’s argument that certain names and idioms such as Sadr-i A’zam or Mo’tamed al-Dowleh, which were used in the text of the Tūmār, had only become common in the Qajar period. Therefore, in all likelihood the existing document is a modified version of an older record and was produced in the early- to mid-19th century.

In the text of the Tūmār, there are frequent references made to an unknown “original plan,” and several canals are identified as structures that were created after the establishment of that “original plan.” Going through the Tūmār, we can be quite certain that up to 14 new water canals had branched off from the river between when the original distribution plan was established and the time period of the latest modifications in the Tūmār. But when was this “original plan”, mentioned in the Tūmār, actually prepared? We know that some sort of document directing the

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132 This document was originally thought to be produced by an influential scholar and advisor to the Safavid dynasty (Shiykh Bahāyī)—also credited for quite some time with the creation of Isfahān’s system of canals. As discussed below, however, subsequent scholarship has called this belief into question.

distribution of Zāyandihrūd River water had existed since ancient times. It is not difficult to imagine how the rise and fall of various political powers and powerful families, as well as the destruction of buildings and systems of infrastructure brought about by wars and power vacuums, would have had a direct effect on the implementation and modification of the document. But is the “original plan” mentioned in the Tūmār a reference to an ancient plan?

Given our current state of knowledge about the Tūmār, providing a definitive answer to these questions is impossible. We can, however, make some assumptions. As discussed in Chapter 1, there was a major change in the pattern of water distribution among various districts of Isfahān sometime between the 11th and 17th century. Therefore, the plan reflected in the Tūmār is substantially different from the pre-11th-century plan. Furthermore, we know that attacks by Timur and his son, Jahan Shāh, and the following period of upheaval would likely have wrought serious damage to the state of Isfahān’s water infrastructure. Moreover, as the geographic location of repeated disputes between the Timurids and the Tukmens, there is little chance that a major plan could have been introduced and implemented in Isfahān during the 14th century. Early decades of Safavid reign also evidenced an attempt by the state to regulate water distribution in various

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136 Timurids were more involved in the agriculture of Khurasan and the state of its infrastructures.
cities of the empire, including Qazwīn (Tūmār -I Qazwīn ) and Herat. In particular, the reign of Shāh Tahmasb I appears to have been a critical turning point.

The Tūmār -i Qazwīn was signed by Ali Karaki, the head of religious affairs during Tahmasb’s reign. In Isfahān, too, during the reign of Shāh Tahmasb, a new water canal was constructed that extended from the river to the old Friday Mosque at the center of the medieval city. A project for bringing the water of the Kuhrang River to the Zāyandihrūd was also initiated during the reign of Shāh Tahmasb. Though the difficulty of this monumental project prevented its accomplishment during this period, it signals the state’s determination to augment the water volume of the Zāyandihrūd, in order to improve irrigation in the region. In light of the significant opening statement of the Tūmār , which refers to the establishment of a water distribution plan under the reign of Shāh Tahmasb, we may consider this as a reference to the actual date of the preparation of the original document. In any case, given the economic landscape of the early Safavid period and their growth policies, it is not unrealistic to assume that the state was very interested in formulating a document to regulate water distribution in the region of Isfahān.

137 The two documents describing the distribution of water in Qazwin and Herat, “Tūmār -I Qazwin,” and “Resaleh Taqsim-I Ab-I Qolob,” are testimony to the initiatives taken by the Safavids.

138 Luṭf Allah Hunafar, Ganjineh- ‘ī Asar-ī Tarikhī-‘ī Isfahān, (Tehran: Ketabforushi-‘ī Saqafi, 1965), 165-168. According to the inscription that was discovered in the mosque, while the water was not to be utilized for irrigation and household applications before its entrance into the mosque, it seems that it was available for such purposes after it left the mosque.

139 Iskandar Munshī, Tarikh-ī Alam Ara, 949.

140 From the time that scholars discovered an association of the Tūmār with the name of Shīykh Bahāyī, there has been somewhat of a misconception that the Tūmār was a document prepared during the reign of Shāh Abbās I. More recently, however, further scrutiny of the titles and facts mentioned in the Tūmār has caused scholars such as Abarī and Mehryar to question the dating of the Tūmār. Given that the Tūmār is a 19th-century modified version of an earlier document, we can’t easily dismiss the name of Shāh Tahmasb at the beginning of the Tūmār. Looking at other circumstantial evidence, such as other activities of Shāh Tahmasb for regulating and arranging the affairs of water in Isfahān, Qazwin, etc., we need to revisit the assumption that the name of Shāh Tahmasb appears at the
At the same time, we can be reasonably certain that the initial distribution plan predated the reign of Abbās I and his major construction campaign in Isfahān. At least two canals that exclusively supported 17th-century royal developments are listed in the Tūmār as establishments that came after the launch of original water distribution plan. Given this information, we can reasonably assume that the “original plan” referred to in the Tūmār was prepared sometime after the attack of the Timurids and before the construction campaign of Abbās I in Isfahān.

When considering the changes that impacted the Tūmār during the years before the preparation of the current 19th-century version, the information provided by the Tūmār is generally not very trustworthy for reconstructing the 17th-century distribution network in terms of the scale of individual gardens or institutions. In contrast, information about the location of each canal, as well as the period of its construction, should be reasonably reliable. Furthermore, when compared against information gathered from both 17th-century sources and existing physical evidence, the information in the Tūmār helps me to confirm or complement the data provided by other sources.

**Heavy Investments in Water Infrastructure:**

**A Necessary Step for a Splendid Capital City**

beginning of the Tūmār, if only to give credibility to the document. For instance, we may ask why Shāh Tahmasb was mentioned and not Shāh Abbās I, who has historically been a more powerful figure, especially in history of Isfahān. We can therefore hypothesize that the original water plan discussed in the Tūmār was a product of the reign of Shāh Tahmasb, occurring after a long period of war and upheaval in Isfahān and, more broadly, when the region began enjoying a period of peace and stability.

141 For example, the Jub-I Sīāh, which Safavid historians clearly mention among the early projects that Shāh Abbās I carried out in Isfahān, is listed in the Tūmār as a canal constructed after the establishment of the original plan. Jub-I Sīāh will be discussed later in this chapter.
Investment in hydraulic infrastructures represents an important aspect of the policies of the Safavids—especially in light of the fact that following the relative political stability during the reign of Shāh Abbās I, the state was able to devote more attention to the measures required for economic growth.\textsuperscript{142} Consider, for example, that this period evidenced the construction of hydraulic infrastructures such as dams in Kāshān and Shirāz, and water canals in Mashhad, Najaf and Karbala, all of which were intended to improve local conditions and stimulate growth in these cities. Similarly, the embellishment of Isfahān and the foundation of new neighborhoods and gardens that stretched the city beyond its medieval boundaries became possible with the support of new water infrastructures that were devised under the watchful eye of Abbās I and his generals.

There is no doubt that the Safavids were well aware of the critical importance of water for the prosperity and growth of Isfahān and its new suburbs. Abbās I’s determination to link the waters of the Kuhrang and Zāyandihrūd rivers was evidenced in the measures he was ready to take to increase the water resources available to the city. Not only did the king assign high ranking and competent officials such as Muhib Ali beg and Imām Ghuli Khān to the project, but he personally made several trips to examine, plan, and oversee its implementation.\textsuperscript{143} A yearly tax of 50,000 Tuman was also levied on the population across Persia to amass sufficient funds to carry out th

\textsuperscript{142} See Chapter 1.

\textsuperscript{143} Safavid sources report four such trips to Kuhrang in the years 1600, 1603, 1618, and 1621.
Around 800 skilled workers, masons, and stone carvers were also invited from all over the country to participate in the implementation of the project.

The Kuhrang project was so important to the Shāh Abbās I that he made several trips to the region to personally examine the state of the site, the scale of the project, and later to inspect the initial phase of its execution. When he traveled to Kuhrang in 1621 to oversee the commencement of the project, neither the uprising in Khuzestan, nor the invasion of the Portuguese to the Qishm Island (in the Persian Gulf), was sufficiently urgent to make him leave the site. It was only the news of the overthrow plot by his son that could bring him to Isfahān overnight.

Despite the project’s short periods of suspension under his descendants (Safī I and Abbās II), the droughts and famines that befell Isfahān after the ascendance of Safī II (later Shāh Sulīymān) once again ignited interest in the project to facilitate irrigation and proliferation of agricultural produce in Isfahān. This time, following the initiative taken by Abbās II, Soltan Sulīymān and later Soltan Husiyn approached French experts and engineers to assist them with the execution of the project—none of which bore fruit. Neither inviting foreign experts, nor the

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144 Kholasat al-Seyr, 39, Abu al-Hassan Qazwini, Favayed al-Safaviyeh, 48.

145 Lord Curzon estimated that between 40,000 and 100,000 workers were required to accomplish the task at hand. The number mentioned by Olearious could have been a reference to professionals and skilled masons with special knowledge and skills—and not the unskilled laborers involved in the project.


147 Iskandar Munshī, Tarikh-i Alam Ara, 1578.


collection of special taxes and sending Persian executive groups to the site, was successful in advancing the project. In summary, the construction of the Kuhrang Canal was never to come to fruition during the Safavid Period.  

The persistence of the Safavid state in pushing for investment in the project, in spite of all the technical and financial obstacles, is a testimony to the importance of the Zāyandihrūd’s water and the measures the state was willing to take to boost its water output. Material evidence in upper stream regions such as Chehel Cheshme and Faridan testify to other parallel activities that the Safavids undertook to increase the water that fed the Zāyandihrūd River.

If the Kuhrang Canal and other upstream projects were aimed at boosting the amount of water available to the Isfahān region, other steps were also taken to address the critical issue of access to the river’s water. The new neighborhoods and gardens required waterways that would deliver the Zāyandihrūd’s water to their sites. While some of the existing canals could have been expanded, extended, and further branched off to reach new destinations, additional water canals were also required. Judging from the content of the Tūmār, we can identify two canals that were specifically constructed to facilitate the grooming of Isfahān as the heavenly capital embellished with charming gardens.

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150 For more information about actions taken by Sultan Husiyn regarding the Ab-I Kuhrang, see Babak Zamanipour, Vizhegiha-‘I Enteghal-I Ab”, 284-293.

151 Ibid, 272.
Lands South of The ZayandheRūd River

References in the Tūmār to the Shāhi Canal (mādī-i Shāh) and Canal of the Great Shāh (mādī-i Shāh-i Kabir) suggest that none of them were in place when the original water distribution plan was prepared.¹⁵² According to the Tūmār , the Shāhi Canal branched off from the river somewhere in the Garkān district (Bulūk), south-west of Isfahān and north of the Pir-ī Bakrān Village.¹⁵³ The Tūmār also makes it clear that this is the canal that carried water to the Hezār Jarīb Garden. It also suggests that the Shāhi Canal was also known with other titles such as mādī-'i Nizām Abād and Jūb-i Sīāh (Black Canal).¹⁵⁴ In addition to the Tūmār , other Safavid sources including an endowment deed by Shāh Sultān Husiyn also refer to the main canal of the Hezār Jarīb Garden as Jūb-i Sīāh.¹⁵⁵ Therefore, and also to avoid complication between Shāhi Canal and Canal of the Great Shāh, I will thereafter refer to the Shāhi Canal with its alternative name, Jūb-I Sīāh.

¹⁵² These names appear in different sources with some variations; for example, 19th-century sources such as Nesf-I Jahan Fi Tarif-I Isfahān refers to The Canal of the Great Shāh as Mādī-i Shāh. Despite the misleading titles used in other sources, because the two canals branched off at different points along the river and meandered on two different sides of the river, it is not difficult to distinguish between them.

¹⁵³ According to the Tūmār , the Jub-i Sīāh was located above Mādī-'i Fartakhoon, which was above Baba Mahoud Bridge. Based on the current location of the Baba Mahmoud Bridge and the village of Fartakhoon, we can guestimate the location of the origin of the Jub-I Sīāh. Maps made based on the 1955 aerial photographs of the area also confirm the location of the Jub-i Sīāh.

¹⁵⁴ Abaṛī, Zāyandihrūd az cheshme ta mordab, transcript of the Tūmār , 116.

Safavid historians made note of a water canal that Shāh Abbās I constructed to carry the water of the Zāyandihrūd to the Hezār Jarīb Garden.\(^{156}\) Construction of this canal appears to have been one of the first actions that Abbās I undertook to pave the way for his royal projects south of the river, including the making of the Hezār Jarīb Garden, as well as Upper Chāhārbāgh and the gardens alongside it. According to the Tārīkh-i Abbāsi (completed in 1611), a large canal (\textit{nahr}) was diverted from the ZayandheRūd River in the year 1598 to bring water to the new suburban royal garden of Abbās Abād (the alternative name for Hezār Jarīb).\(^{157}\) Since provision of water was the essential requirement for establishing gardens in such a scale as Hezār Jarīb Garden and other \textit{amūrī} gardens along the southern extension of Chāhārbāgh street, construction of Jūb-i Sīāh preceded many other building activities in the Isfahān.

The construction of this canal should have been a great undertaking. Given the location of the garden on a plain higher than the Zāyandihrūd River, water had to be branched off from the river at a distant location upstream—so much so that the canal had to traverse the plain of Isfahān before it reached its garden destination (Figure 2-1 & 2-2).\(^{158}\) The canal carried water to the Hizār Jarīb Garden, at which point it was divided into smaller streams that circulated water throughout the nine levels of the garden.\(^{159}\) Once outside the garden, these branches joined together and distributed water among the other elite gardens that lined the southern extension of Chāhārbāgh.

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\(^{158}\) Junabadi, 760-61.

Street (Figure 2-5 & 2-6). Indeed, by fabricating a new canal, Abbās I facilitated the development of large tracts of land south of the river and turning them into royal and elite garden establishments.

Keampfer’s description of the Hizār Jarīb Garden also refers to three water streams, two of which he mentions as Bīst-u Panjih and Ab-i Nīl, which also watered Julfa. Kaempfer identifies the third canal as ChihShah, the origin of which he situates three hours’ upstream from the Zāyandihūd River. The name of the canal, which could be an abbreviation of Chishmih-‘i Shāh (The Shāh’s Spring), as well as its location, suggest that this is the same Shāhi Canal (Jūb-i Sīāh) that is discussed by Junābādī and Mullā Jalāl. From the drawing and description provided by Kaempfer, we can also identify this canal as the major stream of the garden, which flowed parallel with the southern wall of Hezār Jarīb, entered the garden from the south-west corner and was then divided into smaller branches that ran along the south-north avenues of the garden (Figure 2-5).

Based on historic maps of the city, such as the 1851 Russian map, we can also identify three waterways that entered the Garden of Hezār Jarīb from the west. Cross-referencing the description of Kaempfer and information from Safavid sources with the topography and historical maps of the area leads to the conclusion that the canal which flowed into the garden from its south-

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160 Junabadi, Rowzat al-Safaviyeh, p 760-61.

161 Kaempfer, Dar Darbar-I ShāhanShāh-I Iran, 215-16. Since none of these names appear in the Tūmār, it is very difficult to ascertain whether these were canals that disappeared before the latest modification in the Tūmār, or simply experienced a name change. If we stick with the second scenario, it is very likely that these canals correspond to two of the three canals that meandered in the southern suburbs of Isfahān: The Shāyiij Canal and the Nāyej Canal.

162 ibid
west corner was the Jūb-i Sīāh. The two other canals that are marked on the 1851 Russian map of Isfahān correspond to the Shāyij and Nāyej canals from which branches are directed towards the Julfa neighborhood (Fig 2-3). According the content of the Tūmār, foundation of these canals predates the establishment of the original water distribution plan. Since we have already established that the original water distribution plan predates Abbās I’s construction campaign in Isfahān, it is, therefore, reasonable to assume that these two water canals already existed in the area before the foundation of the Julfa neighborhood, and greatly contributed to its fortune.

As far as we can determine from the Tūmār, apart the share of water obtained from the Shāyij Canal, no other water was provisioned for the Farah Ābād Garden, which was constructed further west of Hezār Jarīb between 1699 and 1711. This likelihood is peculiar, especially in light of the fact that we are informed by the contemporary sources that Sultān Husiyn went to a

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163 A note in the margins of the Tūmār reports that by the mid-19th century, its water was complemented by qanats from the Ab-i Nil region, enabling the canal to deliver water all the way to the Sa’ādatābad Garden and the nearby Bagh-i Amin al-Dowlleh

164 Text of the Tūmār. Further examination of better-quality early aerial photos and the fieldnotes by Bedauin should be the next step to further clarify the location and name of the canals.

165 As a general rule, if the Tūmār did not mention anything about the foundation of the canal after the original plan was put into place, I assumed that the foundation of the canal predates the “original plan”. In the Tūmār we come across 14 cases of canals that were founded after the initial establishment of water distribution plan.

166 While the Nāyej and Shāyij canals both traverse the Julfa neighborhood, if we rely on the Tūmār, which reflects the 19th century conditions, it would appear that most of the water of the Julfa was provided by the Nāyej Canal. In the 19th century, the Nāyej Canal was also providing water for settlements near the Upper Chāhārbāgh, as well as the Saadatabad Village. On the other hand, the Shāyij Canal appears to have been an important source of water for the Farah Abad Garden and villages nearby. Its water also traveled all the way to villages such as Kooleh Parcheh near the Saadatabad Garden.

167 For a discussion on the date of the construction and configuration of Farah Abad see Brignoli, “The Royal Gardens of Farahabad,” 139-156.
great lengths (and expense) to bring water to Farah Ābād.\textsuperscript{168} However, 20\textsuperscript{th}-century sources report that no trace of any new canal has been detected at the site. Absence of physical evidence and a reference to the extension of Jūb-i Sīāh that Sultān Husiyn made in one of his endowment deeds indicates that Sultān Husiyn’s actions may have been limited to enlarging the Jūb-i Sīāh and diverting portion of its water for the use in Farah Ābād.\textsuperscript{169}

In his examination of Bedouin’s drawings and fieldwork in Isfahān, Brignoli also identified a line connecting the Farah Ābād and Hezār Jarīb gardens, which he believes reflects Bedouin’s drawings of an existing canal that was used by both gardens. Since Brignoli’s work focuses on the Garden of Farah Ābād, and do not include a discussion of the broader system of landscape in the region, he was unwilling to commit to identifying the direction of the movement of water. However, in his writings Brignoli do suggest an east-west direction, meaning that the water existed the Hezār Jarīb Garden and then entered the Farah Ābād Garden.\textsuperscript{170} However, considering the larger system of water distribution in the area, it is certain that, if anything, the canals that fed Hezār Jarīb all branched off from the river west of the Farah Ābād Garden.

\textsuperscript{168} Father Krusinski and Father De Cerceau. \textit{The History of the Late Revolutions of Persia Taken from the Memoirs of Father Krusinski, Procurator of the Jesuits at Ispahan ...} (London: J. Pemberton, 1733),125. A cursory examination of Sultan Husiyn’s endowment deeds sheds light on this question, as in various places he dedicated the water from other gardens such as Sa’ādatābad, Dastjerd-I Mehradarān, and Bagh-I Shams-Al-Din which by the time were part of his lawful property to his new Garden of Farah Abad. For example see Sepanta, \textit{Tarihche-’I Awqaf}, 246, 292, &359.

\textsuperscript{169} For reference to Sultan Husiyn’s work on extention of the Jub-i Sīāh see the transcript of his endowment deed in Sepanta, \textit{Tarihche-’I Awqaf}, 208. Also look at Lockhart, Laurence. \textit{The Fall of the Safavī Dynasty and the Afghan Occupation of Persia}. (Cambridge [England: University Press, 1958), 481.

\textsuperscript{170} Brignoli, “The Royal Gardens of Farahabad”, 144.
Therefore, if Sultān Husiyn took advantage of the canal that had already been established by his predecessor, Farah Ābād should have been the first royal garden on the route of the canal; alternatively, a stream could have been diverted from it before it entered the Hezār Jarīb Garden. From there the water would continue along its path to the Hezār Jarīb Garden. Indeed, tracing the canals on the 1955 aerial photograph of the area suggest that on its way to Hezār Jarīb Garden, Jūb-i Sīāh should have crossed the Farah Ābād Garden (Figure 2-1 & 2-3).

The 19th-century condition of the Farah Ābād Garden—at least as suggested by those, such as Madam Dialofieu, who visited the site at the time—was in deterioration and despair with no indication of its former prosperity and fortune. Nonetheless, these visitors were persuaded that, at its prime, the garden most certainly had access to large sources of water. In addition to the water that was required for the royal garden, the Safavid elites, who were invited to build their state in the vicinity of the Farah Ābād, were also guaranteed access to water shares. Furthermore, sources refer to large sums of money that Sultān Hoseyn spent to bring water to his new city of Farah Ābād. Part of this money could have been invested in diverting water from the Jūb-i Sīāh. Moreover, he would have had to construct qanāts or other infrastructures in order to compensate for the water that Farah Ābād took away from the Jūb-i Sīāh. Given the paucity of available (and reliable) sources of information, unless archeological excavations or remote sensing (or lidar


173 For example, in the case of the Grand Sheykh al-Islam of the Shāh Sultan Husiyn, we are informed by the the author of “seyr-i vaghaye al-sanin va al-a’vam” that he was given ten jarib lands near the Farah Abad, as well as a right to the water from the share of Sa’ādatābad Garden, to develop the land and build his garden and mansion (from the manuscript of seyr-I vaghaye al-sanin va al-a’vam, quoted in Honarfar, Ganjineh Isfahān, 724).
photography) shed more light on the physical state of these canals, it will be impossible to establish
with any certainty the physical characters and configuration of the canals that provided water for
the Farah Ābād and Hezār Jarīb gardens.

Lands North of the Zayandehryd River

On the opposite bank of the Zāyandihrūd River, the Abbās Abād neighborhood, Upper
Chāhārbāgh Street, and Naghsh-i Jahān Royal Compound also relied on the river’s life-giving
waters. Historical sources indicate that water was delivered to the royal garden and those of the
elites, as well as to the public institutions and spaces of Isfahān, by three major water canals.¹⁷⁴
Specifically, the Chalpas-i Nyāsarm and Fadin canals constituted major suppliers of water for the
city and the Abbās Abād neighborhood. The other two water canals, the Nyāsarm and Farshādi
that meandered throughout the Abbās Abād and Chāhārbāgh district, simply added to the charm
and appeal of the streets, preserving their water for the eastern suburbs. The largest of the three—
the Nyāsarm Canal—could only be used for agricultural purposes in the villages east of the city.¹⁷⁵
Additionally, the Farshādi Canal passed through the western neighborhoods of Lanban and Abbās
Abād, and underneath the Chāhārbāgh Street, only to appear in the courtyard of the Madraseh-‘i

¹⁷⁴ While the information in the Tūmār reflects the conditions of the mid-19th century water distribution pattern, it is
unlikely that there were any major structural changes to canals and their delivery of water to a given area between
the 17th and 19th centuries. Conditions along the southern bank of the river was different, however, particularly in
light of the presence of the Hezār Jarīb and Farah Abad gardens and their associated settlements, which, after the
invasion of the Afghans in the 18th century, experienced serious decay and damage. However, on the Zāyandihrūd’s
north side, despite some decline and deterioration, gardens and neighborhoods remained relatively well populated
and functional.

¹⁷⁵ Mohammad Miḥdī Isfahāni, Nesf-i Jahan, 99.
Soltani and Karvanserai-‘i Boland. In the Karvaserai-i Boland, the architecture further interlaced with the water and part of the structure was positioned over the canal. From there, the canal delivered water to the eastern neighborhoods of the city such as Chāhārbāgh-i Khājū and Hassan Ābād (Figure 2-2 & 2-3). However, while the Farshādi Canal embellished the courtyard of Madrasa-‘i Sultāni, the water for its garden was provided by the Canal of the Great Shāh, also known as the mādī-‘i Shāh-i Kabir.

The Canal of the Great Shāh (mādī-‘i Shāh-i Kabir) is the second canal whose foundation came after the establishment of the original water distribution plan. Since this canal was constructed after the original water distribution plan was put into place, a qanāt had also been established to compensate for the water that was used by the canal. Based on the content of the Tūmār , all of the famous Safavid Gardens (e.g., Hasht Behesht Garden, Chahel Sotoun Garden, tālār Tavileh Garden, Naghsh-i Jahān Garden, Mosaman Garden, Goldasteh Garden), as well as

176 Ibid, 72,77, 99-100.

177 It is important to understand the difference between a canal that provided water for household use and agricultural purposes, versus water that adorned public spaces or institutions, which would be used for purification and sensory delight. Only because a canal went through an area didn’t mean that the adjacent land had a right to utilize its water. For example, because the Farshādi Canal ran across the southern suburb of the city, it created delightful spots all along its banks. However, judging from the Tūmār and descriptions of the author of Nesf-i Jahan, its water was reserved for the estates and villages east of the city of Isfahān. Therefore, when it was skillfully brought into the courtyard of Madrasa Sultani or Karvanserai-I Boland, it was only used for its aesthetic and sensory quality and for the purpose of purification.

178 The Tūmār refers to the revival of a qanat by Motamed al-Dowleh. From the title of Motamed al-Dowleh which is a title used in the 19th century Qajar court), we can postulate that this revival took place in the 19th century, but it also means that in previous centuries, and most probably upon the construction of the canal, a qanat had been built and dedicated to it. As we also see in the case of Nizām Abād Mādī ( Jūy-I Sīāh) and oral histories and written testimonials, it seems that whenever a new canal was dug, and water rights to an existing canal was expanded qanats were built to compensate for the extra water consumption. For example on the margin of the Tūmār there is a note that refers to qanats that were constructed to augment the water output of Nizām Abād Mādī that would add Sa’ādatābad Garden to the estates that were supplied by Nizām Abād Mādī . see Abarī, Az sarcheshme ta mordab, transcript of the Tūmār , 116.
the Lower Chāhārbāgh Street and the gardens associated with institutions such as Abbāsi Jame Mosque (on the Naghsh-i Jahān Miydān) and the Madareseh-‘i Sultāni (Royal School founded by Sultān Husiyn), were supported by the Canal of the Great Shāh.179

Although we lack any textual references to the construction of this canal, it is very likely that it was founded by Shāh Abbās I or one of his descendants during the 17th century—particularly in view of its role in supporting the water requirements of new neighborhoods west of the city (Lunbān and Shams Ābād), and particularly the royal gardens in the Naghsh-i Jahān compound and the vicinity of Chāhārbāgh. Furthermore, the name of the canal signals a direct association with the person of the Shāh, thereby further supporting this hypothesis.

In addition to the Canal of the Great Shāh, other canals that streamed throughout the city and its suburbs all seem to have predated Abbās I’s construction campaign. The Fadin and Chalpas-i Nyāsarm canals, which provided water for gardens of Abbās Abād, predate the foundation of this neighborhood. Unlike Julfa, which was founded on the crown lands (part of the property of the royal household), Shāh Abbās I had to purchase the land of Abbās Abād from landowners in Isfahān.180 A significant portion of the land was an already-existing garden known as Bagh-i Jannat. Additional lands that were purchased from the landowners were most probably agricultural


estates that already had a source of water and a share of water rights. Indeed, these factors were likely critical in attracting the attention of the Shāh and his planners for selecting the site.  

The well-ordered, almost grid-like layout of Abbās Abād could not have been achieved with a predetermined plan. Moreover, in addition to determining the layout of the parcels of lands, the two professionals brought in from Iraq to design a plan for Abbās Abād (Hājī Ināyat Allāh and Siyid Hasan Mutifariqī Tabrīzī) had probably also been charged with proposing a layout for sub-channels that would carry water to each allocated parcel.

The existing Fadin Canal not only provided water for the city and Abbās Abād neighborhood, but was also meticulously incorporated into new public establishments. Its water was used to supply the newly constructed stream that circulated around the Miydān-i Naghsh-i Jahān (Figure 2-4). Animating the miydān and coffee houses that were constructed along its perimeter, the stream inspired Junābādī’s praise. Departing the miydān, Fadin’s water also entered several schools in the area, including Madrasa-i Mullā Abd al-Allāh, Madrasa-i Jaddih

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181 Molla Jalal, Tarikh-I Abbāsī, 413.

182 Fazlī Biyγ Khūzānī Isfahānī, A chronicle, 372. FazlīBeg is the only source that gives the name of these two professionals. I do not have any knowledge of their exact profession and particular skills, but most probably they fall into the category of Mohandes and Memar—namely, those with skills in mathematics and construction. In another source describing the foundation of Farahabad in the Caspian region, Junabadi refers to ostadan-I maher and mohandesan-I ghader (skillful professionals and gifted engineers) brought from the north west (Romiyyeh) to lay out the grid of the city: Junabadi, Rowzat al-Safaviyeh, 840. In his description of the new city of Abbās Abād, Molla Jalal refers to four large canals that streamed through the neighborhood, but he doesn’t provide any names.

183 Mohammad Mihdī Isfahānī, Nesf-i Jahan, 38 & 100-101.

184 In his Rowzat al-Safaviyeh, the Safavid historian Junabadi praised the establishment of a large canal around the maydan and the enchanting coffee houses that were constructed along its perimeter. See Junabadi, Rowzat al-Safaviyeh, 760.
Buzurg and Madarasa-I Jaddih Kūchak, and adorned their courtyards; after which branches from the Fadin Canal flowed into eastern neighborhoods of the city, ultimately carrying water to villages and agricultural estates in the far-off Jay district (Figure 2-2 & 2-4).

The Fall of Isfahān:
Disruption of the Hydraulic System and Urban Decline

As discussed in Chapter 1, the low level of Zāyandīhrūd’s water during the dry season required an efficient plan for water distribution, coupled with a well-organized social infrastructure to supervise the implementation of the plan. The state-assigned mīrāb, who was in charge of the water distribution plan, was assisted by representatives of the community. In addition to governmental support, the community was also involved in the upkeep of water channels and implementation of the plan. Since coordination between the social and physical infrastructures was necessary for the growth and upkeep of the landscape, the declining power of the state translated into the decline of hydraulic system.

Representing an important source of historical information, many foreign visitors who stayed in Isfahān during the reign of Sultān Suliymān (1666-1694) and afterwards commented explicitly about the disorderly state of water in the region of Isfahān. Tavernier (whose stay in Iran coincided with the reign of Abbās II and Sultān Suliymān), documented the decay of water

185 See Chapter 1.

streams around the miydān of Naghsh-i Jahan. Subsequently, Chardin’s reports also sketch a rather gloomy picture of the condition of water distribution. For instance, he describes the prevalence of bribery and the loose control of the state over the activities of the mīrāb. Ghayummi and Mahmoudian suggest that this observed disarray and chaos in the distribution of water was perhaps related to the weakness and disorder in the central state. We can also imagine how any political disorder would have created disruptions in the upkeep of these physical infrastructures—not only in terms of the financial limitations of the state in supporting the maintenance of the canals, but also with respect to the lack of leadership in managing community-based efforts to preserve and upkeep of the essential hydraulic infrastructures in the city.

Importantly, the fall of Isfahān to the Afqan army in 1722 made the situation much worse. In addition to the war and the related destruction of buildings, gardens, and urban infrastructures, the absence of a forceful central power left a lasting and detrimental effect on the hydraulic infrastructures of the city. Indeed, the social infrastructure and the control that was exerted by a powerful state was critical for the system to function properly. For example, the accounts of Mohammad Mīhdi Isfahāni about the revival of the canal that supplied water for Hezār Jarīb

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187 John Baptista Tavernier, *The Six Voyages*, 151. This period most likely coincides with the drought, famine, and disorder that dominated the early reign of Sultan Suliymān, or the then Safi II.


189 As oral history holds, and Subtenly also explains, during the Timurid period a considerable level of local cooperation was required for the distribution of water, as well as seasonal maintenance of hydraulic infrastructures. See Subtenly, Timurids in Transition, p 123. See also Chapter 1 of this dissertation and Hassan Husiyni Abarī, "Modiriyat-i Sonati-i Ab-i Zāyandihrūd”.

190 General disarray, bribery, and the absence of supervision meant that the upkeep of the essential physical and social infrastructure structures for water distribution faced serious challenges during this period.
Garden is very informative. Isfahāni recounts that in the year 1839/40, following the order of the Qajar king, Mohammad Ali Shāh and action of the then-governor of Isfahān (Mutamid al-Dawlih), this canal, which was devastated and blocked after the Afqan invasion, was restored to provide water for the Hezār Jarīb Garden. Following the completion of the project, the garden—which over the prior century laid in almost complete ruin—was revived, filled with fruit trees and flowering bushes, eventually becoming a popular destination for the people of Isfahān. This short period of rejuvenation, however, was not to last; once again, over the next 30 years, the weakness of the central state translated into poor control over the management and upkeep of the canal. Landowners, whose lands bordered on the canal, started to divert water to their own properties, which once again brought damage and destruction to the Hezār Jarīb Garden—originally the main beneficiary of the canal’s life-giving waters. 

The green suburbs of the city, which flourished during the 17th century, represent the regions that were most deleteriously affected following the disappearance of the Safavid court. Indeed, throughout the 17th century the southern suburbs of the city were mainly occupied by people associated with the court; in contrast, the old Isfahāni families lived mostly in the old traditional neighborhoods of the city. The fortunes of these neighborhoods and gardens were

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191 During the 1880s, Mohammad Mihdī Isfahāni who was a scholar and writer, wrote Nesf-I Jahan fi-Isfahān which was dedicated to the description of Isfahān, its history and geography. He employed various historical sources, as well as his own observations and knowledge gathered throughout years of living in the city. Therefore, his observations of the ongoing conditions of Isfahān are very reliable.


193 Haneda, …
directly related to the presence of the court—and specifically, the investments and opportunities facilitated by the court with respect to the expansion and management of water resources.

Isfahān never recovered from the social and political nightmare that resulted from the invasion of the Afqans in 1722. By 1808 when Morier visited the city, the water canals that once adorned the streets were “void of water.” While the local economy was, to some extent, revived, it never again reached the remarkable level of prosperity that the 17th-century population enjoyed. Despite occasional investments in individual architectural projects, gardens, or streets, the overall picture of 19th-century Isfahān is dominated by a narrative of decline. The city’s once cheerful water channels and pools, which earlier had exhibited a vivid play of water to be enjoyed by so many, were empty, the terraces broken, the trees hollowed out or cut down, and the pavilions adjoining the river now abandoned and crumbling.

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Figure 2-1- Topography of Isfahan Plain along with the location of the River and the pre-existing water canals played key roles in directing the 17th-century urban developments in Isfahan. The pre-existing water canals (madis) that used to deliver water to the agricultural lands south of the old city provided the infrastructure necessary for the development of new quarters with splendid gardens, and thus inspired the southward development of the city. When Shah Abbas I decided to establish his majestic Hezar Jarib Garden (5) south of the river, the topography of the area obliged him to travel several miles upstream to divert a canal (A) from the river at the point that is higher than the land of Hezar Jarib. Credit: Sahar Hosseini.
Figure 2-2-The Fadin Madi not only provided water for the city and Abbas Abad neighborhood, but was also meticulously incorporated into public establishments of the city. The stream that circulated around the Naghsh-I Jahan Plaza, as well as the pools in the Jaddeh Bozorg School, Jaddeh Koochak School, Molla Abd Allah School, Saray-i Mokhles, etc. were fed by the Fadin Madin. Map is prepared base information collected through fieldwork and textual information from Mohamad Mehdi Isfahani, ed. Manouchehr Sotudeh, Nesf-i Jahan Fi Tarif-I Isfahani, (Tehran: Intesharat-i Amir Kabir, 1990), overlapped on the Reza Khan Map of Isfahan (1884). Courtesy of University of Chicago Library’s Map Collection. Credit: Sahar Hosseini.
Figure 2-3: Map of the city of Isfahan and its immediate suburbs that were supported by a network of old and new water canals (madis).
Figure 2-4: The Fadin Madi not only supplied water for the newly constructed stream that circulated around the Maydan-i Naghsh-i Jahan, but also departing the maydan its water was incorporated into the architecture of public institutions such as Saray-i Mokhles, and Jaddeh Bozorg School.
Figure 2.5- The Juy-i Siah (Black Canal) carried water to the Hezar Jarib Garden, at which point it was divided into smaller streams that circulated water throughout the nine levels of the garden. Once outside the garden, these branches joined together and distributed water among the other elite gardens that lined the southern extension of Chaharbagh Street. Drawing based on Kaempfer’s description and his hand sketches at the Sloan Collection-British Library.
Figure 2-6- De Bruyn’s drawings of the southern Chaharbagh Street looking towards the entrance of the Hezar Jarib Garden. Up: the water courses that circulated water around the Hezar Jarib Garden joined together and left the garden as one stream. Lower: Once it left the Hezar Jarib Garden the stream flowed along the Chaharbagh Street and distributed water among other elite gardens along the southern Chaharbagh Street. From Cornelis De Bruyn, *Travels into Moscovy, Persia, and Part of the East Indies*, (London: For A. Bettesworth, 1737). Courtesy of UCLA Library Digital Collection.
CHAPTER 3

River in The Public Life of Isfahān

Well-known for its multi-cultural and multi-racial population, 17th-century Isfahān was a vibrant center for public life, largely clustered around the grand Naghsh-i Jahān Miydān, along the celebratory Chāhārbāgh Street, and in the nearby caravanserais and coffeehouses of the capital. The first of these important public spaces—the Naghsh-i Jahān Miydān—was also a center of political, military, commercial and religious life of the city, where the public and royal domains collided with each other. Chāhārbāgh Street, which connected the Naghsh-i Jahān Royal complex to the major suburban royal garden of Hezār Jarīb, not only was the ceremonially site for processions, but was also a favored location for leisurely strolls and social activities for denizens

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1 Started in 1590/1, Naghsh-i Jahān Miydān and its surrounding structures were almost finished when construction of the Royal Mosque along the southern side of the Maydan was completed in 1613. Various buildings around the Maydan represented varied aspects of the Maydan’s importance in the life of the city: The Royal Mosque signaled the intertwined nature of politics and religion in Isfahān, Ali Qapu Palace-Gate represented royal power, and the monumental gate of the Grand Bazaar and rows of shops arranged around the Maydan brought economic activity in close proximity with the religious and political life of the city. For scholarship that focuses on the Maydan-I Naghsh-I Jahan see: Godard, Andre. Isfahān, Annales Du Service Archeologique De l’Iran, Vol. 1. Paris: 1937; see also, E. Galdieri, “Two Building Phases of the Time of Shāh ʿAbbās I in the Maydan-i Shāh of Isfahān, Preliminary Note,” East and West 20, no. 1–2 (1970): 60–9. For discussion on the stages of the construction of maydan, also see McChesney, R. D. "Four Sources on Shāh Abbās's Building of Isfahān." Muqarnas 5, (1988): 103-134.
of Isfahān. As the commercial hubs of the city, the grand bazar (market) and caravanserais created spaces of transcultural interaction where native and foreign merchants, travelers, and Isfahāni citizens intermingled. At the same time, coffeehouses around the Miydān and along the Chāhārbāgh street served as the domain of male urbanites, offering poets, artists, artisans, entertainers, merchants, scholars and students spaces of conviviality, entertainment, and opportunities to display their artistic skills and eloquence in literature and poetry. Focusing on these urban spaces, scholarship has largely depicted the public life of the city within the confines of its architecturally constructed domain; as such, scholars have overlooked the opportunities that emerged around its natural features, such as the Zāyandihrūd River.

Indeed, very little has been written about the significance of the nearby Zāyandihrūd River, which by the middle of the 17th century was well positioned at the heart of the newly developed suburbs of Isfahān. In the discourse of Isfahān’s urban history, which conceptualizes the city as an agglomeration of buildings, the river has often been treated as belonging to the realm of nature. This chapter attempts to revise this notion by presenting the river as an active site of urban public life in Isfahān that fostered transcultural interaction.

With the help of textual and visual sources provided by European travelers and local historical sources, this chapter depicts the manners in which the Zāyandihrūd River accommodated multiple aspects of Isfahān’s urban public life. In line with the recent wave of historiographical

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2 Almost every European traveler who visited Isfahān, including Della vale, Chardin, De Bruyn, Tavernier, Kaempfer, Fryer, etc. refer to the Chāhārbāgh Street as the grand public promenade of the city. Secondary sources, too, never fail to mention or describe the Maydan and Chāhārbāgh Street as major public spaces of the city.

works that have made space their central theoretical concern, this chapter goes beyond the brick-and-mortar conceptualization of urban space as an atemporal entity. My goal is to approach the notion of space as a material site that is not inert and synchronic, but rather changes with time – thus it is temporal and as much produced through performances and practices of urban life. Such an approach will enhance our understanding of the city as an intricate system of active forces, where the built environment and space can be appreciated in association with time, action, and mobility.

The City Extends Beyond the River: Opportunities for New Engagements

Selection of Isfahān as the capital of the Safavid dynasty instigated a century of rapid development towards and beyond the Zāyandihrūd River. Before the outset of Shāh Abbās I’s (1571-1629) construction campaign in the 1590s, the city of Isfahān had been largely confined to its medieval fortifications. Throughout the land that extended between the city and river, however, one could occasionally find brick walls that marked the boundaries of individual gardens. While infrequent, when the flooding of the Zāyandihrūd did occur, it was not particularly catastrophic; nonetheless, the known history of such incidents in the past did keep people away from the river.

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5 On the distinct nature of the suburban landscape of Isfahān before and after the 17th century, see Chapter 2 of this dissertation.

6 Every few years in the late winter or early spring, a heavy rainfall would cause the Zāyandihrūd to overflow its banks. Among those who reported on these floods are Hamzeh Isfahāni, who mentioned two considerable floods in
Once the city became the center of royal attention, its fate changed. Within the few decades after the beginning of Shāh Abbās I’s construction campaign, the city grew at such a pace that the Nagsh-i Jahan Garden, which at the turn of the 16th century marked the most southern limits of Isfahān’s suburb, became the new center of the city itself (Figure 3-1, 3-2).

Ruling the city from suburban garden complexes was a customary tradition for the Turco-Persian rulers. With some variations, Safavid sovereigns, too, practiced a similar spatial relationship with the city. Their tribal-based power structure, coupled with the constant mobility of the court, required frequent encampments along the route—many of which took place within grand suburban gardens that became the de facto temporary abode of their mobile court. It was from within these gardens that they administered their affairs, prepared and refreshed the army, set up ceremonies and banquets, and received dignitaries and ambassadors.

The Naghsh-i Jahān Garden was initially one such suburban garden, which was situated at the southern periphery of the city of Isfahān, approximately one mile north of the river. Throughout the 16th century it had frequently hosted sovereigns, generals and their armies who were passing through the 11th century (310 AH and 344 AH). See Honarfar, Lotf-allah. "Zāyandīhrūd Dar Gozargah-i Tarih." Honar Va Mardom 188, 1357(1978): 19-39. Chardin and other travelers in Isfahān, as well as local sources, also mention several accounts of flooding that occurred during the 17th century. The author of Jahan Aray-i Abbāsī reported heavy rain and flooding in mid-November of 1654, but didn’t provide any details about the damage it may have done to the city and buildings (Mohammad Tāhir Vahīd Qazwini, ed. Sa’eed Mir Mohammad Sadeq, Tarikh-i Jahan Aray-i Abbāsi (Abbāsnameh). Tehran: Pazhooheshagah-i Ulum-i Insani va Motale’at-i Farhangi, 2005. 588). More than a decade after that, in November of 1666, to be exact, Chardin again reported a heavy rain and ice-rain, which was followed by some flooding that wrought serious damage to houses, gardens and the streets of the city. He estimated that the damage to royal buildings was about 100000 eco (Chardin, “Voyages. V.1”, 279). The next mention of flooding that I was able to find appears in the accounts of Du Bruyn, which occurred in April of 1699. See Cornelis De Bruyn, Travels into Muscovy, Persia, and Part of the East-Indies. London: 1737), 200.

through the area. Abbās I’s great grandfather, Shāh Ismail (1487-1524), had stayed there and played polo in its Miydān. The garden had also hosted Abbās I and his generals on their way to retrieve lost territories or pacify rebellions. While we do not have any precise information about the surrounding landscape, it is likely that beyond the walls of the garden, all the way to the river, was a landscape covered with agricultural lands, occasional gardens, and meadows and marshlands.

Abbās I’s signature contributions to the city include the expansion of the pre-existing Naghsh-i Jahān Garden, coupled with the addition of lofty buildings and pavilions that would equip the garden to function as a *dawlat Khānih* (Felicitous Abode of Rule). With the help of urban elements, the royal complex was then connected to the city and suburban royal retreat on the other side of the river. On the eastern side of the complex, the Naghsh-i Jahān Miydān served as a liaison between the royal space and the public domain of the city. In the west, a splendid tree-lined avenue, known as Chāhārbāgh Street, connected Naghsh-i Jahān Miydān to the recently-constructed Hezār Jarīb Garden south of the river (Figure 3-2). These new developments by Abbās I stretched the city southward towards the river. Lined with a series of sumptuous gardens, Chāhārbāgh Street was the grand ceremonial promenade of the city, hosting royal parades, and processions of royal guests into the city—not to mention the evening stroll of Isfahāni residents. The street created an artery that eventually determined the direction for the development of the city over the decades to come.  

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8 Ali Emrani argues that tree-lined streets and gardens were the structure around which the city of Isfahān developed over the following decades. See Emrani, Seyed Mohammad Ali. "The Role of Gardens and Tree-Lined Streets in the Urban Development of Safavid Isfahān." 1. Aufl., München, Techn. Univ., 2012.
Pietro Della Valle, who is perhaps the first European traveler to provide a substantial description of Isfahān in the early phase of its development under Shāh Abbās I, gives an account of this ongoing expansion. He describes how the southward development plan, which began with the construction of Chāhārbāgh Street, also supported the establishment of new neighborhoods on the banks of the river. On the north side, the “New Tabrīz,” later to be known as the Abbās Abād quarter, was established to accommodate the Muslim Tabrīzī community, which immigrated from the disputed north-western frontiers. Opposite the Abbās Abād on the southern bank of the river, the new neighborhood of Julfa was established to house the Armenian community, which Abbās I had moved from their hometown in Caucasian frontiers to Isfahān. Further east, a Zoroastrian colony was established south of the river. Evidencing the ongoing work in Isfahān (in 1617), Della Valle suggested:

Based on what has already been done one can judge that the king has plans for uniting these three places in Isfahān, and this has been taken care of with incredible passion ... and I believable when this is done the environs of Isfahān will be larger than Constantinople and of Rome.

Urban Landscape Along the River

9 Both groups were moved amidst the ongoing Safavid-Ottoman hostilities and wars that were ongoing in the Caucasus.

Available historical written and documentary evidence about the banks of the river and their landscapes are too fragmentary to allow us to sketch a detailed picture of the region. However, a cross examination of the evidence that we do have allows us to form an overall idea about the landscape that developed along the banks of the river.

Judging from the accounts of Italian and Spanish visitors, it appears that the rich and noble residents of Julfa and Abbās Abād had realized the potential of the pleasant breezes and unique views that were offered by the river quite early on. Writing in 1618, the Spanish ambassador Figueroa noted the presence of large mansions in both Julfa and Abbās Abād along the shores of the river. He found the area to be one of the most beautiful places with some of the finest views in the world. Indeed, he believed that the land overlooking the river appeared to be among the most desirable locations in Julfa, as the best and most beautiful houses were positioned to enjoy a prospect of the river. The balconies and windows of these houses were constructed to ensure view of the river and its banks. It was from these windows and balconies that many people, including the Sherriff of Isfahān and a number of Englishmen, watched the 1618 Armenian “Blessing of Water” ceremony that took place on the shore of the river.

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13 Ibid.
The existence of such buildings was not limited to Julfa. On the other side of the river in Abbās Abād, various nobles had constructed spacious gardens and grand pavilions along the platform that bordered the river.\textsuperscript{14} Shāh Abbās I and Safī I reportedly held galas in these houses.\textsuperscript{15} Proximity to the river was so desirable that Shāh Abbās II not only removed the Zoroastrian community from their neighborhood so that he could construct his royal complex adjacent to the river, but also ordered the construction of other important projects such as Tavoos Khānih and Takiyeh Feyz on lands adjacent to the river.\textsuperscript{16} In particular, Takiyeh Feyz, which was established as a Sufi convent, was constructed in an already existing spacious elite garden that had been laid out on the bank of the Zāyandihīrūd River. Shāh Abbās II specifically demanded a building designed with all the doors and the grand \textit{Iwān} opening towards and overlooking the river.\textsuperscript{17}

The Dutch painter and traveler, Chornelis de Bruyn, has provided us with the only visual representation of these establishments on the bank of the river (Figure 3-4). Fortunately for us, his accounts and illustrations are considered to be reliable and accurate. This is particularly evident from his drawings of Persepolis in which he corrected errors

\textsuperscript{14}Chardin, \textit{Voyages}. V.2, 58, and John Fryer, \textit{A New Account}, 293.

\textsuperscript{15}Della Valle talks about galas that Shāh Abbās I staged in the houses adjacent to the river. Shāh Safī I also arranged similar assemblies. One such instance reported by the Vahīd took place in the house of Khosro Soltan Mirshekar bashi located adjacent to Zandeh rud. See Vahīd Qazwini, Mirza Mohammad Tāhir and Sa'eed Mir Mohammad Sadeq, \textit{Tarikh-i Jahan Aray-i Abbāsī (Abbāsnameh)}. (Tehran: Pazhooheshagah-i Ulum-i Insani va Motale'at-at-i Farhangi, 2005), 251-52.


\textsuperscript{17}Muhammad Yusuf, Valed Isfhānī, \textit{Iran Dar Zaman’i Shāh Safī}, 663; Vahīd Qazwini, \textit{Tarikh-i Jahan Aray-i Abbāsī}, 621.
made by other travelers such as Kaempfer and Chardin. Relying on his illustrations, we can presume that the banks of the river were lined with large gardens that housed beautiful two-stories pavilions—most of which were strategically positioned to take advantage of all possible vistas. The location of buildings towards the north of the garden (closer to the river) represents a desire to take advantage of the proximity of the river and its breezes and vistas, while also enjoying a wide view of the garden on the back (south).

In comparing Safavid Isfahān and Mughal Agra, scholars often draw parallels between Isfahān’s Chāhārbāgh Street and Jamuna River, both of which were flanked by royal garden-palaces. Though both cities were graced with important rivers, the distinct nature of these rivers and topography of the two regions had prompted different riverine landscapes. In Agra, the Mughal gardens were established in some distance from the river to protect themselves and their built environment from the sometimes-fierce flooding of the Jamuna; in Isfahān, however, the gentler nature of the river allowed the elites and the urban population to establish themselves closer by.

By 1637, when Adam Olearius, the secretary to the Holstein mission to Persia, visited Isfahān, he was attracted by the spacious walks along the river. These walks, as the famous French merchant and jeweler Chardin later described, were created by embankments that extended along the river and throughout the outskirts of the city, thus

18 Willem Floor, Encyclopedia Iranica, http://www.iranicaonline.org/articles/de-bruin


providing the people of Isfahān with spaces for leisure and socializing. Based on our incomplete knowledge of Isfahān during this period, it is not possible to determine any details about these walkways, or establish a certain date for their construction. Neither Della Valle, nor Figueroa (who visited Isfahān between 1617 and 1619), mention anything about walkways along the river, though they both participated in ceremonies and events along the river. In later decades, however, references to these walkways began to appear in descriptions provided by a number of visitors, such as Olearius, Chardin, and De Bruyn. Therefore, it is very likely that these walkways were later developments that emerged as a result of the growing population and increasing construction activities in the new suburbs of the capital. It should also be stressed that given the occasional flooding of the river during the rainy season, new developments along the river demanded further protection. The set back of these elite gardens and the slightly raised walkways were perhaps strategies to minimize any possible damage.

During the warm days of the summer when water levels were low, these walkways were frequented by large numbers of youth, who would ride their horses and exercise near and in the water. The presence of water and the cooling breezes attracted people to the banks of the river. Especially in the later decades of the century, when the availability of coffee found its way from Chāhārbāgh Street and the Naghsh-i Jahān Miydān to the vicinity

21 Chardin, Voyages, V2, 58.
22 Adam Olearious, The Voyages and Travels, 224; & Cornelius De Bruyn, Travels, 197.
23 Chardin, Voyages, 58.
of the Khājū Bridge, local residents and visitors had an even greater incentive to enjoy their time by the river.  

Similarly, the noble and elites spent time in their pavilions that lined the banks of the river. This area developed at such a pace that during the early decades of the 18th century, when Soltan Husiyn (1694-1722) was looking for a site for his Farah Ābād complex, he had to move further away from the city and new suburbs to find land for his royal establishment. When Fryer visited Isfahān in 1670s, elite gardens and pavilions along the bank of the river had extended all the way west near the new royal retreat at Farah Ābād. It was in one of these gardens that Fryer was entertained by French artisans and enjoyed dinner “under the hedge and trees of the orchard by the bank of the river.”

Riverine Rituals and Festivals

In an early modern imperial capital such as Isfahān, time not only had a critical role in structuring the life of the urban population, but also was conceptualized and managed

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24 For more on the coffeehouses along Chaharbgah Street and Maydan, see Farshid Emami, "Coffeehouses, Urban Spaces, and the Formation of a Public Sphere in Safavid Isfahān." Muqarnas Online 33, no. 1 (Nov, 2016): 177-220. By the time that De Bruyn visited Isfahān in the closing years of the 17th century, he reports that people visiting the riverbanks were enjoying coffee that was ready made for them, alluding to the existence of coffeehouses by the river. See De Bruyn, Travels, 200.


26 John Fryer, A New Account, 290

27 ibid
by the state as a method of power making and fashioning identity. In both capacities, time was also a structuring principle in defining the relationship of the people with the river. The seasonal nature of the river shaped the cycle of life, work, and activities in the city and its surrounding hinterlands, creating a pattern for both their agricultural activities as well as their daily schedules. In the warm summer days, the cool breeze near the river brought many to the banks of the Zāyandihrūd, and the water distribution schedule defined periods of work and breaks in farms and gardens.

The ceremonial calendar of the city also forged new temporal relationships with the river. For the urban population, certain ceremonial practices such as royal feasts, communal festivals of Āb-Rīzān (water ceremony), or religious rites such as the Christian “Blessing of Water” all represented important moments when the river acquired a central position in the collective life of the city. In such instances, beyond its sensory delight, the river provided an alternative site of public interaction outside the dense fabric of the city.

**The Christian Epiphany**

Europeans who visited Isfahān, including Silvia Figueroa, Pietro Della Valle, John Baptist Tavernier and others, had the opportunity to participate in the “Blessing of Water” ceremony, which was carried out on the shore of the Zāyandihrūd River. In the year 1618

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when Shāh Abbās I was in the city, he took measures to ensure that the ceremony would take place with the upmost pomp and splendor, and later attended the event as well.29

This particular event was attended and narrated by two keen European observers, Della Valle and Figueroa. According to the accounts of Figueroa’s journey on the day of the ceremony:

… early in the morning, the ambassador left his home, with the religious and other members of the family to attend the ceremony which was held in a large plain which is between the neighborhood of Julfa and the river, where everyone was waiting…. the assembly was composed of not only Armenians who held the ceremony, but also the Jacobite, Nestorians, Georgians and women whose devotion had brought them there, or were curious to see what was going on in this grand assembly.30

The morning procession was carried out by bishops, clergymen, and other members of twelve churches in Julfa and Isfahān, all dressed lavishly and equipped with dazzling crosses, bells, candles and other accessories. Attendees included both Christian and non-Christian men and women who gathered on both banks of the river and entertained themselves watching the procession. Royal guards were also sent to the site to ensure security and prevent any conflict. These elaborate processions culminated with the arrival of the king and his entourage. It was only then that Christian priests began the baptism

29 Pietro Della Valle, Voyages de Pietro Della Valle, V. 5, 35.

ceremony: pouring holy oil into the water and then plunging all the crosses into it. Families would also take advantage of the occasion to baptize their newborn infants. Both Figueroa and Della Valle also noted that several naked people immersed themselves in the cold water and started swimming in the river.

On this cold day in January, the religious ritual created a temporary space, claimed by the Armenian community, legitimized by the approval and presence of the king, protected by the government, and attended by both Christians and non-Christians. For the Armenians, whose religious teaching encouraged them to carry out the epiphany ritual by the river (if possible), the Zāyandihrūd was an epitome of the blessed water of the Jordan River. The prayers uttered by the clergy would endow the Zāyandihrūd River with the grace of Jordan, where Jesus was baptized. Indeed, those people who swam in the river imagined themselves immersed in the sacred water of Jordan River, which would wash their spiritual dust away.

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34 Eastern Christian traditions recommend that the ceremony to be carried out in an open space and near a large body of water, and preferably a river if there is one in the vicinity. See Nicholas E. Denysenko, "The Blessing of Waters and Epiphany: The Eastern Liturgical Tradition " Routledge. http://www.tandfebooks.com/isbn/9781315614014, 30-31.


36 Looking through his own Catholic background and mindset, Figueroa suggested that these people go into the water to endure a representative hardship. However, for Orthodox Armenians, the value of water was in its sanctity, which would remove spiritual dust and lead to salvation. For example, see Rev. Hovel, Ohanyan. "Water as a
The presence of the Zāyandihrūd and the community’s safe access to it was an opportunity well-used by the Armenian community—unfortunately, an opportunity that was taken away as the status of Armenians diminished in the ensuing decades. Whether Abbās’s decision to settle the Armenian community by the river was a conscious choice (alluding to their previous home on the banks of Aras River) or was simply a fortunate coincident is not clear. However, his decision to ensure their safe access to the river was a political statement. By encouraging them to openly conduct a splendid Christian ceremony, and by positioning himself at the center of the ceremony along the bishops, Abbās I pursued several goals. He choreographed a show for the Armenian community and European envoys such as Della Valle and Figueroa, who were present in the capital, and he presented himself as being in complete control and close alliance with the Armenian community.

Re-imagining the spatial organization of the participants based on the information provided by Della Valle and Figueroa’s account, provides further insights into the gender, religious, and social dynamics of this space. In particular, the location of women was a direct echo of their identity. While the king had a pronounced and active presence, the women of the royal family were completely absent from the scene. The high-status ladies

Symbol of Spiritual Birth” Berkeley, California, 2014, 62: “As we can see from all these historical accounts, the baptismal service in Armenia was performed in the rivers, in the running waters from the time of the Holy Apostles to the time of St. Gregory the Illuminator, from the first to the fourth century. Having the Jewish baptismal practice, as well as the baptism of our Lord in the running waters of the River Jordan as an example, the first Christian Armenians strongly believed that the sins could be washed away only in the running waters. As the Israelites washed their bodily uncleanness in the running waters.”

Later in this chapter I will demonstrate that towards the end of the century, Armenians carried out Epiphany within Julfa Neighborhood, inside and outside their churches. At the same time, with the growing power of Shi’i clergy, more restrictions were imposed on the minorities, including the Armenian community in Isfahān.

See footnote 41.
who did attend the event were closely guarded by special royal guards, which were charged with protecting them and ensuring their comfort amidst the large number of the crowd. They were grouped based on their religion (Muslim vs. Christian), and were given a privileged position near the river that would enable them to have an excellent view of the ceremony. Another group of Armenian women (presumably from a lower status), who were charged with entertaining the king, were positioned in front of houses further away from the river.

Importantly, the river, which in some sense also represented a physical border between the Christian and Muslim inhabitants of the city, was transformed into an opportunity for exposure among various ethnic and religious groups. On the other bank of the river, the Muslim men and women of Abbās Abād and Isfahān followed the ceremony with their curious eyes. Indeed, because of its location on the shore of the river, the ritual of “Blessing of Water” was one of the rare occasions when the Armenian community (and other Christians of Isfahān) had a chance to publicly display their religious identity, which was otherwise largely confined to the Julfa neighborhood and its Christian churches and establishments. On this day, however, both banks of the river, and even the little island in the middle of the river, were occupied by the people of both faiths who eagerly observed the procession and the baptism of the cross in the river.39

This ritual was not only an attractive spectacle for the Muslim inhabitants of the city, but also brought other non-Armenian Christians to the banks of the river. According to Figueroa’s account, other Christians including Nostrians, Georgians, and Jacobites—and

even foreign envoys and agents—participated in the event. Epitomizing a grandiose theater for the entire urban population in Isfahān, the ritual was a motive that united various Christian churches in the city and brought various Muslim and Christian groups into interaction with each other.

The Armenian community’s access to the river as the site of one of its essential rituals was at the same time a sign of their esteemed position in the city as the subject of royal favor. Indeed, Armenian merchants of Julfa were well-positioned to contribute to Abbās I’s economic plans. Their wealth, skills, and extended trade network in strategic places from India to Central Asia and Muscovy all the way to the Ottoman land and Europe were an asset for Abbās I, whose long-term plan was to transform Isfahān into a major trading center.⁴⁰ Shāh Abbās I’s active participation in the ceremony, and his presence in the ensuing party that was held in the house of an Armenian elite, are also a testimony to the high status and value of the Armenians in the eyes of the king.⁴¹

At the same time, this event also signals the multicultural character of Isfahān and the state’s policy of diversity and tolerance, especially during the first half of the 17th century.⁴²

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⁴¹ Future sovereigns, and particularly Safi I and Abbās II, were also reported to attend such Armenian ceremonies. See Jean-Baptiste Tavernier and John Phillips. *The Six Voyages of John Baptista Tavernier, a Noble Man of France Now Living, through Turkey into Persia and the East-Indies, Finished in the Year 1670*, London: Printed for R.L. and M.P., 1678, 172.

The global culture of the city, which scholars have identified in the daily commercial life of its bazaar and caravanserais, as well as the public murals that depicted European figures, was also present in the ceremonial life of the city that took place around the river.  

In the later decades of the 17th century, with the decline in the state’s policy of religious tolerance, highly public Christian Armenian ceremonies began to fade away from shared public spaces. Under the increasing pressure that state enforced on religious minorities, Armenians had to retreat back into their neighborhood and churches. The growing power of religious clergies within the government provided the theological and juridical basis for imposing such pressures on religious minorities. By the time that De Bruyn visited Isfahān in 1703-04, the ritual of “Blessing of Water” was carried out in the courtyard of Christian churches, or along more secluded water canals that meandered throughout the Julfa neighborhood.

Interestingly enough, the disappearance of Armenian ceremonies from the banks of the river that signaled their retreat back into their predominantly Christian neighborhood and religious institutions ran parallel with the state’s growing patronage of Shi’i Muharram rituals. It is no coincidence that as the state was increasingly tapping into the power of public spatial practices to forge a collective Shi’i identity, it inevitably undermined the

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43 The murals at the entrance of the bazaar are perhaps the best-known example of the presence of European figures in 17th-century Isfahān. Such mural paintings also appeared on the gateways of suburban gardens such as Hezār Jarīb Garden (De Bruyn), and on the interior decoration of palaces such as Chehel Sotun. De Bruyn also describes murals in the pavilions of the Saʿādatābad garden that depicts men and women in Spanish fashion.

44 For increasing intolerance under Sultan Sulīmān and Sultan Husiyn, see Roger Savory, Iran Under the Safavids. Cambridge [England]: Cambridge University Press, 2007.

45 De Bruyn, Travel, 185-6.
access of other groups to public venues. Indeed, as their power shrank, and state pressure increased, Armenians were stripped of the privilege of using the Zāyandihrūd River as a site of their sacred baptisms and as a public stage for their religious processions. While curious Muslim citizens still came to the Julfa to watch the ceremony, relinquishing their claim over unfettered access the river represents a powerful signal as to the declining prominence of minorities all over the Safavid realm.

Āb-Pāshān Ceremony: The River Becomes a Public Concourse

In the beginning of the month of Saratan (June/July) which according to traditions of the non-Arabs, and auspice of Kasra and Jam (ancient mythical Persian kings) is the day of Ab Pashan (sprinkling water), [Shāh Abbās I] with his entourage at the Chāhārbāgh Street watched the ceremony of Ab Pashan, and in that day more than hundred thousand of people from various classes had gathered in the Chāhārbāgh Street, and threw water on each other. So large was the number of participants and the water they used that Zāyandihrūd River went dry, and indeed it is an extraordinary entertaining scene.

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46 Babak Rahimi’s book, *Theater State and the Formation of Early Modern Public Sphere in Iran*, examines the transformation of Shi’i rituals from primarily devotional practices to an elaborate repertoire of ceremonies that solidified state power; however, they later became opportunities for misrule and disobedience and emergence of public sphere in 17th-century Persia.

The role of the river in the ceremonial life of the city was not limited to religious rituals. Other local occasions, most notably the “Āb-Pāshān” or “Āb-Rīzān” festival, would also bring people from all walks of life to the river. As the court historian Iskandar Munshī noted, on a hot July day people from all social strata gathered along the Chāhārbāgh Street and the Zāyandihruḍ River and splashed and sprayed water at each other. Low water levels in the river during the month of July encouraged people to turn the river into a major site of entertainment—many bringing their own vessels that they used to soak other Isfanhanis. At times people got so taken away by the play that the event ended up with a number of people dead or injured.

Detailed information about the specific origins and rituals associated with the Āb-Pāshān festival in the 17th century remains limited. The festival is believed to be rooted in the ancient Tīrgan Persian ceremony and is related to an old mythical story about celebrating the long-awaited period of rain that ended an even longer period of drought. While medieval Muslim scholars such as Al-Bīrūnī refer to the festival and its origins, 17th-century Persian sources do not provide us with anything more than passing references. Thus, interestingly, our most enlightening sources of information are the European

48 ibid
49 Figueroa, L’embassador de Garcia de Silva, 312.
informants, Della Valle and Figueroa, who attended the Āb-Pāshān ceremony that was held on the 4th of July in 1617 when the Shāh was in Isfahān.\textsuperscript{51}

In terms of detailed information about the festival, both men seem to have been most impressed with the fierce activity of Isfahāni men who jumped into the river and splashed water on each other. Indeed, their activities created an amusing spectacle for the onlookers who lined the banks of the river and occupied different levels of the Allāhverdīkhān Bridge. While the king and his entourage enjoyed themselves under the shadow of the arcades in the first level of the bridge, women had secured their position along the upper level.\textsuperscript{52}

Emblematic of their position in 17th-century society, women were banned from direct participation in the ceremony. Nonetheless, the location of these women on the upper-most level of the bridge afforded them a nice view of the activities taking place below them.\textsuperscript{53} However, the gender-based situation in Isfahān seems to have differed from other provinces of the empire. Consider, for example, the Caspian province of Gīlān where people of both genders were reported to have been actively engaged in the Āb-Pāshān Festival.\textsuperscript{54}

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\textsuperscript{51} Molla Jalal, and Iskandar Munshī also mention this and other Ab Pashan festivals, but none of them provide much detail about the ceremony. See Molla Jalal al-din Mohammad Monajem Yazdi and Seyf Allah Vahīdnia. \textit{Tarikh-i Abbāsi Ya Rooznameh-i Molla Jalal}. Tehran: Intesharat-i Vahīd, 1988, 191-92; & Iskandar Munshī, \textit{Tarikh-i Alam Ara}, 788.

\textsuperscript{52} Figueroa, \textit{L’ambassador de Garcia de Silva}, 346-47.

\textsuperscript{53} Ibid, 346.

\textsuperscript{54} Iskandar Munshī, \textit{Tarikh-i Alam Ara}, 853.
\end{flushright}
various regions as well as social classes and religious groups. Furthermore, scholarship has shown that the visibility and public participation of Safavid women in the public realm declined throughout the course of the 17th century. In comparison to the prior century, the shift from a tribal-rooted system towards a religious urban-centered regime, coupled with a steady increase in the power of Shi‘i religious figures throughout the 17th century, created more limitations for women. Perhaps the growing gender-segregated culture of 17th-century Isfahān had a direct effect on the spatial arrangement of the festival, relegating women who were traditionally active participants in the festival to more distant observers.

As noted, the first level of the Allāhverdīkhān Bridge also accommodated the king and his entourage. For this occasion, the king had invited foreign ambassadors to join him in watching the ongoing activity from the Allāhverdīkhān Bridge. Arriving at the bridge in the morning, the king intended to make use of the festival as an opportunity for entertainment as well as a display—and the Allāhverdīkhān was an excellent place for fulfilling the king’s plans. Not only was the bridge a magnificent piece of architecture that inspired the awe and admiration of all European visitors, but also it offered an eminent


57 Traditionally, women in Turco-Mongol societies held great power and a presence in various avenues of life. It is believed that the seclusion of women during the Safavid period grew throughout the 17th century—a time when the Safavid state was transforming from a tribal state to a religious urban-based centralized power. See Maria Szuppe, “The ‘Jewels of Wonder’: Learned Ladies and Princess Politicians in the Provinces of Early, Safavid Iran,” in Gavin R. G. Hambly (ed.), Women in the Medieval Islamic World: Power, Patronage, and Piety (London: Macmillan, 1998), 325–48, and 336–7. The gendered nature of spatial practices in 17th-century Isfahān is a long-overdue subject that awaits serious study.
view of the river (Figure 3-5). In positioning himself along the first level of the Allāhverdīkhān Bridge, the king not only enjoyed the scenery, but was also visually in control of the activity in the river. This strategy was, indeed, part of the larger pattern of Shāh Abbās I’s attempts to present an impressive picture of his power. The Allāhverdīkhān bridge also enabled the king to employ the river as an alternative site for staging various public theaters and events that occurred on a regular basis in the Naghsh-i Jahān Miydān, the central market, and in the coffeehouses of Isfahān. This ordinary space was transformed into a royal setting through minor, yet key, changes. For instance, gatekeepers restricted access to the bridge and tents were pitched along the bridge to protect against the sun; additionally, the presence of female entertainers and drinking also enhanced the overall experience.

Similarly, Shāh Safī I (1629-1642) and Shāh Abbās II (1642-1666) occasionally took advantage of the river to set up events and festivities along the monumental bridges that spanned the river. One such instance that was recorded by Persian sources was during the Mughal ambassador’s visit to the capital. On this occasion, the river served as a threshold for entrance into the city and a site of lavish extravagant display. Accompanied by the Mughal Ambassador- Safdar Khān - the king’s entrance into the city took place in multiple stages. The first stage was his short stay in the royal suburban garden of Hezār Jarīb, south of the river. From there, and in the presence of an enthusiastic crowd that gathered to

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58 Figueroa informs us that at one instance when the exchange among the people was turning into a fight, the king ordered his men to intervene. Figueroa, *L’ambassadeur de García de Silva*, 312.

59 Figueroa, *L’ambassadeur de García de Silva*, 313.
welcome the king and his guests, the Shāh and his entourage traveled along the Chāhārbāgh Street moving northward towards the city. The procession made a stop over the Allāhverdīkhān Bridge. There, royal guards had arranged for canons to be brought to the shore of the river and fired to celebrate the entrance of royal party into the city.\textsuperscript{60} In spring, too, Shāh Safī I set up extravagant festivities in the vicinity of the river. Coinciding with Easter, the king selected the house of mīrshekār, which was located on the bank of the river opposite the Armenian neighborhood, for an extravagant gala, and also ordered that the Allāhverdīkhān Bridge be lavishly decorated.\textsuperscript{61} By doing so he not only reinforced his relationship with the Armenians, but also used the river as a unique site of display.

The mobility and temporality inherent in the festive spaces of the Safavid courts, which was grounded on the itinerant culture of the Safavid army and elites, offered exciting possibilities for turning ordinary public spaces of the city into festive sites of demonstration. Indeed, Safavid spaces received a large portion of their splendor from temporary elements and features. Textiles, lamps, fire plays, the sound of water, music, were used to prepare the ordinary everyday spaces such as market, coffeehouses, and bridges into royal spaces of pomp and display.

\textbf{Temporal Geography of the River}

\textsuperscript{60} The Canons failed to fire and the person in charge was accordingly punished. Valeh Isfahāni, Muhammad Yusuf., Nasiri, Muhammad Reza. \textit{Iran Dar Zaman-i Shāh Safī Va Shāh ʿAbbās-i Dovvom: 1038-1071 H.Q.} (Tehran: Anguman-i Atar va Mafahir-i Farhangi, 2001), 246.

\textsuperscript{61} Valeh Isfahāni, \textit{Iran Dar Zaman-i Shāh Safī Va Shāh ʿAbbās-i Dovvom}, 251-2.
Shāh Abbās I’s urban policies to build his suburban complex on the southern side of the river, and link it to the city with a magnificent avenue, stretched the city towards and beyond the river. By providing land and infrastructures and instituting policies that encouraged development in the vicinity of the river, he further planted the seed for an unprecedented engagement between urban life of Isfahān and the river. With the construction of large mansions and gardens along the river, coupled with the establishment of walkways and bridges that facilitated residents’ close interactions with the Zāyandihrūd, the city forged closer ties with the river. Easy access to the river and its nearby amenities, the visual appeal of water, and the cooling breezes attracted denizens of Isfahān.

In addition to its place in the daily recreational life of Isfahāni citizens, the river also played a vital role in the ceremonial life of the city. During the formative years of Isfahān as the grand capital of the Safavid Empire, the state often used splendid ceremonies and ritual as a means for building and displaying power. In the first decades of the 17th century when the Safavid state was going through its transition from a sectarian movement to a centralized imperial power, rituals played an integral role in establishing the power and identity of the new state. The spatial enunciation of power was not limited to magnificent architectural projects that clearly displayed the state’s power for citizens and visitors, but also included repetitive royal ceremonies that occupied various everyday spaces of the city as opportunities for public spectacles.

62 In his original study of Safavid Muharram Rituals, Babak Rahimi goes beyond architecture and discusses the role of urban performances as cultural mechanisms and theatrical techniques for representation of power. See Babak Rahimi, *Theater State*, 173.
A number of these ceremonies and rituals, such as the Armenian celebration of the Epiphany or the Āb-Pāshān Festival, were arranged by the river and were often closely engaged with it. On such occasions, the transitory and dynamic nature of an event/ritual and the collective memory and imagination of water intersected with the material embodiment of the river as a geographic site. While the ritual bridged between real and fictive time, the prayer of the Armenian priest transformed the water of the Zāyandīhrūd into the sacred and purifying water of Jordan River. Furthermore, as the only major source of water available in the area, the river was the natural choice for the Āb-Pāshān ceremony. In a hot and arid region such as central Persian Plateau where water is scarce, the Zāyandīhrūd River was the backbone of Isfahān’s livelihood and fertility. As such, the river was an ideal location for celebrating and expressing the people’s gratitude for water as an essential commodity of life, as well as an important setting for royal rituals that obviated the power of the state to onlookers. Endowed with such a significant place in the collective imagination of the society, the Zāyandīhrūd was at the core of these urban rituals. Indeed, while the space acquired meaning through performance, far from being independent, the space of the ritual itself acquired significance through its association with the river.63

Capitalizing on the presence of the river, these rituals also brought people of various social, religious, and ethnic backgrounds to the banks of the river and created sites of interaction and exposure. Therefore, while separating the Christian and Muslim communities, the Zāyandīhrūd River also represented a unifying presence—a shared

subject of their attention and social life. For the Muslim inhabitants of Abbās Abād, who watched the ceremony from north shore of the river, (as well as those who chose to come to the Armenian side), the river and the rituals that it embraced were the subject of curiosity and entertainment. At the same time, it allowed Armenians to imagine themselves connected and related to the blessed water of the Jordan River, re-live their memories of the old Julfa and ceremonies along the Aras River, and in many ways express their religious identity in the public space of a majority-Muslim city. Indeed, the ritual transformed the river from a border to a shared space of imagination.

The presence of the king had an astonishing effect in validating this space—as if with his participation, the king approved this space as emblem of Armenian identity and endorsed the legitimacy of their claim in the public life of the city. In effect, the ability to occupy an open, shared public space along the river was a sign of the power and privilege of Armenians in the first half of the 17th century. The community’s success in carving out a temporal space emblematic of their identity illustrates their power and prominence, which, by the time De Bruyn had arrived in Isfahān in the early years of the 18th century, was sadly in decline. By then, though the Christian community had grown considerably in numbers, it was not enjoying the same level of prosperity and privilege, as evidenced by the fact that the “Blessing of Water” ritual was pushed into the confines of the Julfa neighborhood. The fact that this important ritual had to disassociate itself from the river and the public exposure and opportunity for display that it offered, represents a clear sign of the diminishing significance and power of the Armenian community in Isfahān.

As a physical element that brought various communities together, the river could also be a site of conflict and contention. One must note that the various ceremonies
discussed in this chapter were all carried out under the watchful eye of the royal guards who were stationed in strategic locations to prevent discord and maintain discipline. On the day of Epiphany, the Shāh’s guards would block the streets and the bridge that led to the site of the ceremony in order to prevent the passage of any unauthorized mob or riders to the site.⁶⁴ Indeed, the religious nature of the ritual would have made the space ripe for an outbreak of sectarian disputes. Royal guards were also put in charge of protecting groups of elite female spectators who stood near the river.⁶⁵ The intensive interactions and activities on the day of Āb-Pāshān also created scenes of struggle between participants, sometimes even leading to injury and death.

These measures were not just there for protection of Isfahāni citizens. As the capital of the Safavid Empire, which received people from all over the world, the public spaces of the city and the banks of the river were also prone to hostile interactions involving foreign visitors. One such instance that was reported by both Persian and European accounts describes a fight between the Franks and the companions of the Mughal ambassador. Over the course of just a couple of days, the dispute, which Vahīd believed took place during a period of royal festivities and entertainment along the river, was transformed into a full-fledged fight between the Franks and Mughals, and was not put into rest until the Safavid government intervened.⁶⁶

⁶⁴ Della Valle, *Voyages*, V.5, 35.

⁶⁵ These are probably higher status women from Armenian and Muslim families, for whom a space was reserved near the Bishop and clergy members; and guards were assigned to protect them.

⁶⁶ Adam Olearius and the court historian Vahīd offered differing accounts of the event. Here I am relying on Vahīd’s testimony. See Valeh Isfahān, *Iran dar zaman-i Shāh Safi*, 252; & Adam Olearius, Adam, *The Voyages and Travells*, 197-98.
Whether imbued with joy, entertainment, and conviviality (or even fights and disputes), the events and rituals along the Zāyandihrūd River represent important moments when the collective memory and meanings associated with river were enacted. The river was celebrated as a source of physical sustenance, as the sacred source for washing away impurities, or as an extraordinary setting for theatrical displays of power and glory. Tied to the cosmic calendar, these festivals created a temporal geography for Isfahān, which turned the river from a border between the Muslim and non-Muslim, royal and commoner, and foreign and local into a site of their meeting, exposure, and interaction. Creating and maintaining a shared civic memory, these riverine activities played a crucial role in shaping the experiences of Isfahān’s cosmopolitan inhabitants.
Figure 3-1- Approximate map of Isfahan prior to its selection as the Safavid capital, few years before 1600. The map is based on the General Chirikov’s Russian map of the city in 1851 from Mihryar, Muhammad., Fatullaev-Figarov, Sh. S., Fakhari, Farhad, Qadiri, Bahram. Asnad-i Tayyiri-i Shahrba-Yi Irani-i Dawrah-i Qajar, (Tibyan: Danishgah-i Shahid Bihishti : Sazman-i Miras-i Farhangi-i Kishvar (Pizuhishgah), 1999); Redrawn and modified based on textual information and the 1963 aerial photograph of the city. Credit: Sahar Hosseini.
Figure 3-2: Isfahan after the construction campaign of Shah Abbas I (1571-1629). The map is based on the General Chirikov’s Russian map of the city in 1851, from Mihryar, Muhammad., Fatullaev-Figarov, Sh. S., Fakhari, Farhad, Qadiri, Bahram. Asnad-i Taṣvīri-i Shahrā-Yi Iran-i Dawrāh-i Qajar, (Tihran: Danishgah-i Shahid Biluṣhti : Sazman-i Miras-i Farhang-i Kishvar (Pizhuhishgah), 1999). Redrawn and modified based on textual information and the 1963 aerial photograph of the city. Credit: Sahar Hosseini.
Figure 3-3: By the middle of the 17th century (1660 AD) the new royal complex (Saadatabad Complex) was established on the shores of the river. This map illustrates the approximate condition of Isfahan around 1660 AD. The map is based on the General Chirkov’s Russian map of the city in 1851, from Mihryar, Muhammad, Fatullaev-Figarov, Sh. S., Fakhari, Farhad, Qadiri, Bahram. Asnadi-Tabayi-Ashrani-Yi Irani-i Dawrah-i Qajar, (Tihran: Daneshgah-i Shahid Bihiisti : Sazman-i Miras-i Farhangi-i Kishvar (Pizhuhishgah), 1999), Redrawn and modified based on textual information and the 1963 aerial photograph of the city. Credit: Sahar Hosseini.
Figure 3-4: Drawing of the Julfa Bridge by Cornelis De Bruyn showing the elite mansions and gardens that lined along the river. According to Chardin, every evening young people came to the banks of the river for riding, playing, practicing and socializing. From Cornelis De Bruyn, Travels into Moscovy, Persia, and Part of the East Indies, (London: For A. Bettesworth, 1737). Courtesy of UCLA Library Digital Collection.
Figure 3-5- Sketch of the eastward view from the Khaju Bridge. In De Bruyn's opinion there was no thing more pleasing to the sight than the view to the eastward from upon this bridge. From Cornelis De Bruyn, Travels into Moscovy, Persia, and Part of the East Indies, (London: For A. Bettesworth, 1737), 200. Courtesy of UCLA Library Digital Collection.
Figure 3-6- The steps on the lower level of the Khaju Bridge offered remarkable opportunities for multi-sensory interaction with the river. Photo Credit: Sahar Hosseini, Summer 2015.
CHAPTER 4

Sa‘ādatābad: The Riverine Royal Complex

After a long prayer to God and the Prophet Mohammad, a eulogy for Shāh Abbās II (1642-1666), and a laudatory description of the enchanting morning in Isfahān, Ramzī Kāshānī (1635-?) began his poetic description of Sa‘ādatābad Garden (Garden of Felicity) with the following verses:

There is a garden near Isfahān where delight surpasses the garden of Khān
Heaven is a reflection of its features; its air breathes life into the lifeless
Twilight is a reflection of its pomegranate blossoms, and delight is embedded in the leaves of its plane trees
It’s not a garden, but pleasure of soul, it’s a heaven near Isfahān
More or less, it stretches about thousand Jarib, but each step in it is worth hundred thousand times.

His evocative description then focuses on the nearby Zāyandihrūd Lake:

A lake originated from a crystal-clear water, embedded with delight
Where Joy and entertainment parade
As I heard this encouraging description, I could not stay in my place

With the hope to wander in this prosperous garden, I got ready enthusiastically

On his way to the garden, Kāshānī passes through an “enchanting pathway” (rahi mosaffa) with “trees lining on either sides” (be har sooyash nahalan doosh bar doosh). The path takes him to the lively waters of the Zāyandihūd River, where he sees a stone dam that had transformed the river into a lake that bordered the Garden of Saʿādatābad.

Composed in celebration of the Saʿādatābad Garden (Garden of Felicity), this encomiastic poem presents glimpses of a garden that was the stepping stone of Abbās II’s (1642-1666) building activities on the shores of the Zāyandihūd River. While the garden was originally founded by Shāh Safī I (1629-1642), Shāh Abbās II’s decision to develop it into a full-fledged royal complex bestowed a new role on the river. Delineated with bridges, buildings, and gardens, the river became the ceremonial core of the complex, and affected the spatial configuration of its surrounding structures. In effect, the physical and spatial composition of the Saʿādatābad Complex marked an unprecedented engagement with the river.

After the selection of Isfahān as the capital of the Safavid Empire in 1598, the city, which for centuries had kept its distance from the river, underwent a southward expansion towards the Zāyandihūd River. The very gentle slope of the plain wherein Isfahān was established, and the mild current of the river made it easily approachable. Moreover, given the waterway’s low frequency of flooding, construction along the river did not require massive provisionary measures to maintain the safety of the city. Embankments and platforms were created, dams were

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68 Presumably to maintain its distance from flooding, and to position agricultural lands closer to the water.

69 For more information about the flooding of the Zāyandihūd River, see Chapter 2.
constructed, and neighborhoods were established along the river. By the time that the Italian traveler Della Valle visited Isfahān in 1618, immigrant communities from the northeastern frontiers of the empire had already settled on the opposite banks of the river. Their beautiful mansions looked over the river, and their gardens and grand pavilions bordered the platform along its banks (Figure 3-4).

While the development of residential suburbs and elite gardens along the river was actively pursued from the first decades of the 17th century, early royal and administrative complexes were established in a considerable distance from the river. The Naghsh-i Jahān administrative-cum-residential complex, at the far north side of Chāhārbāgh Street, mediated between the city and the suburbs, and the Hezār Jarīb Garden at the southernmost end of the Chāhārbāgh marked the conclusion of Abbās I’s (1588-1629) urban-suburban project (Figure 3-2). Situated in a considerable distance from the river, the complex hydraulic architecture of these royal establishments only indirectly engaged with the river – receiving their water through a network of canals that diverted water from the river.

Indeed, these water canals (mādī) not only functioned as conduits for transportation of water but also provided some of the most vital elements of sensory delight in the city. Similar to

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70 The accounts of Chardin, Tavernier, De Bruyn and Kaempfer make indirect references to embankments, walkways, and other infrastructural provisions to control water. Chardin talks about embankments along the Abbās Abād banks of the river. Tavernier and De Bruyn also mention walkways along the river. Refer to Chardin, Jean. *Voyages De Mr. Le Chevalier Chardin, En Perse, Et Autres Lieux De L'Orient.* (Amsterdam: Lorme, 1711), 58; De Bruyn, Cornelis. *Travels into Muscovy, Persia, and Part of the East-Indies.* (London: 1737), 197.

71 For further discussion of these riverside garden residences and observation of Della Valle and Silvia Figueroa, refer to Chapter 3.

72 For added description of these water canals and their role in the economic life of the city, refer to Chapters 1 and 2.
Isfahān’s royal compounds, various private and public spaces all around the city had a close – yet invisible bond with the river. The stream that circulated around the Naghsh-i Jahān plaza and the water pools and fountains in the courtyard of schools, mosques, and commercial establishments near the plaza were all supported by the Fadin Canal (Figure 2-2). Similarily, many royal and elite mansions and gardens drew their delight and excitement from the animated play of water that was facilitated by these waterways.

In addition to this indirect engagement, which made the river at once present and absent from the scene of urban life in the city, the river also accommodated public and royal leisure and entertainment. Expanding upon the previous chapter, and augmented with the information presented in Chapter 5, this chapter examines the direct interaction of the court with the Zāyandehrūd. In particular, this chapter focuses on the Sa’ādatābad suburban complex as the first major royal development where the river was employed as the central element in the layout of the compound. Most prior scholarship devoted to this royal complex focused on particular elements of the compound, namely the Sa’ādatābad Garden and the Āynih Khānih Pavilion. Therefore, this chapter begins by reimagining the complex and its spatial organization in its entirety. Using that as a foundation, it then addresses the relationship between the royal complex and the river by answering some specific questions: What roles did the river play in the life of the complex? How

73 See Chapter 2.

74 For works on Āynih Khānih, see Sussan Babaie, Isfahān and its Palaces, Statecraft, Shi'ism and the Architecture of Conviviality in Early Modern Iran. (Edinburgh: Edinburgh University Press Ltd, 2008),167-169. Jean-Do Brignoli’s unpublished doctoral dissertation is perhaps the only scholarly attempt to reconstruct the spatial organization of the complex. However, because he only relies on European sources and ignores Persian materials such as the poetry of Ramzi Kashanī and Mohsen Tašír, he, as well, focuses on the southern section of the complex that was more accessible to European visitors. Refer to Brignoli, Jean-Do. "Les Palais Royaux Safavides (1501-1722): Architecture Et Pouvoir." Université Aix-Marseille, 2009, 542-578.
was this interaction articulated through architectural strategies? And how did the spatial arrangement and architectural strategies that were employed in the complex structured the court decorum around the river?

A variety of important historical sources, including written accounts of Safavid court historians and European visitors, poems composed in celebration of Sa’ādatābad, and visual accounts offered by European travelers, provide the basis for the reconstruction and critical analysis of the complex. Since nearly all the structural elements of the complex are lost (only two bridges remain), re-imagining the spatial and material configuration of the complex is critical for any further analysis. Due to the fact that the piecemeal nature of available historical information is insufficient for reconstructing a detailed plan of the entire complex, my reconstruction remains at the scale of mapping spatial relationships (Figure 4-1). Wherever additional detail on decorations, building configuration, and material properties are available, I advance my analysis to a more intimate scale.

**Shāh Abbās II and the Construction of the Sa’ādatābad Complex (Abode of Felicity)**

The precise date for the construction of the Sa’ādatābad Complex is hard to determine. Available Safavid sources mention the project in different years. For example, writing circa 1668, Vālih Isfahāni described the purchase of land from the Zoroastrian community, as well as the design and construction of the exceptional Sa’ādat Garden (Garden of Felicity) in the year 1655 AD.75 However, another contemporary court historian, Mohammad Tāhir Vahīd, noted the construction

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of the city and edifice of Sa’ādatābad among the events of the year 1658; he also provided a chronogram for the year 1660 AD. Vahīd’s description addresses the construction of the auspicious daulatkhānih (Abode of Rule) in a garden adjacent to the Sa’ādat Garden, bordering the river and the new Shāhi Bridge (Khājū Bridge). It is possible that these two Safavid historians are reporting on different stages of the project, with the first date being a reference to the construction (or modification) of the Sa’ādat Garden, and the second date alluding to the addition of residential and service quarters in the adjacent land. While we cannot be certain, we can, as Charles Melville has suggested, associate this temporal inconsistency to the usually lengthy construction process. For now, it is safe to assume that the project was ongoing between 1655 and 1660 AD.

76 1068 and 1070 AH.

77 I use the word daulatKhānih, because there is no precise English equivalent for it. It does not equate with palace, capital, or government complex. In the Safavid context it refers to an assemblage of residential, administrative, recreational and ceremonial spaces that were clustered with workshops, a library, and service spaces such as kitchens and storage areas. Individual buildings or clusters were often located within gardens. For more information about the Safavid daulatKhānih in Isfahān, see Sussan Babaie, Isfahān and Its Palaces, 119-123. For Vahīd’s account of the construction of daulatKhānih, refer to Vahīd Qazwini, Mirza Mohammad Tāhir and Sāeed Mir Mohammad Sadeq, Tarikh-i Jahan Aray-‘i Abbāsī (Abbāsnameh), (Tehran: Pazhooheshagah-i Ulum-i Insani va Motaleat-i Farhangi, 2005), 683.

78 The Āynih Khānīh was located within a garden that dates back to the time of Shāh Safi. Perhaps Vale Isfahāni’s reference to the design and construction of the Sa’ādatGarden is a reference to Shāh Abbās II’s addition or refashioning of the existing garden. Based on Coste’s plan of the garden and other visual sources (and most notably Pascal Coste’s unpublished plan of the garden that resides in the archive of the Bibliothèque Municipale de Marseille), the Sa’ādatGarden also contained two other buildings located on the main axis of the Āynih Khānīh. Whether these two buildings were Abbās II’s addition or part of the original configuration of Safi’s garden is yet to be determined.


80 1065 and 1070 AH
In any case, both sources confirm the interest of Shāh Abbās II in the site. In order to materialize his vision, he had to buy the land near the already existing Saʿādat Garden from the Zoroastrians – relocating the community to a site near the Julfa district. At that time, the Āynih Khānih Pavilion was part of the suburban Garden of Saʿādatābad, which was established by Shāh Safī sometime before 1641. Whether Safī was on a mission to turn this site into a new daulatkhānih is not clear, but very unlikely, since Abbās II did not begin the project until 1655AD – thirteen years into his reign.

Construction of the Saʿādatābad Complex under Shāh Abbās II was at once a continuation and a departure from the urban legacy of Shāh Abbās I in Isfahān. To further express his dominion, along his own investment in the complex, Shāh Abbās II also ordered his generals to acquire lands in the area and establish their own gardens and mansions. Surrounded by elite gardens, the new daulatkhānih preserved its connection to the city through a new avenue – the New Chāhārbāgh (Chāhārbāgh-I Khājū)—which was lined with rows of trees. In this way, Abbās II’s daulatkhānih followed the example that was set by Abbās I’s Chāhārbāgh-Hezār Jarīb ensemble (Figure 3-3).

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81 Khajegi-Isfahāni described a reception held by Safī in the Āynih Khānih Pavilion after he recovered from an illness in the year 1641. This is the first historical reference to this talar which confirms that the talar and the garden were established by Safī before 1641. See Khajegi-Isfahāni, Mohammad and Iraj Afshar, Kholasat Al-Seyr, (Tehran: Intesharat-i Elmi, 1990), 295, quoted in Babaie, Isfahān and Its Palaces, 167.

82 Vahel Isfahāni, Iran Dar Zaman-i, 438-39.

83 With the new Chāhārbāgh (or Chāhārbāgh-I Khājū), Abbās II was enforcing a close tie between his suburban royal complex and the urban seat of rule (naghshe Jahan complex), which followed earlier examples such as Abbās I’s Chāhārbāgh Street, or the Khyābān in Herat. For discussion of the role of Khyābān in structuring urban growth in Isfahān, see Emran, Seyed Mohammad Ali. "The Role of Gardens and Tree-Lined Streets in the Urban Development of Safavid Isfahān." 1. Aufl., München, Techn. Univ, 2012. For more elaboration on Chāhārbāgh-I Khājū and its connection to the Saʿādatābad Garden, refer to Jean-Do Brignoli, 542-87.
It must be noted, however, that the Sa’ādatābad complex also departed from Abbās I’s model by its conscious attempt to integrate the Zāyandihūd River into the royal complex. As we shall see, the river was tamed and directed toward the creation of a lake that would become an active element of the garden in its own right. In the years to come, as the Āynih Khānih Pavilion continued to be used as a glamorous site for lavish Safavid banquets and social events, the lake not only offered an exceptional natural backdrop, but also demonstrated the royal power that tamed the river into a lake.84

As the site of these royal banquets, the columned hall (tālār) of the Āynih Khānih Pavilion provided a spectacular panoramic view of the river and surrounding natural scenery (Figure 4-3 & 4-4). Its high ceiling, supported by slender wooden columns, contributed to an expansive and spacious space with an unobstructed view. Open on three sides, the exterior and interior of the building melted into each other, dissolving the boundary between the building and nature, thus situating the spectator closely engaged with the spectacle. As Sussan Babaie has argued, similar to other pavilions with frontal column halls that emerged in 17th-century Isfahān, the spatial arrangement of Āynih Khānih followed a model fabricated to accommodate the political, ideological, and performative agenda of the Safavid State at the height of its power.85 Other

84 Āynih Khānih Pavilion is frequently mentioned as the site to house local and foreign dignitaries who arrived in Isfahān and received an audience with the king. In the year of Abbās II, one such reception was held in honor of the Mughal Prince, Sultan Balaghi. See Vahīd Qazwini, Tarikh-i Jahan Aray-‘i Abbāsi 637; Valeh Isfahāni, Iran Dar Zaman-i Shāh Safi Va Shāh ʻAbbās-i Dovvom, 601. Kaempfer, De Bruyn, and Chardin all attended ceremonies held in honor of foreign ambassadors in the Sa’ādat Garden and talar of Ayineh Khānih (Hall of Mirrors).

85 Talar refers to the frontal columned halls attached to a masonry structure in the back. The open and axial arrangement of these palaces introduced a new language in the introverted radially symmetrical arrangement that was predominant in the Safavid architectural vocabulary up until the 17th century. For more info, see Sussan Babaie, Isfahān and its Palaces, 157-197.
examples that are known to us—most notably Ali Qapu and Chehel Sotoun—implemented a similar spatial strategy using slender wooden columns to create spacious and transparent spaces.

While these Safavid tālār-fronted palaces introduced a new language for engaging with their surrounding garden, Āynih Khānih was unique in the ways it was situated to respond to the river. In the famous Ali Qapu Palace, the tālār opened up towards the public plaza, offering a commanding view of daily life and the various ceremonial events held within the plaza (Figure 4-5). In the case of the Chihil Sutūn Palace, the tālār opens up to the space of the garden, mediating the transition from the interior space of the building to the semi-open space of the tālār, from where the vision and space further expanded outward to incorporate the entire garden (Figure 4-6). In contrast, in the Sa’ādatābad Garden the presence of the river supersedes the attractions of the garden. In fact, the tālār appears to deliberately divorce itself from the garden and instead opens itself towards the river. It must also be noted that despite their overall similarities, each tālār was designed with a distinct plan to optimize its relationship with the outside space. Unlike the plan of Chihil Sutūn and Ali-Qapu, where lateral expansion of the plan in parallel with the garden and plaza mediated a distant yet wide and dominant view to the garden, the tālār of Āynih Khānih was designed with an elongated plan. Stretching along the central axis of the garden, the tālār extended its reach towards the river and advanced all the way to its shore (Figure 4-7).

Shāh Abbās II’s vision for his Sa’ādatābad Complex took this close visual and spatial relationship to the next level. The location of the complex at the spot where the river was deepest offered an unsurpassed opportunity for creating a beautiful lake in front of the Āynih Khānih
Pavilion. The fabrication of this lake was facilitated through the construction of a bridge-dam. It is likely that Shāh Abbās II’s insistence on establishing his daulatkhānīh at this site was not a coincident but an opportunistic move to take advantage of the natural potentials of the location.

Similar to the temporal discrepancy associated with the establishment of the Sa’ādatābad Complex (Adobe of Felicity), sources are also inconsistent about the construction date for the bridge-dam (hence referred to as Khājū Bridge). Vālih and Tāhir Vahīd both talk about the construction of the bridge in the year 1658-9 AD. However, three years earlier (circa 1655-6 AD), Vahīd had already reported about the Shāh Abbās II’s decision and subsequent action to construct a dam on the same spot. To further complicate the picture, Paul Losensky, and Honarfar offer two different interpretations of Ramzī Kāshānī’s chronogram. While Honarfar establishes the date 1658-59, Paul Losensky believes that Ramzi’s chronogram should be interpreted as 1655-56.

Given the Vahīd’s reference to dam in 1655, we can ascertain that by this time at least the idea for the construction of the bridge and attempts for the construction of the dam were well in place. In this year (1655), Vahīd wrote about the transfer of stones and other construction materials

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to the site, followed by other steps to complete the construction of the dam. In fact, he remarked that following these steps the water level rose and the river transformed into a sea.\textsuperscript{90} Therefore, we can suggest that by 1655-56, early steps in the construction of the bridge (including at least its foundation) had been taken, but the bridge would not be complete until 1668. And by 1659-60, the bridge was ready to accommodate Shāh Abbās II’s spectacular festivities and, indeed, served as a viewing platform to watch fireworks over the river.\textsuperscript{91}

These historical references and descriptions illustrate a campaign of parallel work on the bridge and the Sa’ādatābad Complex which took place between 1655-6 and 1658-9. Early references to both projects started to appear in historical sources in the year 1655-6, and reached conclusion in 1659 & 1660. In effect, their portrayal of events suggests that the idea for the construction of the bridge, the lake, and the Sa’ādatābad Complex were all integrated; and orchestrated around a vision to make the river an active integral element of the royal complex.

\textbf{The lake}

If, as the dates suggest, the location of the lake adjacent to the royal complex was not a serendipitous accident—but instead part of the initial vision of Shāh Abbās II—what was the king’s agenda in incorporating the lake into his design? How would this transformation advance the Safavid’s political schema, or enhance the charm, beauty, and attraction of the complex? When

\textsuperscript{90} Tāhir Vahīd, \textit{Tarikh-i Jahan Ara}, 584. The idea of a bridge as a multifunctional infrastructure will be discussed in Chapter 5.

\textsuperscript{91} This is the year 1069 AH. The ceremonial function of the bridge is discussed in Chapter 5.
Shāh Safī I constructed the Āynih Khānīh Pavilion, the view to the river was no doubt a superlative advantage that distinguished Saʿādatābad from the Hezār Jarīb Garden and other similar suburban retreats in Isfahān that were established far away from the river. However, critical examination of the new complex makes it clear that Shāh Abbās II sought to augment the mere visual appeal of the river by employing spatial organization and architectural configuration towards maximizing the experiential potentials of the river.

Indeed, the first reference to Shāh Abbās II’s intention to create the lake alludes to the monarch’s concern for recreational potential of the lake, as well as its economic advantage. As Vahīd narrates:

It occurred to the king that if a dam is constructed over the river which provides diversion for the viewers and gives farmers constant access to the necessary supply [of water], it will bring prosperity to the garden of delight of the spectators, and also cause the development of the city of Isfahān.

Other literary sources that discuss the Saʿādatābad Complex also celebrate the lake as an integral part of the complex. In a poem dedicated to the description of Saʿādatābad, Muhsin Taʾsīr reserved a special section for the lake and its description. Furthermore, in his celebratory poem

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92 Given the scarcity of water in the region, the absence of large and abundant rivers, and the presence of large pools in front of the Safavid pavilion, the view to the river should have been a unique feature of the site. The location of Safavid royal complexes in Mazandaran such as in Farahabad along the Tajineh River, or in Abbāsabad of Ashraf overlooking an artificial lake, further confirms this preference. However, the role, position and arrangement of large bodies of water in Safavid architectural practice is a topic for another study that awaits scholarly attention.

93 Tāhir Vahīd, Tarikh-i Jahan Ara, 584.

that hailed Sa‘ādatābad, Ramzī Kāshānī made direct references to the dam and lake, and praised the lake for its wealth of water, felicity and charm.95

Furthermore, the choice of specific words that are meant to convey the pleasure associated with the lake helps us elaborate on the nature of its charm. For example, in their portrayal of the river, Ramzī Kāshānī and Vahīd repeatedly used the word tamāshā, which literally translates to viewing or visioning. 96 However, in reality, the joy that accompanies tamāshā surpasses the pleasure that is derived from the pure aesthetic beauty of the subject. The word also refers to the act of viewing an entertainment or show. Therefore, using the word tamāshā, in reference to the river, celebrates the lake beyond its attractions as a mere landscape; instead, it reflects the active role of the river in offering diversions of various nature. Indeed, as I will explain, the lake served as a site for royal recreational activities, afforded an opportunity for contemplation, and set a dramatic display of light in motion.

Theatre of Light and Water

For the Safavid kings, who were fascinated with illumination (Chirāqān) and fireworks, large bodies of water were perfect opportunities for multiplying the allure of such settings, and orchestrating a vibrant theater of reflecting and refracting light in dialogue with water. European and Persian sources repeatedly describe Safavid feasts that were accompanied by spectacular

95Note that such references to the delight of water and celebration of its abundance must be contextualized in terms of the routine scarcity of water in the Persian Plateau and the critical role of water for the livelihood and economy of Isfahān. For discussion on the cultural conception of water in the Persian Plateau, see Chapter 1 of this dissertation.

96Ramzī Kashanī & Iraj afshar, “Ramz al-riyahin”, 584; Vahīd, Tarikh-I Jahan Ara, 584, 635, 646.
illuminations over a lake, pool, or river. In the accounts of his court historians, Shāh Abbās II appears as a particularly passionate enthusiast for illumination (Chirāqān) ceremonies. Specifically, during his voyage in Māzandarān, Shāh Abbās II is reported to have arranged numerous Chirāqān festivals over the river and artificial lakes and pools that Safavids established for themselves in the region’s lush landscape. Once the night rolled in, lamps and candles were arranged along the water, creating an impressive scene of reflecting lights that glittered and sparked, and created scene that impressed the viewers.

If water magnified the allure of candles and lamps and launched a dramatic theatrical play of light and water around the Sa’ādat Garden and Āynih Khānih Pavilion at night, consider how during the day water’s dialogue with the rays of the sun would have accomplished a similar magic. Especially in collaboration with the mirrored decorations on the walls and columns of the tālār in the Āynih Khānih, the river created what Babaie refers to as “a constant dialogue of reflected and refracted light between the surface of the river and tālār.” If this refraction was an inherent quality of water, taming the river into a standstill lake elevated it to yet another level. Transforming the flowing river into a tranquil lake expanded the domain of opportunities that the river was ready to offer. The calm crystal surface of the water entailed practical and metaphorical applications,

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97 Among earlier instances we can recount Della Valle and Figueroa’s description of the evening in Bagh-i Jannat of Qazwin, or Figueroa’s description of illumination on the Allāhverdīkhān Bridge as well as the entire suburbs of the city, which was intended to be observed from the roof of a house near the river. Refer to Della Valle, Pietro and Sho’a al-din Shafa. Safarnameh-i Pietro Della Valle, (Tehran: Sherkat-i Intasharat-i Elmi-Farhangi, 2002) 2, 51-2; Garcias de Silva Figueroa and Gholamreza Sami’ee. Safarnameh Don Garcias De Silva Figueroa, (Tehran: Nashr-i No, 1985), 269 & 359-361.

98 Tāhir Vahīd, Tarikh-i Jahan Ara, 534-5.

99 Babaie, Isfahan and Its Palaces, 169.
offering a site for recreation as well as contemplation. It provided opportunities for recreational boating, and a mirror reflecting an image of the world.¹⁰⁰

**Contemplative Beauty**

The capacity of the lake to incite both worldly joy and spiritual contemplation is quite visible in Vahīd’s account of the construction of the lake:

Since among the most prominent occupations which removes the dirt from the mirror of the heart is watching the fluid water which refines the spirit in plants and animals … the imperial attention was set on the construction of a dam over the Zindihūd River (Zāyandihūd River), so during the time that Isfahān is the residence of the glorious banner [of the Shāh], they arrange for excursion/riding in the lake (*seyr-I daryacheh*), and rendering the signs of joy and vivacity from the wide open surface of that water.¹⁰¹

As Neciboglu discusses, in medieval and early modern Turkmen-Timurid, and by extension in Safavid and Ottoman cultural milieus, there existed an intimate connection between sight and insight. For artists, poets, and writers of the period, the visual perception of beauty was refined by a mental perception that was mediated through distinctly-human faculties of “inner sense”. Thus,

¹⁰⁰ Space considerations prevent the inclusion of extensive details about the metaphoric meaning that the lake and the mirrored decoration of Āynih Khānīh could have entailed for the intellectual and well-read artists and audience of the Safavid court. The tradition of mirrored decorations in Safavid Persia is a less explored subject, yet highly worthy of attention. In 17th-century Persia, the use of mirrors (often imported from Venice) was a new and innovative decorative approach. Therefore, this trend not only represents the aesthetic taste of the Safavids at this point, but also the increasingly international nature of Safavid art and decorations.

¹⁰¹ *Tāhir Vahīd, Tarikh-i Jahan Ara*, 584-5.
for the art and architecture of this period, higher beauty was not perceivable through “pure sensation”; rather, it required contemplation on the deeper meaning of the subject under scrutiny. It was only through this contemplative seeing that the true and higher beauty in the things would reveal itself.¹⁰²

Where the ultimate goal of any artistic activity was to contemplate and project the higher beauty imbedded in the world, the mirror was celebrated for its capacity to project the best reflection of the physical world.¹⁰³ Within this Aristotelian view, where art is a reflection of the divine light, Vālih Isfahāni considered the reflecting surface of the lake “as a heart-stealing mirror in the view of the onlooker.” In other words, for the viewer, the crystal surface of the lake offered a medium to reflect on the deeper meaning of the world. Much like a mirror whose reflective capacities enable it to present a real reflection of the world, the reflecting surface of the water was an ultimate form of art that projected the world for each viewer according to his inner faculty.

Beyond the lake, the appeal of the water was extended into the space of the tālār, all the way to the back of the building and the hydraulic architecture in the garden. In his poem, Mirza Mohsen Ta’sīr captured this harmonious symphony and the graceful dance of water:


¹⁰³ Neciboughlu offers an example from the 15th and 16th century manuscript of the Khamsa, produced in the Turkmen/ Safavid court. The illustration narrates the story of a painting contest where the winner was not the Greek illustrator who offered the most realistic depiction, but the Chinese artist who polished the surface of the wall to the extent that it reflected greater luminosity and beauty than the mural of the Greek artist. Necipoğlu, Gülru. "The Scrutinizing Gaze," 46. Such reflective qualities were also associated with the purified heart of the Sufi which was capable of reflecting the divine light. Bahmany, Leila Rahimi. "Mirror Metaphors in Persian Sufi Literature." In The Mirror in Medieval and Early Modern Culture: Specular Reflections, edited by Nancy Frelick, 113-129. Turnhout, Belgium: Brepols, 2016. In the medieval and early modern Persianate intellectual milieu, where Sufi thoughts and themes were increasingly infused with art and literature, the artists and educated intellectuals of the period were no doubt familiar with leitmotif of reflecting mirror.
The center of the garden has stone pavements
All along stands streams with fountains
The sparkling fountains
Organized from edifice to edifice
What a stream?! Highlighted by a water tower
Its waterfall is supplied from the bucket of the cosmos

... 

While the still water of the lake was cherished for its visual appeal to the sight and inner intellect, the aquatic spectacle created by a continuous series of pools, fountains, water towers and streams charmed the auditory senses. In the artistic culture of early modern Persia, which cherished hearing as the second most important sensory faculty, water also bore an auditory allure. In the background, the smooth flow of water in streams that ran from edifice to edifice created a tranquil symphony of vision and sound. In the foreground, the fountains that were arranged along equal distances, played the high notes. As the water danced, sprinkled, and cascaded down the water tower pavilion, it created a mesmerizing symphony that appealed to both eye and ear.

Worldly Joys: Recreational Boat Riding

Ta’sīr’s anthology on the description of the Sa’ādatābad Complex also featured a passage about a boat that floated on the lake. By intervening in the natural flow of the river, upon the will of the Shāh, the unnavigable river was transformed into a tranquil spacious lake. Beyond a metaphorical and highly visible allusion to royal power, the lake was also intended to


105 For an attempt to re-imagine the organization of this part of the garden, look at Jean-Do Brignoli, "Les Palais Royaux Safavides," 542-578. While Brignoli’s work exclusively relies on European accounts, I also employ the work of the contemporary Persian poet Mirza Mohsen Ta’sīr.
accommodate royal recreational boating. Either accompanied by his women (as De Bruyn suggests) or feasting among his generals and entourage (as was the common custom in Māzandarān), the king was able to enjoy his beloved practice of leisurely boating.

Boating along rivers and in natural and artificial lakes, and turning the event into festivities and social gatherings, was not unique to Safavid kings. This culture of boating-related social entertainment was a practice upheld by generations of Turko-nomad rulers, from the Qaznavid king – Sultān Masoud to the Timurid prince Babur and his grandson Akbar. Several passages from Babur’s memoir are devoted to descriptions of music and drinking parties that were set up in boats. In these settings, Babur and his entourage listened to music, engaged in conversation and occupied themselves with excessive drinking of *araq, majun* and other mildly psychoactive substances (Figure 4-8). Whether it was their adventure-seeking character or the aesthetic effect of water under the influence of substance, the floating boat in water provided a perfect setting for recreation and sociability.

In the dry landscape of the inner Persian Plateau, which is devoid of any navigable river, Safavid kings seized any opportunity to turn water into a dazzling setting for their pastimes.

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106 Alluding to the strength of the dam, Ta’sir compares it with the Gate of Alexander: *be khod pichideh chon moj-i shenavar/ ze estehkam-i an sad-I Sekandar*, Ta’sir, Mohsen and Amin PaShāh Ejlali, *Divān-i Moḥsen-i Ta’Sīr-i Ṭabrīzī*, 174.


Especially important was the Caspian region, which was rich in water and verdant, thus offering Abbās I and his descendents an amazing setting for boating parties and elaborate illumination festivities (Chirāqān) on the rivers and lakes. In particular, Vahīd’s detailed coverage of the reign of Abbās II offer important sketches of the Shāh’s fascination with such practices. Consider the following passage from his account of the year 1658-9 AD:

Earlier, during the stay in Māzandarān, a group of knowledgeable grandees of Ray were assigned to the building of boats/ships with innovative and new design and outmost pomp, with a roof, and equipped with a seat for the majesty, shadow of merciful God, and spaces for the servants to stand, and it was embellished with extravagant covers, once again the triumphant banner cast its attention to the heavenly city of rule, Farah Ābād. [the Shāh] repeatedly toured across the street (Khyābān) of Tajīnih River, each time with generals and nobilities whose name was specially put down to be among the companions in that spirited feast, [they] enjoyed the flowers of this delightful entertainment, and ordered that around the river on both sides should be illuminated with luminous candles, and skilled fire players dress the dark night with the apparel of the bright day, in that way do the magic.111

During royal trips to the Caspian region, not only did the Tajīnih River in Farah Ābād accommodated royal entertainments, but the natural or artificial lakes in Barforoush, Abbās Abād, and Homayun Teppeh also served as sites for similar ceremonies.112 Furthermore, long before

111 Tāhir Vahīd, Tarikh-i Jaha Ara, 682.

112 For example, see the narrative of Shāh Abbās II’s sojourn in Mazandaran and constructions in Homayoun Teppeh during the winter of 1653. Tāhir Vahīd, Tarikh-I Jahan ara, 546-49.
the reign of Abbās II, large pools that were suitable for boating would have already been common elements of many royal ensembles. In Tabrīz, the royal complex of Shāh Isama’il included a large pool that hosted the young king and his emirs’ boating assemblies. Similarly, in the daulatkhānah of Qazwīn, in the Imārat-i Daryāchih of palace precinct in Isfahān, and later, in Sultān Husiyn’s Farah Ābād Complex, we evidence the incorporation of large pools that accommodated boats and offered opportunities for water-based activities. It is within this cultural context that we should look at Abbās II’s attempt to turn the river into a lake. In effect, this transformation entailed the incorporation of the river as an integral element of the complex, which would function in a capacity similar to the large pools and artificial lakes in other Safavid compounds.

**Gardens on the Other Side of the River/Lake**

According to Kaempfer’s testimony, boats on the Zāyandihrūd Lake also served to access the gardens on the other side of the river, which were reserved for the use of the Shāh and female members of the court. Separated from the main royal spaces in the south bank, the remote position of these gardens made them ideal candidates for the royal family and particularly female

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113 Safarnameha-‘i venizian dar Iran, 409.

114 For Qazwin, see Pietro Della Valle, Safarnameh, 250. For Isfahān, see Chardin; and for Farahabad, refer to Jean-Do Brignoli, "The Royal Gardens of Farahabad and the Fall of Shāh Sultan Husayn Revisited." In *Middle East Garden Traditions: Unity and Diversity*, edited by Michel Conan, 139-156. Washington, D.C: Dumbarton Oaks Research Library and Collection, 2007.

members of the *haram*. The Safavid poet, Ta’sīr, identifies these gardens as Nazar Garden (Bagh-i Nazar) and Burj Garden (Bagh-I Burj); and allocates a special section of his description of Sa’ādatābad complex to these two gardens – thus confirming their position as part of the Sa’ādatābad Complex.\(^{116}\)

While our information about the spatial arrangement of these gardens is very limited, some general observations can be made based on the available visual and textual sources. In particular, a drawing from Chardin’s manuscript plays a critical role in enabling us to imagine such spatial relationships. Chardin, himself attributes this drawing to a Persian painter. This is a peculiar condition, since Europeans often hired painters trained in a more European style with the ability to record a close-to-reality version of what they saw. Most likely, the difficulty that Chardin and his painter faced in accessing the interior space of the Sa’ādatābad complex forced Chardin to hire a local painter, who most probably had easy access to the complex.\(^{117}\) Even though Chardin later complained about the painter’s inaccuracies and faulty perspectives, judging from the image, it is likely that the artist had been exposed to both Persian miniature and western perspective drawing. It is clear that the artist’s access to the complex—coupled with his visual literacy in miniature painting—enabled him to imagine the entire complex and spatial relationship among its various components, thus offering a comprehensive (if somewhat inaccurate) picture of the complex (Figure 4-9).\(^{118}\)

\(^{116}\) Mirza Mohsen Ta’sīr, *Divan*, 175-76.

\(^{117}\) Chardin complains about the difficulty of accessing the interior space of the complex. He and his painter had stopped by the complex several times and each time they were not granted access. Chardin, *Voyages*, 75-76.

\(^{118}\) In the tradition of miniature painting, the artist often combined conventional plans and elevation to use the space for conveying key information. These drawings did not follow the model of axonometric projection and linear perspectives that was the accepted mode of western architectural drawing following the Renaissance. The artist often represented architecture as experienced and imagined, rather than as a truthful snapshot of the physical world.
In this drawing, the painter has depicted the Saʿādat Garden and the lake as a continuum. Spatial barriers between the garden, tālār, and the lake have dissolved; instead, the garden seems to embrace the lake. In contrast, the gardens on the north shore are depicted with walls that veil them from the river. This distinct spatial relationship with the river seems to correspond with the function and nature of each garden. Whereas the open spatial arrangement of the Saʿādat Garden corresponds to its significant role in hosting royal feasts and receptions, the visual and spatial seclusion of the northern gardens point to their utility as private gardens, reserved for the use of the royal family and female members of the haram.\footnote{While Chardin views the river as a separation between male and female quarters, Kaempfer talks about the gardens on the other side of the river as dedicated to the pleasure of the Shāh with his wives and concubines. As I will describe, the fact that these gardens (unlike the Saʿādat Garden) were walled off from the river and were connected with a bridge to the residential and service quarter, offers persuasive evidence to consider them private gardens dedicated for the use of the royal family.}

In addition to Chardin’s imprecise drawing, Taʾsīr’s encomiastic poem, which was composed to celebrate the Saʿādatābad complex, offers some insight into the condition of the two gardens on the north shore of the Zāyandihrūd. It is critical to understand that this poem should not be interpreted as a realistic description of the gardens, and thus should not be taken literally. However, in the absence of other sources of information it helps us to unravel some unexplored aspects of these gardens. Furthermore, since the poem is written by a local poet with access to the court, it informs us about the way that the courtiers viewed the setting and would have experienced it.

The little information provided by Ta’ṣīr portrays these gardens as grounds adorned with pleasure pavilions: Nazar Garden appears as a heavenly abode with a viewing platform or pavilion (manzar) positioned in the middle of a body of water, possibly a pool. The second garden is identified as Bagh-i Burj and featured a water tower (Burj-i Ābi) with an awe-inspiring height. A second building was also located on the axis of the stream that ran through the Burj Garden. Interestingly, the buildings described by Ta’ṣīr resonate with the name of the gardens: Nazar garden featured a viewing platform and Bagh-i Burj a high tower. More than a century later, however, when Mohammad Mehdi Isfahānī mentioned a garden along the northern shore of the river, he identified it as Bāgh-i Daryāchih (Garden of the Lake). Thus, it is likely that more than a century of change, modifications, and even partial or complete destruction had wiped out the original name of these gardens from the memory of the locals and replaced it with a continued association with the lake.

The Residential-Service Quarter and the Pedestrian Bridge

As described earlier in this chapter, the boats floating on the river would have accommodated the leisurely rides of the king and his concubines, while also providing access to the gardens located on the north shore of the river. In the meantime, more direct access was

120 Ta’ṣīr adds that its building is laid out following the model of hauzKhānīh.

121 Mirza Mohsen Ta’ṣīr, Divan, 175-76.

122 The word Nazar communicates visual and spiritual attention, and Borj can be translated as tower.

provided by a pedestrian bridge that connected the segments of the complex that were split by the river. Similar to the Khājū bridge in the eastern end of the complex, the stone foundation of the pedestrian bridge facilitated the creation of the lake in front of the royal complex. However, a more obvious function of this pedestrian bridge was to connect the residential and service quarters of the complex to the private gardens on the north shore.  

Abbās II’s vision for transforming an isolated suburban garden that Shāh Saḥī I had established into an extravagant royal town was contingent upon the realization of certain other measures. In addition to calling upon his courtiers to acquire land and establish their own garden residences in the area, Shāh Abbās II had to augment the recreational function of the existing garden with other services and residential elements that were necessary for its full function as a daulatkhāneh. He achieved this goal by adding a section on the western side of the Saʿādat Garden that was designed to accommodate residential and service quarters. Known as Haft-Dast (Seven Parts), the new ensemble housed a miydān (space for equestrian practices), various halls, a mosque, female quarters (haram), and other service elements.

Sadly, lack of detailed information about the Haft-Dast complex makes it impossible to reconstruct its entire plan with any confidence. Most of our information comes from a few exterior drawings by De Bruyn, and later 19th-century sources such as Pascal Coste and Flandin’s drawings and Ernst Holtzer’s photographs (Figure 4-10, 4-11, 4-13). The picture that these visual sources

124 De Bruyn, Travels, 200.

125 Pascal Coste accompanied a French group on a mission dispatched to Iran in 1839 for renewing friendship and the commercial relationship between Iran and France. The precise drawings and sketches he made during in trip are rich sources of information about the architectural monuments of Persian as they stood in the 19th century. For more information on Pascal Coste and his publication and sketches in Isfahān, see Brignoli, Jean-Do. "Pascal Coste En
depict for us suggests an architectural arrangement for the Haft-Dast compound that is significantly different from the edifices in the Sa’ādat Garden—and particularly the Āynih Khānīh (Hall of Mirror). Unlike Āynih Khānīh, which was designed as an outward-looking building that poured its interior space out into nature, Haft-Dast appears as an inward-focused complex consisting of interrelated rooms and spaces that were walled off from the outside by the solid façade of the building. In the Hoeltzer photograph, which was taken shortly before the building was destroyed, the eastern façade appears as a heavy, solid wall with few windows or openings; thus, it clearly communicates an image of a building with the intention to shield the interior from the outside world (Figure 4-11, 4-12). Other visual documents, such as drawings by Flandin and De Bruyn, suggest a similar closed-off quality for the building, which would have been essential to protect the residential female quarter from the gaze of any outsiders (Figure 4-10, 4-13).

Because of its transparency and visual access, the Sa’ādatābad Garden, which was open to the lake and dedicated to public receptions and ceremonies, was not a suitable setting for female members of the court. Instead, women residing in the Haft-Dast quarter could easily access the gardens on the north shore of the river by taking the pedestrian bridge. To ensure the protection of women from any outside gaze, the building advanced all the way to the edge of the river where the bridge started. Indeed, the bridge directly connected the interior of the Haft-Dast complex to the gardens on the other side of the river. As a result, residents of the Haft-Dast were able to directly access the northern gardens without ever having to set foot on the public section of the Sa’ādatābad Complex.

The remaining structure—coupled with visual evidence from De Bruyn and later Coste and Flandin—confirms the masonry base of the bridge. This knowledge has often led scholars to dismiss the wooden elements of the bridge, thus creating some confusion about its appearance and name: Jūyi (associated with a rivulet) and Chūbi (wooden). As Honarfar argues, the continuous presence of a rivulet on the bridge until the 20th century suggests that in its original state the bridge incorporated the same or a similar rivulet. This is further confirmed by Ta’sīr’s 17th-century poem in which he makes a reference to a rivulet that streamed along the bridge. However, we cannot easily dismiss the possible integration of wood in the construction of the bridge. Beside its reference to the rivulet, the often-ignored contemporary poetry of Mirza Mohsen Ta’sīr, also includes important references to the wooden components of the structure. In effect, the often-dismissed wooden balustrades of the bridge, which also appear in the drawing and descriptions of De Bruyn, could have been an architectural strategy to control the view to and from the pedestrian bridge (Figure 4-10). An intricate wooden balustrade could have provided further protection for the female members of the court who used the bridge to access the gardens on the north side.


127 Honarfar, Ganjineh, 576.

128 See footnote 64. While we don’t know the exact function of this rivulet, most probably it functioned as a conduit for transferring water from the higher lands south of the river to the gardens in the north shore. Honarfar also makes a similar suggestion. See Honarfar, Ganjineh, 575-6.

129 Its wooden bridge is a wonderous story/ over which runs a rivulet/ There is nothing similar to this bridge in the world, as it is made of wood and similar to a boat (Pol-I Chúbish Heyrat Dastanast, Ke dar Balay-I aan Nahri Ravanast- be giti nist in pol ra gharineh, ke az chubast va hamtarz-i safine), Mirza Mohsen Ta’sīr, Divan, 174.
the meantime, using a wooden balustrade instead of a solid parapet or wall would have offered passersby visual access to the river and lake, while protecting the female pedestrians along the bridge from unwanted scrutiny. When compared with the Khājū Bridge on the other end of the complex, the smaller scale of the pedestrian bridge attests to its private use. In light of that, the wooden elements not only provided a more guarded space, but when paired with the rivulet that streamed along the bridge, they could have been strategies to create a more delightful and intimate space, and ultimately a pleasant introduction to the royal gardens on the northern side of the river.

**River as the Spatial and Functional Core of the Complex**

While the pedestrian bridge was an internal element of the Sa’ādatābad complex and access to it was limited to the residents of the court, the Khājū Bridge on the eastern side of the lake primarily served a public function. Located right at the edge of the Sa’ādatābad Complex, it had a dual relationship with the royal space. Although sources are silent about the possible tensions and benefits of the liminal condition of the bridge on the border of public and royal space, we can imagine the challenges that visual access from the bridge to the royal court would have created.

On a normal day, the bridge was basically a public thoroughfare, which also attracted a large number of people who enjoyed the diversions provided by the bridge. Beyond that, the bridge also accommodated special royal ceremonies. On such occasions when the bridge would be closed off from the public, the pavilion and niches of the bridge, which would have housed the

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130 The bridge and its place in the public and royal life of the city is discussed in Chapter 5.
king and his entourage, overlooked the spectacular scenery that was orchestrated over the lake. At
night, the central pavilion and other niches of the bridge offered amazing vantage points for
viewing the illumination ceremonies on the river—while during the day the bridge framed an all-
encompassing view of the Saʿādatābad Complex and its gardens. Looking westward from the
central pavilion of the bridge, the Safavid historian, Vālih Isfahāni, provides edifying descriptions
of the likely scene enjoyed by the king and his entourage: “In the west, like a charming mirror,
reflections on the surface of the lake enchant the eye. On the two sides, sight of the Saʿādat Garden
(on the south shore) and Nazar Garden (on the north shore) recalled the garden of Heaven for the
viewers.”¹³¹ From the pavilion of the bridge the view to the river and the gardens flanking on either
side gave the impression as if the entire complex was laid out as a large garden with the river as
its central stream.

For the Safavid court, which was becoming increasingly entrenched in the city, the
Zāyandihrūd River offered a unique appeal. Unlike Shāh Abbās I, whose frequent military
campaign kept him on the move—taking him to places such as Māzandarān, Gīlān, and Azarbāyyjān
with green lush landscape ripe for royal festivities—Shāh Saffī I and Shāh Abbās II were blessed
with a relatively peaceful time and, thus, spent considerably more time in Isfahān. Although they
both visited the Caspian region several times, the mobility of their court was mostly limited to the
distance of “few days travel” around Isfahān. In this light, it is no surprise that the banks of the
Zāyandihrūd River, which offered an exceptional opportunity to engage with a large body of water
at a comfortable distance from the capital, were viewed as being exceptionally desirable to 17ᵗʰ-
century life in the city.

¹³¹ Valeh Isfahāni, p. 603.
While Shāh Safī I established his Sa’ādat Garden and Āynih Khānīh Pavilion adjacent to the river, Shāh Abbās II expanded the complex around the river. By transforming the river into a lake, the Zāyandihrūd became the functional and spatial core of the complex. Flanked by two gardens and served by two bridges, the lake became the key element around which various components of the complex were arranged. Furthermore, the spatial arrangement of each complex in relation to the river and the lake was reflective of its nature and function. In the most ceremonial public space of the complex—namely, the Sa’ādat Garden, which was intended for public receptions and royal displays—we evidence a complete integration between the palace precinct and the lake. The space is orchestrated in such a way that the lake appears as an extension of the space for royal receptions. In contrast to the highly public Sa’ādat Garden stood the more private spaces allocated to the service and residential use of the royal family and their entourage. The Nazar and Burj Gardens, as well as the Haft-Dast palace, were all closed off from the river. While the internal arrangement and individual pavilions in the Nazar and Burj Gardens portray a picture different from the dominant conceptualization of a haram as a highly private and intricate labyrinth of rooms, the walls of the gardens and solid façade of the Haft-Dast communicate the separation that existed between the lake and private spaces of the complex.  

Use of the pedestrian bridge by the elites and boating on the lake represent exceptional moments when the private domain of the court extended into the public realm. (As noted earlier in

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132 Babaie makes a similar argument about the architecture of the female quarters in the Naghsh-i Jahan Palace, where the female quarter included buildings with an open plan and spatial arrangement. She associates this to the ideological stance of the Safavid as a Persio-Shi’it dynasty. While this association may be applicable to Safavid buildings visible and accessible to the grandees, foreign visitors or the larger public cannot justify the spatial arrangement of the female quarter. When it comes to private leisure and residential spaces, I am more prone to see open plans, transparency, and dissolving spatial boundaries as a product of Safavid mentality and desire for direct connection with natural setting and outdoor space, rather than a political move.
this chapter, however, specific structural measures were taken to protect the women from being exposed to the attention of unauthorized males.) The temporality embedded in the Safavid city was an important element in delineating the boundaries between royal and public space.\textsuperscript{133} Ceremonies, rituals, and special events not only turned the most mundane spaces of the city into the royal domain, but also created temporal gendered spaces.

The lake not only provided a delightful setting for royal boating feasts and recreational opportunities, but also integrated the natural landscape into the setting for royal receptions. As a result, the river became an integral part of the complex: regulated, molded, and sculpted as much as the gardens, pavilions, and buildings of the complex. The potentials of the river, so celebrated in the culture and climate of Safavid Isfahān, inspired attempts to tame and morph the river into an active part of the complex. It was this close engagement and integration between the river and other parts of the complex that provided opportunities for interaction with the natural water that no other suburban garden or complex near the city of Isfahān could accommodate.

The 1722 fall of Isfahān to the Afqan army put a halt to Safavid performances choreographed around the river. Isfahāni citizens had to wait for several generations until these practices were once again revived during the Qajar Dynasty (1785-1925).\textsuperscript{134} For example, in May 1877, the governor of Isfahān, Zīl al-Sultān, arranged a feast on the banks of the Zāyandihrūd River. Per the order of the government, wooden dykes were installed along the lower level of the

\textsuperscript{133} This temporality is best visible in the practice of \textit{quruq}. During the 17\textsuperscript{th} century, whenever the Shāh went out in public and was accompanied by his female retinue, a ban entitled \textit{quruq} was issued that prohibited any man to be on or near the path of the royal assembly. For more information, see Chardin, \textit{Voyages}, 552-53.

\textsuperscript{134} In many respects Qajars continued the policies and practices established by the Safavids. Some scholars argue that the Qajar’s claim to grandeur was partially reinforced by projecting an image that allude to the continuity of Safavid practices.
Khājū bridge to block the flow of the river and create a temporary lake in front of the Āynih Khānih and Haft-Dast palace. As Mirza Husiyn Khān Tahvildar reported:

For seven days and seven nights [they] decorated the building of Haft-Dast, and Āynih Khānih, and set up numerous awnings and tents in the garden of Sa‘ādatābad, and arranged extravagant lighting (Chirāqān) and fireworks all along the river banks and on the water and over the buildings and inside the garden, which the world has not seen anything like it ….. [they] launched innovative boats in the water and enlightened the sight of insightful people.135

This spectacle—while no doubt a perfect opportunity for the governor to associate himself with the ages-old Safavid practices—also afforded an entertaining public spectacle for the Isfahāni citizens who gathered along the river to watch the ceremonies. In essence, Zīl al-Sultān’s conspicuous efforts not only represent a deliberate attempt to display power and glory, but also signal a conscious attempt to tap into the collective memory of the Isfahāni people, for whom the Safavid period embodied the height of Isfahān’s power and glory.

Figure 4-1- Diagram showing the spatial relationship of various sections in Abbas II’s Sa’adat Abad Complex. Diagram made by the author, based on the description of Ramzi Kashani’s peom, and drawings by De Bruyn (Figure 4-10), Chardin (Figure 4-9) and Pascal Coste’s sketch of the Sa’adat Abad complex at the Fonds Anciens of the Bibliothèque Municipale at Marseille Album 3, board 44.
Figure 4-2- The section cutting through the Sa’adatabad and the river demonstrates the spatial continuity between the Ayneh Khaneh Palace and the river, and the central position that river occupied in the spatial arrangement of the complex.
Figure 4-3- illustration of a royal feast held at the Ayneh Khaneh Palace demonstrates the openness, flexibility of space of the talar which blurred the boundaries between the space of the talar and the garden. Engelbert Kaempfer, Engelbert. Amoenitatum Exoticarum Politico-Physico-Medicarum Fasciculi V, (Lemgoviae: 1712). Courtesy of LuEsther T.Mertz Library Rare
Figure 4-5- Photo of the Ali Qapu Palace, photo by the author, 2015.

Figure 4-6- Photo of the Chehelsotoun Palace, Photo by the Author, 2015.
Figure 4-7- A comparison between the plan of Ali Qapu Palace, Chehel Sotoun Palace, and Ayneh Khan Palace reveals how in each palace the longitudinal or latitudinal stretch of the plan was employed as a strategy to optimize the talar’s relationship with the public plaza, garden, and the river. From left to right: Chehel Sotoun Palace & Ayneh Khan Palace, after Sussan Babaie, Isfahan and its Palaces: Statecraft, Shi’ism and the Architecture of Conviviality in Early Modern Iran (Edinburgh: Edinburgh Univ Pr, 2008), & Ali Qapu Palace, after M. Ferrante, “Dessins et observations préliminaries pour la restauration du palace de ‘Ali Qapu” in Travaux de restauration de monuments historiques en Iran, ed. G. Zander, Rome, 1968, pp. 137-206.
Figure 4-8- Drunken Babur Returns to the camp at night, From Baburnama, ca. 1589, attributed to Farrukh Beg, Opaque watercolor, ink, and gold on paper, Arthur M. Sackler Gallery.
Figure 4-9: A drawing of Sa’adatabad Complex made by an Iranian artist. From Jean Chardin, Voyages De Mr. Le Chevalier Chardin, En Perse, Et Autres Lieux De L’Orient. (Amsterdam: Lorme, 1711). Courtesy of LuEsilher T.Mertz Library Rare Books Collection.
Figure 4-10 - A view of Haft Daš Palace and the Chubi Bridge which provides access to the gardens on the other side of the river. Cornelis De Bruyn, Travels into Muscovy, Persia, and Part of the East-Indies. (London: 1737), Plate 84. Courtesy of UCLA Digital Archive.
Figure 4.11 - Photo of Ayneh Kahneh Palace with Haft Dašt and Chubi Bridge in the background in the late 19th century. From Holtzer, Ernst and Fariba Farzam. Hezar Jelveh-'i Zendegi, (Tehran: Sazman-i Miras-i Farhangi-i Kishvar, 2004).
Figure 4-12- Eastern Façade of the Haft Dašt Palace, From in the late 19th century. From Holtzer, Ernst and Fariba Farzam. Hezar Jelveh-‘i Zendegi. (Tehran: Sazman-i Miras-i Farhangi-i Kishvar, 2004).
Figure 4-14 - Spatial arrangement of the Sa’adatabad Complex, overlaid on the contemporary view from the Google Earth.
Figure 4-15- Chubi Bridge, Isfahan, Iran, 2015. As an internal element of the royal complex, this private bridge connected the residential-service quarter of Sa‘adatabad on the south to the private royal gardens north of the river.
CHAPTER 5:

The Khājū Bridge: Encapsulating the Multi-Dimensional Relationship Between the City and the River

Introduction

Almost every European visitor who wrote about Isfahān has dedicated lines, and sometimes pages, to descriptions of Naghsh-i Jahān Miydān, the Chāhārbāgh Streets (Charabgah and Chāhārbāgh-i Khājū), the extravagant gardens that flanked these avenues, and the two monumental bridges that linked them to the new developments south of the Zāyandihrūd River. Those strolling throughout the suburbs of Isfahān eventually had to cross the Khājū Bridge or Allāhverdīkhān Bridge to visit the parts of the city that stretched beyond the river (Figure 3-3). So impressed were visitors with the architectural splendor of these two monumental structures, that they eternalized these bridges in their written descriptions, sketches, and drawings. With the position of these two bridges at the center of touristic attractions of the city, this historical fame has justifiably persisted into the 21st century. However, despite their longstanding distinction, there is almost no scholarship devoted to the architectural historiography of these bridges.¹

¹ Scholars including Ferrante, Luschey, Pope, Babaie, and Hunarfar have written about the architectural configuration, decoration, and date of construction of these bridges. Sussan Babaie, Robert Haug, “Isfahān x. Monuments (5) Bridges,” Encyclopedia Iranica, online edition, 2007, available at http://www.iranicaonline.org/articles/Isfahān-x5-bridges (accessed on December 2016); Hunarfar, Luṭf
Architectural historians such as Ferrante dedicated their attention to the physical anatomy of these bridges, but overlooked the opportunity to contextualize their observations within other historical evidence. Other art historians such as Pope limited their work to general description of architectonic and decorative elements of the bridges, and admired their capacity to attract the public. However, commentaries on the public life of the Khājū and Allāhverdikhān bridges were often based on observations of the contemporary condition of the structures, but did not account for the social and physical transformation of Isfahān over the last two centuries – as if oriental societies and their art and architecture were timeless static entities.

By failing to situate their architectural analysis within the historical and cultural matrix of premodern practices that spawned the design and use of these bridges, the scholarship on these Isfahani structures remains confined to anatomical exploration and projective fantasies. In light of this scholarly gap, Chapter 5 of this dissertation goes beyond mere physical and visual descriptions to take a closer look at the correspondence between the architectural features and functions of the bridges. What do the spatial arrangement, architectural characteristics, decorations, and technical details of these bridges tell us about their function and role in the royal and public life of Isfahan? How did these bridges mediate the relationship between the people and the river? How can a

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2 For example, Ferrante suggested that the two towers at the either ends of the bridge functioned as posts for collecting tax from the caravans that entered the city. Unfortunately, he doesn’t offer any other historical evidence to support his claim, neither did I find any textual/visual evidence that backup this claim. Heinz Luschey is perhaps the only scholar who pays close attention to the water features created by the architecture of the Khājū Bridge. See Luschey, Heinz. "The Pul-i Khwaju in Isfahān: A Combination of Bridge, Dam and Water Art." Iran 23, (1985): 143-151. As an archeologist of ancient Iran, he employs a material culture approach and demonstrates an acute sensibility to the material properties of the bridge as a method for its examination. While valuable, his observations are limited, especially due to the fact that his textual sources exclude primary Persian materials.
contextualized reading of their architecture shed light on the dynamic socio-political conditions of 17th-century Isfahan?

In order to answer these questions, I rely on a detailed cross-examination of primary textual and material evidence. The existing structures of these two bridges provide us with extraordinary evidence to contextualize our archival sources. Therefore, I supplement architectural information gathered through fieldwork with textual and visual materials that have been recovered from the accounts of European travelers, Persian poems, and Safavid court chronicles. European accounts and, more importantly, the less-explored Persian narratives, present these bridges as infrastructures that functioned beyond their utility as a passage over the river. In effect, examination of these Safavid Bridges in their historical context reveals an unexplored aspect of urban life in Safavid Isfahān—where the river provided alternative sites of royal display and public encounter on the fringes of the city.

**Anatomy of the Two Bridges**

Southward expansion of the city of Isfahān over the course of the 17th century and development of new residential neighborhood and royal gardens on the southern bank of the river heightened the need for additional bridges that could facilitate transportation across the river (Figure 3-1, 3-3). The Allāhverdīkhān Bridge was the first bridge that the Safavids sponsored in Isfahan. Initiated and overseen by a high-ranking Safavid general, it was positioned on the axis of the famous Chāhārbāgh Street, which connected the urban and suburban royal establishments of the Naghsh-i Jahān in the north, and the Hezār Jarīb Garden south of the river. Therefore, the bridge facilitated access for the royal assemblies who headed to the gardens on the other side of
the river. Furthermore, with the political and commercial center of Isfahān in the north, the bridge considerably eased the communication of the Armenian community who settled in the new Julfa neighborhood south of the river.

Compared to existing nearby bridges, the Allāhverdīkhān Bridge was an architectural marvel. Afzal-al-Tavārīkh, the only Safavid source that gives us any detailed information about the bridge, praised its three-story design and asserted that in this region no one had ever seen such a structure over the water. Accounts of European visitors and the existing structure of the bridge itself confirm Fazli Bayg’s (author of Afzal-al-Tavārīkh) claim. Along the main level (first level of the bridge) the principal path of the bridge was flanked by two rows of vaulted galleries on either side, which offered alternative paths for pedestrians. Along the lower level, the architect took advantage of the poor navigability of the river; specifically, by not having to worry about the presence of sailing ships or large boats, he extended the stone foundation of the bridge over the entire width of the river, lining two rows of thirty-four piers to support the main level of the bridge.

Visiting Isfahān in the 1660s, the French traveler, linguist, and natural scientist, Jean de Thevenot, bestowed a great deal of praise on the bridge and its galleries:

… men are there secure from bad weather and heat of the sun, and yet have an open air and fair prospect, for these vaulted walks have a great many windows that look upon the river. If a man desires a more open passage, he hath the platform over this gallery, that equally reaches from one end of the bridge to the other: But it is so hot upon it in the summer-time, that the other way is more commonly taken, which serves also many times for a horse-way in the winter that they may avoid the water

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that fills up the middle of the bridge, when the river overflows, which sometimes happens, though in the summer time it be for low, that there is hardly any water in it, so that they have been forced to use art in paving the bottom in that place very smooth, that so it may fill its channel by spreading its waters equally. This bridge then has five passages, one in the middle, and four in the two sides, to wit the two covered galleries, and the two platforms over them which are above twelve foot abroad, with rails both towards the bridge and River. Nay there is a six passage when the water is low, which during the great heats of summer is very delightful for its coolness; and that is a little vaulted gallery, which crosses all the archs from one end of the bridge to another; it is low underneath the reacheth to the bottom of the river; but there are stones so laid that one may step over without wetting the foot; they go down into it from the bridge by steps made in the thickness of the walls.  

Thevenot’s keen observations of the bridge reveal the multiple considerations that the designer(s) of the bridge took into account. The six different walkways, distributed along the three different levels of the bridge, each had a certain advantage in mediating the relationship of passersby with the river. Given the seasonal nature of the river, the upper and lowermost levels of the bridge were designed to accommodate the extreme conditions of the area. While the upper level provided a safer path during the rainy and flood season when the water would rise to the main level of the bridge, the lower level offered a respite from the heat during the dry season. Along this level, the stone foundation of the bridge created islands that were separated by streams of water. Cubic stones implanted in the water courses allowed people to step from island to island to cross the river or rest in the peaceful shade of the arcades. Indeed, as Della Valle exclaimed, during

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4 Thévenot, Jean de. *The Travels of Monsieur De Thevenot into the Levant: In Three Parts*, (London: Faithorne u.a., 1687), 81-82. Text is quoted as it appears in the manuscript.
the summer the cool breezes and murmuring water made the lower level of the bridge the most desirable spot in the city.\textsuperscript{5}

By 1658, about two hundred miles downstream from the Allāhverdīkhān Bridge, Safavids established another monumental structure known as Khājū Bridge.\textsuperscript{6} Constructed about half a century after the first bridge, the overall layout of this structure was similar to the Allāhverdīkhān Bridge. Its multi-storied profile, the flanking galleries and its accommodating lower level followed the same spatial arrangements that were employed in the construction of the Allāhverdīkhān Bridge (Figure 5-3, 5-5). However, as most 17\textsuperscript{th}-century travelers and contemporaneous visitors agreed, Khājū Bridge far surpassed its predecessor for its elaborate and dramatic architecture. The octagonal pavilion at the center, the glittering tile decorations on the façade, and the steps implemented in the foundation of the bridge not only enhanced its aesthetic appeal, but also impacted the function and the life around the bridge.

With its exuberant architecture, rhythmic design, and drama of color, light, and shadow, Khājū Bridge was a true representative of the Safavid state, which by the mid-17\textsuperscript{th} century was striving to project an extravagant and impressive picture of a powerful centralized empire. The spectacular blue tiles of the bridge, and harmonic rhythm of its arches were amplified by the reflective qualities of the river.\textsuperscript{7} After all, Khājū Bridge was envisioned as part of the Abbās II’s

\begin{footnotes}
\item[6] In the sources of the Safavid period, this bridge has been referred to as Hasan Abad Bridge, Shiraz Bridge, and Shāhī Bridge.
\item[7] As I demonstrated in chapter 4, with the assistance of Khājū Bridge the Safavids tamed the Zāyandīhrūd River, creating a lake in the middle of Saadatabad Complex that stretched on two sides of the river. For more explanation see chapter 4 of this dissertation.
\end{footnotes}
new royal Sa’ādatābad compound (detailed in Chapter 4), and therefore had to outshine others in beauty and magnificence.\(^8\)

**Khājū Bridge as a Dam**

To complement its aesthetic appeal, Safavid court poets composed verses celebrating the allegorical significance of the Khājū bridge that embodied the absolute power of the monarch:\(^9\)

*By the command of the king of the seven climes
The bridge became the equal of heaven’s arch
So that the floods of the springtime pour
Over its sluices into the stream of the Milky Way
Recently they built a bridge over the river
They bound together the fascicles of the earth\(^9\)*

For Māzandarānī, the Bridge’s power to tame the river was both a metaphoric and a literal act of control – epitomizing the monarch’s absolute command over his realm, and even over nature:

*The form of the Zāyandihrūd is changed by the bridge
Into a bold youth in golden mail cinched with a belt\(^10\)*

Other verses praised the strength and steadiness of the bridge, and associated it with the legends of the Wall of Alexander—thus comparing the Shāh Abbās II and his power with Alexander the Great:

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\(^11\) From Divan-I Ashraf Mazandarani, quoted and tr. in Paul Losensky, the Equal of Heaven’s Vault,” 205.
If the entire cosmos cross over it
Columns of its skeleton wont shake
Whirling around itself like a floating wave
From its strength like the Wall of Iskandar\textsuperscript{12}

In referring to the Wall of Iskandar and the shape-modifying power of the bridge, the Safavid poet, Ta’sīr, intentionally alluded to the function of the bridge as a dam. In fact, textual evidence proposes this function as a critical factor that inspired the construction and design of the bridge in the first place. The Safavid historian, Vahīd, provides accounts of the construction of the Khājū Bridge in two separate episodes, first in the year 1655, and then in 1658. In the first account of 1655, Vahīd only mentions the intention of the king for the construction of a dam without any reference to a bridge:

It occurred to the exalted mind [of the king] that if a dam is to be constructed over the Zāyandīhrūd, which would become a mirror of entertainment for the viewers, and ensure steady support for farmers of the farm of hope, it would lead to the prosperity of gardens, and also wealth and fortune of Isfahan… In a short time with stone and other required materials, in the vicinity of the river mountains were raised to the sky, and with the intervention of light and fire-handed craftsmen [the materials] were employed for the construction of the dam… once these mountains sank into the soil, water of the river escalated like a mountain, such that it appeared to the viewer that the river has embraced the sea.\textsuperscript{13}

This passage, written in response to the events of 1655, represents the first reference made to the construction of the structure that later became known as the Khājū Bridge. Ta’sīr does not

\textsuperscript{12} Ta’sīr, Mohsen and Amin PaShāh Ejlali. *Divan-i Mohsen-i Ta’şir-i Tabrīzi*, (Tehran: Markaz-i Nashr-i Daneshgahi, 1994), 174

\textsuperscript{13} Vahīd Qazvini, Mirza Mohammad Tāhir and Sa’eed Mir Mohammad Sadeq. *Tarikh-i Jahan Aray-‘i Abbāsi (Abbāsnameh)*, (Tehran: Pazhooheshgah-i Ulum-i Insani va Motale'at-i Farhangi, 2005), 584. All translations are the author’s unless otherwise noted.
mention a single word about the bridge, and his attention is concentrated on the dam. Thus, we can postulate that water control should have been one of the central motivations behind the (re)constructions of the Khājū Bridge. After this passage, we do not see any other mention of this structure until the year 1658, when another Safavid historian, Vale Isfahani, joined Vahīd in celebrating the construction of the bridge. At this point both historians talked about a hybrid structure consisting of a dam on the lower level and a bridge with Īwāns and chambers on the upper level.

On the lower level, eighteen water courses were cut through the stone foundation of the bridge to allow the water to flow past. During the rainy season when the water level escalated above the foundation level, the water would run through the openings underneath arches that spanned the piers of the bridge. Grooves carved out on the surface of these arches, a few of which are still visible, testify to the role of the bridge as a dam. To block the flow of the river, wooden dykes could be installed within the openings of these grooves, thereby raising the water level on the western side of the bridge.

To ensure the safety and effective operation of the dam, further provisions were made. Importantly, recent archeological investigations have revealed the presence of two underground

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14 Khājū Bridge was constructed in a location that previously was occupied by an 14th century Aq Quyunlu Bridge known as Hassan Abad. By the time that Shāh Abbās II decided to reconstruct the old bridge it was seriously damaged and broken.
15 Scholars such as Hunarfar have employed Ramzi’s poem as the source for establishing the date for the construction of Khājū Bridge as 1568. More recently, Losensky has interpreted the chronogram differently (without considering the word water) and suggested the date 1655 for the construction of the bridge. Close reading and cross examination of Vahīd and Vale Isfahānī’s texts allow us to suggest that neither judgment is accurate; more likely, the construction of the bridge/dam was ongoing between 1655 and 1658. Such cases question the validity of reading a monogram as a reliable single method for establishing a date for architectural projects – though monograms are sometimes the only credible information on the date of an architectural project. See Lotf Allah Hunarfar, Ganjineh, 575; & Paul Losensky, “The Equal of Heaven’s Vault,” 204, footnote 22.
17 Safavid sources refer to this act of placing wooden dykes in front of the water as takhteh-bandī.
canals on the north bank of the river, which functioned as part of the hydraulic infrastructure that supported the dam. They were implemented as a safety system to balance the water pressure on the two sides of the bridge. In addition to the physical testimony of these recent archeological findings, these canals are also visible in the 17th-century drawings of both Jean Chardin (Figure 5-7) and Engelbert Kaempfer (Figure 5-8). Indeed, their sketches suggest that similar canals were also implemented in the south bank of the river.

The lake that formed behind the bridge not only offered the Sa’ādatābad Royal Complex a spectacular amenity for entertainment and respite (discussed in Chapter 4), but according to Mohammad Mehdi Isfahani, the lake also facilitated the irrigation of the Karraraj settlement. While information about 17th-century Isfahān is insufficient for confirming the presence of this irrigation canal, direct references made by Safavid historians such as Vahīd and Vālih Isfahani (noted above), do substantiate the irrigation-related objectives behind the construction of the bridge. Vālih Isfahani was particularly fervent in highlighting the fact that construction of the dam was intended to facilitate the “collection of the water of the river for irrigation of the farm of farmers, and produce of peasants.”

Furthermore, the presence of a water canal branching off from the Zāyandihrūd River on the north bank and right beside the Khājū Bridge, which is identifiable in an 18th-century Russian map of Isfahan, further supports this theory (Figure 5-9). Even though no traces of this canal remain today, we can still pinpoint it on the 1963 map of the city, where it is labeled as Nahr-i Āsyāb.

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19 unfortunately, these infrastructures were likely destroyed during several repair and rehabilitation projects conducted in the 19th and 20th centuries.
20 Tahvildar, Mirza Husiyn and Manūchihr Sutūdīh, *Joghrafiya-i Isfahān*. Tehran: Moasseseh-i motaleat va tahghighat-i joghrafiyayee, 1963), 29. For the lake and its place in the Sa’ādatābad complex, refer to Chapter 4 of this dissertation. For the location of Karaj in the Isfahān region look at Figure 1-5.
(Figure 5-10). Without a doubt, over the three centuries after the collapse of the Safavids, the banks of the river and water canals have undergone substantial changes that are not easy to trace with any certainty.

There is no question that investment in infrastructure represents a significant aspect of Safavid policy for economic development. The network of roads, bridges, and caravanserais that Abbās I established across the empire are well known for their impact on promoting trade. Within the city of Isfahan, the famous Grand Bazaar and Qaysariyeh Market (luxury textile market) were important destinations that housed high-profile commercial activities. While the accessibility and safety of the transportation network created by Abbās I significantly expanded and improved trade, the state’s efforts to foster economic activities were not limited to the commercial realm alone. Similar to their Timruid (1370-1449) and IlKhānīd (1256–1353) predecessors, the Safavids were well aware of the importance of agriculture as a prerequisite for a safe and prosperous empire.22 The personal attention and resources that Abbās I allocated to the Kuhrang project—to adjoin the Kuhrang River to the Zāyandihīrūd, and in so doing increase its water capacity—is highly indicative of his awareness and attention to hydraulic infrastructures as a stepping stone for prosperity in Isfahan.23 It is also possible that Abbās II’s investment in the Khājū Dam represents a modest attempt to compensate for his withdrawal from the Kuhrang project.24

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22 For further discussion of investments in agricultural infrastructure during the Safavid period and their Timruid predecessors, refer to Chapter 1 of this dissertation. For a more thorough examination of agricultural affairs during the Timruid period, see Subtenly, Maria. "Khurasan and the Agricultural Imperative." In Timurid in Transition, 103-107: (Brill, 2007).
23 Safavid investments in river-based hydraulic infrastructures, and the Kuhrang project is discussed in chapter 2 of this dissertation.
24 Safavid investment in the project of adjoining the water from the Kuhrang to the Zāyandihīrūd River, and the attitude of each Safavid monarch towards the project, are discussed in Chapter 2 of this dissertation.
Bridge as a Royal Pavilion

In effect, the function of the Khâjû Bridge extends well beyond its utility for transportation and hydraulic efficiency. Critically, its architect(s) intelligently morphed the engineering provisions of a bridge and a dam with design considerations that created impressive visual and experiential effects. While as a dam the bridge contributed to the agriculture and gardening industry of the area, the Khâjû also functioned as a public platform wherein private royal practices found a stage outside the confines of the walled gardens and royal hunting grounds.

On the lower level, as the water rushed through the arcades of the bridge, it created spectacular water cascades (Figure 5-8). Above that, the main level of the bridge featured an impressive architectural arrangement. According to Vahîd, once the foundation was established, designers set to work:

_Iwâns_ and _bâlâkhânihs_ (upper level room) were established on either side of this prosperous highway, and in each section, they opened the door of vivacity and pleasure to the viewers. In the east, the view of the cascades that flow like a sea through each opening attracts the eye, and the intelligent ear hears the verse of _gardens underneath which river flows_, and in the west surface of the lake performs like a charming mirror.  

Vahîd’s choice of terminology and his description depicts the bridge as a charming elevated pavilion in the middle of the water, surrounded by pleasing views and enhanced by the sound of water. Indeed, the architectural organization of the bridge further advanced the idea of a royal pavilion amidst nature. The central galleries of the bridge, which hosted the monarch during ceremonies, were designed following the familiar prototype of a hexagonal royal pavilion that

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25 Vahîd. _Tarikh-i Jahan Aray_, 603. “Gardens beneath river flows” is a verse from Quran that is used to refer to Paradise. In the Islamic text and Persian literary sources, the phrase is often used to symbolize the Gardens of Paradise.
intermingled with water (Figure 5-11). In all its different states—as a flowing river, as a vivid splashing cascade, or a stand-still reflecting lake—the river recalled familiar water elements in Persian gardens. It would appear that in designing the Khājū as they did, its creators’ manipulation of the river was intended to evoke memories of the streams, playful fountains, and pools that adorned the nearby gardens.

The parallels between this setting and a royal garden were not limited to physical similarities, but also extended to performances and practices that took place on or near the bridge. Like the garden pavilions, the Khājū Bridge also accommodated elegant royal festivities. Safavid court historians, contemporary with Abbās II, recount vivid descriptions of an elaborate ceremony set up on the recently constructed Khājū Bridge in the year 1659. In the word of Shāmlū:

The order of the sun-like and world obeying king directed those affiliated with the court to decorate […] the Shāhī Bridge, which is among the steady buildings of the time, and is constructed over the Zāyandihrūd River in the hand of gifted and skillful architects [...].

Following royal order, Safavid generals and courtiers were assigned to decorate the galleries of the bridge with lavish golden textiles, reflecting mirrors, and astonishing paintings. Along the bridge, golden canopies were pitched, and braided ropes were installed on the walls to hang lanterns and lamps. Beyond these detailed decorations, they also managed to pump water all the

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26 The hexagonal pavilion was traditionally the most prevalent architectural model for Safavid, Mughal, and Timurid pavilions amid gardens, and hunting grounds. The six-sided plan offered ample views to the outside nature. In an ongoing study I am also exploring the recurrent pattern of pavilion amidst large bodies of water that appears in both Safavid and Mughal hunting lodges.

27 In his book chapter, “The Equal of Heaven’s Vault,” Paul Losensky examines the literary devices that Safavid poets used to describe the Khājū Bridge, and in association with it the monarch and the ceremonies taking place on the bridge. His focus on literary analysis and allegories and devices set his work apart from the current study.

28 Shamlu, Vali Quli ibn Davud Quli, Sadat Nasiri, Hasar, Qiṣṣa Al-Khaqani (Tihran: Sazman-i Chap va Intisharat-i Vizarat-i Farhang va Irshad-i Islami, 1992), 517.
way up to the central pavilion of the bridge, creating a pool and a fountain that sprayed water about three meters up into the air.\(^{29}\) As Vahīd describes:

The smell of *oud* and fragrance of flowers […] blended together, and the sound of glasses of wine and fountain of water […] rolled over each other. The fireworks in the middle of the river created a thunder […] emerging from the riverbed, burning cypresses flew into the sky. His majesty, content and cheerful enjoyed himself up until the world-adoring morning and rested in the eastern pavilion of the bridge.\(^{30}\)

Much of the space of the feast was, in fact, shaped by temporary elements and decorations that enhanced the sensory experience of the participants. If the richly-decorated textiles—which included golden and silver patterned velvets, reflecting mirrors, and extraordinary paintings—appealed to the eye/vision of the participants, the sound and smell of the dancing water, fragrant flowers, and likely musical accompaniments provoked other senses. Furthermore, imagine how the lights, candles, and fireworks and their dancing reflection in the water further exalted the magnificence of the sovereign and his court.

Recently, historians of architecture have challenged the traditional reliance of architectural history on vision, and separation of the physical features of an architectural space from the activity that took place in (or on) it.\(^{31}\) For example, in her discussion of Ottoman mosques, Jaleh Erzen highlights the non-architectural “performative” character of the space as being central to the overall experience of the user and important factors in impressing him/her. Similarly, Nina Ergin treats the sound of Quran recitals as an integral element of spatial experience of 16th-century

\(^{29}\) Vahīd, *Tarikh-I Jahan Aray*, 669-71. Unsatisfied with the work of his generals, Shāh Abbās II intervened in the process and directly contributed to the adornment of the bridge. His direct intervention and emphasis on innovation implies the importance of the ceremony for the monarch.

\(^{30}\) Ibid, 672.

Istanbul mosques. In the same line, in Isfahān the representational appeal of the Khājū Bridge was not limited to its architectural monumentality and beauty. What took place within that space—the scenes seen and the experiences that transpired in the space—were equally (and sometime more) effective in impressing the observer. Indeed, the materiality of the architecture and spatial arrangements functioned in tandem with other practices and sensory experiences, influencing the viewer across multiple levels.

In this instance, the natural context and architectural configuration of the bridge were augmented by a series of provisions that embellished the feasting ritual, such as temporary decorative textiles, paintings, lights, and performative procedures—all of which engineered an obvious display of power and kingship. Through careful employment of certain technologies (such as pumping up the water to create a fountain), and deliberate visual and material choices, the definition of an infrastructural institution was transformed—producing a newly defined space for royal banquet. In fact, architectural space provided a fertile setting for upholding familiar cultural and political performances. The Khājū Bridge (and to a lesser extent the Allāhverdīkhān Bridge) featured richly-decorated pavilions that housed the sovereign and secondary galleries that flanked the main passage of the bridge. The architectural configuration of these bridges, their wide openings that framed the river, and their location over the water that reflected the image of the


33 Despite the continuation of Turco-nomad practices, there is an appreciation for innovation and newness. This emphasis on “new design” (Tarhi-No) and “innovative style” (Ayeeni-Gharib) is repeatedly brought up in Safavid chronicles. For example, in the account of decorating the Khājū Bridge, Vahīd repeatedly emphasized the innovation and originality of the decoration of the Safavid generals. However, despite the “outmost innovation” and “novelty” that each had employed, because of some similarities among their works, the monarch was not satisfied with some of the interventions and introduced other decorative elements to embellish the walls. Vahīd, *Tarikh-i Jahan Aray*, 668-9.
bridge, and refracted a variety of light sources, provided a rich setting for the enactment of familiar cultural performances of Turco-Persian kingship. Surrounded by water, open to the natural setting, and adorned with textiles, lights, mirrors and other ornaments, the bridge provided all the elements that adorned the feasts of prior Turco-Persian rulers.

Scholars have written substantially about the continued impact of the Turco-nomad soft architecture on the architecture and garden culture of the Safavid, Mughal, and Ottoman court. In the textile city that Timur set up in Khān-i Gil near Samarqand, the temporary spaces created by tents of various sizes, shapes and majesty were instrumental in the Khān’s (Timur) expression of power. While the Safavids, Mughals, and Ottomans all became great patrons of grand architectural structures, the importance of tents, awnings, and textile decorations remained central elements of their courtly culture. The temporal ad-hoc nature of textile architecture offered great flexibility for a royal culture that favored mobility as it campaigned across the realm, moved from garden to garden, and set up festivities in the public spaces of the city.

34 Being surrounded with water was also an important element in the setting of the feast. As discussed in chapter 4, boating along rivers and in natural and artificial lakes, and turning the event into festivities and social gatherings, was a practice upheld not only by Safavids by also by generations of Turko-nomad rulers, from the Qaznavid king – Sultan Masoud to the Timurid prince Babur and his grandson Akbar. Several passages from Babur’s memoir are devoted to descriptions of music and drinking parties that were set up in boats. For more information see chapter 4 of this dissertation.

35 For a detailed discussion about the interplay of water and illumination in Safavid royal settings, refer to Chapter 4 of this dissertation.


Timur himself has been reported to use ordinary spaces such as the courtyard of a madrasa (religious school) as a place for setting up banquets. In the Mughal court of Shāh Jahan, as well, preparation for the Nowruz celebration included pitching special tents and awnings, as well as carpets and ornamental rugs in the public and private courtyards of the palace complex. Also, in the time of Akbar it was a common practice for the generals to decorate the arcade and cells around the courtyard at their own expenses. Shāh Abbās II’s royal banquet within the confines of the Khājū Bridge was an extension of these familiar practices, where ephemeral elements would prepare a common space for the occasion of the festivity.

However, in expanding the royal domain over the bridge and, thus, over the Zāyandīhrūd River, Abbās II was continuing a practice that dates back, at the very least, to the initial cultural flourishing of Isfahān in the early decades of the 17th century. Throughout the four decades prior to the construction of the Khājū, Shāh Abbās II’s forbearers used the earlier Allāhverdīkhān Bridge for similar royal displays and festivities. Notably, Shāh Abbās I even did not wait until the completion of the project; in the fall of 1608, in celebration of the ongoing successful work in the Allāhverdīkhān Bridge, Shāh Abbās I announced seven days of public festivities, during which the bridge became the centerpiece of a royal banquet. Fazli Bayg provided an edifying description of this occasion:

Each gallery and Iwān of the edifice of the bridge was allocated to the grandees (khavanin), Sultāns and intimates (Muqarrabin), and each was decorated from majlis.

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38 Bernard O’Kane suggests that this practice of Timur of establishing tents and feasting in the Madrasa Sarāy-i Malek created the misunderstanding for Clavijo who refers to this madrasa as “palace.” For further discussion, see O’Kane, Bernard. "From Tents to Pavilions: Royal Mobility and Persian Palace Design." Ars Orientalis 23, (1993): 249-268: 251 & 253.


40 Ibid, 157. This activity, which we also evidence in decorating the galleries of the bridges in Isfahān, was perhaps an extension of Turco-nomad camping practices, where each grandee prepared and adorned his own tent.
(gathering) to majlis and occasion to occasion, and adorning each face to face with the other, it became the envy of the gardens of paradise.\footnote{In his article, “New Lights on Shāh Abbās Construction of Isfahān,” p. 169, Melville has most likely misread the word Khavanin (grandees) as Khatun (ladies). Reference to ladies in this context is a very unlikely scenario since, according to Junabadi, in May of the next year (1609-safar 1018) after the golrizan ceremony, it was brought to the Abbās I’s attention that women were deprived of enjoying the ceremony, and as a result the king assigned Wednesdays for their promenade along the Chāhārbāgh Street and the bridge. From this passage we can gather that women were not allowed to participate in such public ceremonies during this period, and therefore the word is more probably khavanin and not khatun; the published edition of the manuscript also uses the word khavanin. FazlīBayg, A Chronicle, 482-3.}

The same practice was later repeated by Shāh Safī, in April of 1637:

According to the order, it was determined that since it is the season of flower and fairness and the river of Zāyandihruḵ conducted itself like a drunken – foaming at the mouth – they adorn the Shāhi Bridge, and prepare for cheer and festivity, and [the Shāh] appointed Husiyn Bayg – the overseer – as its master. His servants (khedmatash) swiftly turned that piece of land into a model of Paradise, and allocated each chamber and arch to ministers, general, nobilities, sheriffs, and grandees (vozara va omara va a’yan va kalanratan va arbab) [who] made an ample effort in the custom of decorating (tartib-i Ayeen Bastan).\footnote{Khajegi-Isfahāni, Mohammad and Iraj Afshar. Kholasat Al-Seyr, (Tehran: Intesharat-i Elmi, 1990), 247.}

Both Abbās I’s and Safī’s feasts in the Allāhverdīḵān Bridge, the allocation of galleries to the grandees, and their active participation in decorating the chambers are all reminiscent of what we later evidence in Abbās II’s banquet on the Khājū Bridge.

Safavid chronicles also report other instances of embellishing the Allāhverdīḵān Bridge for display. The arrival of Ottoman envoys in 1609 and Uzbek guests in 1611 both inspired similar measures, whereby the bridge was decorated and prepared for welcoming guests, as well as excursion of royal assemblies.\footnote{FazlīBayg, The Chronicle, 498 & 581.} The celebration of Nowruz in the year 1609 was also marked by decorating the bridge and arranging royal and public ceremonies on the site.\footnote{It was during the Nowruz festivities of this year that Abbās I allocated one day for the royal women of the haram to frequent the bridge and the Chahrbagh Street. Monajjem also mentions that in order to validate (and value) the...} In general, when the
Shāh was present in the city, the bridge was well-integrated into the ceremonial calendar of the city.

Local Persian sources are somewhat lacking in that they only provide brief and often allegorical references to the range of royal occasions that were staged on the bridge. In such instances, scholars can often turn to European accounts, which often linger on the ceremonies and proceedings of such festivities and offer detailed information about the architecture, decoration, and arrangement of royal settings. Unfortunately, European accounts do not provide any information about these royal assemblies on the bridge—except in the case of the Āb-Rīzān ceremony (detailed in Chapter 3).45

Judging from the accounts of the Āb-Rīzān ceremony provided by our two European informants, Della Valle and Figueroa, Abbās I also took measures to turn this public thoroughfare into a private setting. Such transformation in nature of the bridge was accompanied by radical changes in the space’s relationship with its physical and social adjacencies. By blocking the entrance to the bridge, royal guards limited access to the bridge to special guests, and thus altered the social order of the space.46 Within this now-private space, the Shāh, his local entourage, and foreign guests entertained themselves. The tents that were set up along the west side of the bridge offered guests welcome protection from the sun. For the ambassadors who were situated in the

45 For a detailed discussion of the Abrizan ceremony, refer to Chapter 3 of this dissertation. Figueroa also refers to another occasion, when on his way to a banquet that was set up in Abbās I’s honor at the house of a merchant, Abbās I made a deliberate decision to get out of his way and direct the assembly to the bridge before going to the merchant’s house. Silvia Figueroa, Safarnameh, 359-60.

46 Della Valle, Voyages, V.4-373.
galleries, the overall experience was enhanced by the local scenery, the activities of people in the river, dancing girls, drinking, conversation, and the cool breezes that blew from the river.47

Similar practices also continued during the reign of Shāh Safl I. Specifically, on the occasion of the visit by the Mughal envoy, Safdar Khān, the Allāhverdīkhān Bridge hosted one of several banquets that were organized in his honor. Vālih Isfahani narrates:

Since in this time the sea of Zāyandihrūd dancing and surging drunkenly had come to relish the view of the arches of the royal bridge, [while] from the excitement of spring in each side it was infused with flowers, the excellency placed an order for the adornment and golrizan of the bridge, and in a few days that extraordinary feast and astonishing event was accomplished. Under the direction of Husiyn Khān Bayg, overseer of houses (Sarkar buyutat) and party decorators of heavenly feasts embellished the arcades in the middle of the bridge …. Prepared a heavenly feast, and never showed any hesitation in embellishing the banquet.48

On these occasions, beyond the remarkable architecture of the bridge, dramatic performance of hospitality and entertainment were instruments for impressing the foreign envoys, as well as the Safavid courtiers and dignitaries.

With the exception of the Āb-Rīzān ceremony, none of other banquets that were set up on the Khājū and Allāhverdīkhān bridges appear in the account of European visitors; neither do Persian sources ever mention any Europeans attending these feasts. Rather, the honorary guests, at least according to Persian sources, tended to be the Uzbeks (guests of Abbās I), the Ottomans (guests of Abbās I), and the Mughals (guests of Safl I).49 One source indicates that Georgians were

48 Vālih Isfahāni, Iran Dar Zaman-i Shāh Safl Va Shāh 'Abbās-i Dovvom, 252.
49 For Abbās I’s Ottoman and Uzbek guests see FazlīBayg, The Chronicle, 498 & 58. For the Mughal guests of Shāh Safl, see Vale Isfahāni, Iran dar zaman-i, 251-52; Tāhir Vahīd, Tarikh-i Jahan Aray, 280.
also present at one of Abbās II’s Khājū Bridge ceremonies.\textsuperscript{50} Whether Europeans were truly absent or did not find the occasion sufficiently appealing to document on paper, this prevalent silence in both European and Persian sources confirms the cultural specificity of these occasions and their targeted audience.\textsuperscript{51}

As noted earlier, the temporality and mobility that was intrinsic to the court culture of the Safavids tended to favor such transient settings. Like their Ottoman, Uzbek, and Mughal counterparts, the Safavid concept of power and sovereignty was rooted in the Turco-nomad culture of mobility and elaborate temporal soft architecture. In this culture, the constant mobility of the sovereign and his army meant that wherever they camped, magnificent tents decorated with elaborate textiles and ornaments hosted their splendid ceremonies. Additionally, the king would assemble and transport a variety of easily-movable furniture and decorative elements that he could use in his minor, less formal residences as he moved across the realm.\textsuperscript{52} In such a culture, the king and his entourage could have employed ephemeral elements to transform a pasture into a city, and a city into a royal domain. The Uzbeks, the Ottomans, and the Mughals that were reportedly present at these occasions, all had deep roots in Turco-nomadic traditions of power and kingship, and thus would have been deeply familiar with the cultural significance of such transient settings amidst nature, and highly sensitive to the power display that was embedded in it; and that would have made them one of the primary targets of such lavish displays.

The Confluence of Public and Royal Space

\textsuperscript{50} Valeh Isfahāni, Iran dar zaman-i, 262; Tāhir Vahīd, tarikh-i jahan aray, 672.
\textsuperscript{51} More importantly, the fact that local sources only mention Mughal, Uzbek, Ottoman, and Georgian neighbors also signals their own cultural sensibilities and importance that the Persians associated to these immediate neighbors.
\textsuperscript{52} Della Valle, Safarnameh,
The golrizan ceremony on the bridge, which found its way into the accounts of court historians, was part of a larger culture of public ceremonies that were often enacted across the city. On such occasions, royal agents and inhabitants of the city all engaged in decorating the market, miydan, coffee shops and other public spaces of the city. In Isfahan, the ceremonial procession of the king and his associates, religious parades and festivals, as well as the shows such as firework displays, circuses, wrestling matches and polo (chogan) competitions frequently brought the people to the Naghsh-i Jahān Miydān, Chāhārbāgh Street, and other public spaces of the city.

Construction of the Allāhverdīkhān Bridge provided a new space for a range of public ceremonies, thereby extending the public space for royal celebrations to the vicinity of the river. In the years following 1608, when we first have a mention of a royal banquet on the bridge, the bridge repeatedly reappears in reference to royal public ceremonies. In the year 1609, when Abbās I’s Ottoman guests were present in Isfahan, the gardens of Isfahan—and particularly the Allāhverdīkhān Bridge—hosted their recreational activities.53 Similarly, in the year 1611 when the city was getting ready to welcome Abbās I’s Uzbek guests, illuminations, decoration of the public market, and the Gheysariyeh (textile market) was extended to the Chāhārbāgh Street and Allāhverdīkhān Bridge.54 On the day of the Āb Rīzān festival in 1617, the king departed the Naghsh-i Jahān complex, traveled down the Chāhārbāgh Street, and stopped at the bridge where he spent the morning and part of the afternoon celebrating, entertaining guests, and enjoying the spectacle from the galleries of the bridge. After this sojourn, the Shāh departed for a more private feast in the house of an Armenian elite in the Julfa neighborhood (Figure 5-13). About two decades later in 1635, when Safī I entered the city accompanied by his esteemed guest, the Mughal

53 FazlīBayg, Chronicles, 498.
54 Ibid, 581.
ambassador, the Allāhverdīkhān Bridge once again served as a station for a brief sojourn. Taking the ceremonial Chāhārbāgh Street on his way from the Hezār Jarīb garden to the city, the royal assembly stopped at the bridge to enjoy the show that was arranged in celebration of their arrival (Figure 5-14).55

Indeed, the Allāhverdīkhān Bridge embodied several significant elements that were central to the performance of Safavid Kingship. Among the many royal ceremonial sites in Isfahan, what distinguished the AllāhveridKhān Bridge was its location at the intersection of river, urban public space, and the grand Chāhārbāgh Street. By virtue of connecting suburban Hezār Jarīb Garden to the Naghsh-i Jahān Complex, Chāhārbāgh Street functioned as the main throughway for the royal parties that moved between the Naghsh-i Jahān complex and the suburban Royal garden or/and the Julfa Neighborhood. Famous for its pleasant air, inviting coffeehouses, and water streams and pools, this tree-lined street was also a public hub of the city that brought many people for evening strolls and socializing. Furthermore, located at the mid-way point of this street, the bridge was a magnificent edifice over the river – surrounded with water it offered an ideal spot for a short stop on any trip between the city and suburbs. The architectural arrangement of the bridge with its galleries, stone base, and chambers facilitated a marvelous multi-sensory relationship with the river, which had the capacity to adorn any royal assembly or private respite. Though such arrangement existed within the private gardens and hunting grounds, Allāhverdīkhān’s exposure to the public eye differentiated it from any similar private settings. Similar to the Ali-Qapu Palace that flanked the Naghsh-i Jahān Miydān, or the coffee houses that hosted royal banquets in the

market, the Allâhverdîkhân was a highly visible structure which made it an ideal and conspicuous civic stage.

As Sussan Babaie rightly points out, in 17th-century Isfahân the culture of visibility and visual access was partly enacted through an architecture culture that encouraged interaction and conviviality. This trend is best displayed in the Nagsh-i Jahan Miydân of Isfahân and the Ali-Qapu Palace that provided a platform for an exchange of royal and public gaze. Similar architectonic strategies were also employed in the design of the Khâjû and Allâh VeridKhân bridges to encourage transparency and theatricality. Positioning themselves in the galleries of the bridge, the king and his guests enjoyed both a physical and symbolic advantage that the elevated position of the bridge afforded; equally important, the open architecture of the bridge that resulted from the inclusion of open galleries would have exposed them to the public’s eye. The fact that Châhârbâgh Street was the public site of recreation and leisurely strolls for the Isfahani citizens further contributed to the prominent role of the bridge which, as noted, served as a prime location for displaying royal ceremonies of power and influence that was unique to the Safavids.

Public Life of the Bridges

When not occupied by the court, the Khâjû and Allâhverdîkhân bridges both were part of the public infrastructure of the city, serving the everyday life of the denizens of Isfahan. Given the nature of our sources, which often reflect the views of European visitors or court historians, it is

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57 For the highly visible nature of monarchy during the reign of Abbâs I, especially in comparison with the Ottoman and Mughal court, see Gulru Necipoglu, "Framing the Gaze in Ottoman, Safavid, and Mughal Palaces." *Ars Orientalis* 23, (1993): 303-342.
difficult to determine with any certainty the ways in which these bridges were seen and used by the public. However, a critical cross-examination of these limited sources offers valuable glimpses. First and foremost, in a city that was rapidly expanding beyond the river, these bridges were valuable transportation infrastructures that facilitated the passage of people and animals across the river. With their visionary three-storied design to accommodate anticipated weather-related fluctuations, both bridges offered safe passage over the river all year long. The Allāhverdīkhān Bridge, in particular, was considered to be a major amenity for the large Armenian colony who lived right across the river. The later Khājū Bridge, too, greeted travelers arriving at the city via the Shirāz Road (from the south), and facilitated connection between the Sa’ādatābad district and the Khājū neighborhood, as well as expanding districts of the city that lay north of the river.58

Travelers or locals crossing these bridges could also take advantage of the galleries along the main level of the bridge or, depending on weather conditions, take refuge along the lower level. On the main level, the galleries that flanked the central path not only offered alternative passages, but also provided niches for respite where people could spend time under the shadow of the arcades and enjoy the cool breezes and the charming spectacle that was framed by the arches. Indeed, the structural arrangement of the bridge encouraged leisurely strolls and recess in the galleries. As observed by Thevenot, Della Valle, and several other Europeans, the lower level of both bridges offered a rare opportunity for pleasure and comfort, especially in the hot and dry summer of Isfahān when the shade, cooling breezes and proximity to the running water of the Zāyandihrūd River were valuable amenities.

58 Shiraz Road, which connected Isfahān to the cities such as Shiraz and Gombrun in the south, at the time played an important role in the commercial network of Persia.
Such opportunities for recreation and relaxation transformed the bridge from a transitory passage to a site of prolonged respite, interaction, contemplation, and sensory pleasure. Critical reading of Persian sources, as well, confirms this observation. For example, in referring to the Allāhverdīkhān Bridge, the Persian historian Fazli Bayg employs words such as *seyrgah*. The word, composed of the noun *Seyr* (leisurely trip, excursion) & suffix of *Gah* (place) indicates a place of leisure and excursion. Indeed, in employing this term, Fazli Bayg testifies to the locals’ perception of the bridge as a space for leisurely strolls.

The Safavid historian Gonābdādi also praises the “rectangular chambers in the middle of the pillars, where at the time of the low water during the summer the wandering companions and assembly of travelers (*Moasheran-i Sayer* and *Sayeran-i Moasher*) took refuge from the heat of the sun, and in these exquisite resting places enjoyed the gentle wind arising from the surface of the river.” Similarly, Fazli Bayg’s description of the Allāhverdīkhān Bridge includes references to the “edifices where groups of people with their family could stay for several days and nights without any difficulty and discomfort.” Judging by the existing structure of the bridge, it is highly likely that Fazli Bayg and Gonābdādi were both referring to the chambers found on the lower level of the bridge (Figure 5-1 & 5-3 & 5-4). These rooms, which are currently closed to the public, are also visible in the plan drawn by Pascal Coste, and may have initially been designed to offer temporary resting places for both visiting travelers and local Isfahanis.

Textual and archeological evidence confirm the presence of analogous spaces in other Safavid bridges outside Isfahan. Kleiss, the German archeologist who surveyed a large number of

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59 Fazlī Bayg, *Chronicles*, 466: “No one have seen a comparable structure over the river which could be the *seyrgah* of the world.”  
60 Gonābdādi, p 761  
61 Fazlī Bayg, p 466.
bridges across Iran, refers to other Safavid bridges with hollow spaces and sometimes chambers in the piers. These features, he suggests, functioned as structural provisions to lighten the weight of the heavy structure of the bridge. Della Valle’s travel accounts also confirm Kleiss’ description, while also shedding light on alternative function of these hollow chambers. During his trip from the Caspian region to Qazvin, Della Valle slept in a white room that was built into the lower level of a bridge built over the Karraj River. The room, as he explained it, was located underneath the bridge, but above the level of water—thus very similar to the chambers along the lower level of the Allāhverdīkhān Bridge. The white finish of the interior also suggest that the hollow chamber was more than a structural provision, set up to accommodate guests. Earlier, on his way from Kāshān to Firuzkuh, Della Valle had evidenced similar amenities, which he regarded a part of the Shāh Abbās I’s project for expanding paved highways and equipping them with amenities that would facilitate travel—and therefore trade across the empire.

The mural decorations on the interior walls of the Allāhverdīkhān’s chambers also suggest that, at the time of their construction, the chambers were intended to be accessible to the public. Chardin in the 1660s, and much later William Ouseley (between 1810 and 1815), both complained about the indecent and erotic content of the mural decoration of these chambers. While we do not have any visual sources to reimagine these murals, the citations of Chardin and Ouseley about the “Europeanizing” style of these murals—not to mention, their erotic content—put them in a

63 Della Valle p. 231.
64, Della Valle, Safarnameh, p 124 & 231
65 Chardin also mentions that Shāh Abbās II had ordered to close the doors of these chambers to the public. These rooms in the Allāhverdīkhān Bridge are currently closed to the public, and my attempt to access their interior was unsuccessful.
Chardin, Jean. Voyages De Mr. Le Chevalier Chardin, En Perse, Et Autres Lieux De L'Orient. (Amsterdam: Lorme), 1711, 59.
group of similar murals that in this period adorned public and semi-private spaces of the city. Such mural paintings, which incorporated scenes involving multiple figures with exposed body parts and sexually provocative gestures and poses were in display on various urban facades. The presence of such scenes on the portal of the Qaysariyeh Bazaar, the portal of elite gardens along the Chāhārbāgh Street, as well as more private and semi-private spaces such as the hall of Chihil Sutūn Palace, suggest that they were not isolated incidents; rather they represent recurrent visual elements that can be found during the early stages of the developing 17th-century cosmopolitan culture of Isfahan—a time when social culture was preoccupied with sexuality and fascinated with obscene and indecent scenes. In effect, presence of such paintings in the chambers of Allāhverdīkhān testifies to the intention of the patron/designer, who had imagined these chambers not as mere structural elements or leftover spaces, but as spaces that were widely used and exposed to the public.

The lower level of the Khājū Bridge also included similar rooms at the either end (Figure 5-11). Whether at the time they served a similar purpose, we are not able to firmly ascertain. However, De Bruyn’s observation when he was in Isfahān in 1704 offers some insight. During De Bruyn’s stay in Isfahan, the Khājū Bridge was a favorite public site of recreation:

There is nothing more pleasing to sight than the view to the eastward from upon this bridge. In the evening, you see an infinite number of persons from both sexes, taking the air by the riverside, near the water fall, and in the fine way that runs along the arcade of the bridge. Some on the horseback, some on foot. Smoking and drinking coffee, which they find readily prepared for them.


This short passage by De Bruyn offers a rich spectrum of information about the ways that Isfahani people used the Khājū Bridge as a public space. First, the upper level offered an amazing opportunity from which Isfahani residents could view their city. While such panoramic visual access may appear commonplace to the modern eye, it is critical to consider the importance and value that such an extensive view to the landscape would have had in the context of 17th-century Isfahan. In comparison to the medieval city, the architectural culture of new developments in Isfahān was one of openness and visual access; the sweeping views of the landscape from the upper story of the bridge was an experiential privilege rarely offered to the ordinary population of Isfahan. Especially considering that the flat topography of the city did not accommodate any expansive views, as De Bruyn mentions, the bridge provided the public with an exceptional visual advantage.

De Bruyn’s statement also suggests that people of both sexes participated in recreational retreats on and adjacent to the bridge. Despite the fact that accuracy of De Bruyn’s observation has been widely corroborated by scholars, given our information from other sources, we cannot necessarily take De Bruyn’s statement at face value. To begin with, it is very unlikely that the women that De Bruyn saw by the river belonged to royal or elite families of Isfahan. Even in the early decades of the 17th century—when according to scholars elite Safavid women enjoyed more freedom and public presence—their access to public space and bridges was highly controlled.

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69 As I demonstrated in chapter 4, I am relying on De Bruyn descriptions and sketches here, since his accounts and sketches are considered fairly accurate and trustworthy.

70 Perhaps the only comparable opportunity was the view from the portal of gardens that lined Chāhārbāgh Street. Accessible to the public, these portals would offer an advantageous view of the garden and the Chāhārbāgh Street. However, even comparable to these portals, the far-reaching view to the river and the landscape along it that vanished into the horizon was a unique experience.

71 The only exception to this flat topography was the Soffe mountain that was located on the southern fringes of the Isfahān plain well beyond the city and its suburbs.

72 See footnote 18, Chapter 4 of this dissertation.

73 For discussion on the status, visibility, and presence of Safavid women in the public arena, see Mathee, Ruthee. "From the Battlefield to the Harem: Did Women’s Seclusion Increase from Early to the Late Safavid Times?"
According to Monajjem, in the year 1609 Abbās I designated Wednesdays for women to enjoy a stroll along Chāhārbāgh Street and the Allāhverdīkhān Bridge. Similarly, during Abbās I’ reign special dates were set aside for the women to frequent the Qaysariyeh Market (the luxury textile market). On such occasions when upper-class women were out and about, men were ordered to leave these areas, which were then closely guarded to protect women from any exposure to male members of the society (except the eunuchs). Scholars believe that throughout the remainder of Safavid period, and particularly towards its end when religious figures gained a firmer grip over power, even this limited access of elite and royal women to public space faded away. Under such circumstances—and given that De Bruyn visited Isfahān at a time of excessive control over the activities and movement of female bodies —the women he saw by the bridge could not possibly have been high-status ladies. Instead, they would have been ordinary or lower-class women, or those whose profession would have brought them to the public to entertain others, as was customary in other male-restricted public spaces such as coffee houses and taverns.

Interestingly, De Bruyn also mentions drinking coffee and smoking hookah among the activities that took place on the bridge. His remarks about the availability of ready-made coffee and hookah on the bridge imply that the bridge was equipped with certain amenities that offered


74 Molla Jalal al-din Mohammad Monajem, Tarikh-i Abbāsi, 361.
75 For example, see Szuppe, “Status, Knowledge, and Politics,” 142, & Kathryn Babayan, “Aqā’id al-Nisa,” 351-59.
76 For 17th century coffee spaces and tavern along the Chāhārbāgh and Maydan of Isfahān, see Farshid Emami, "Coffeehouses, Urban Spaces, and the Formation of a Public Sphere in Safavid Isfahān." Muqarnas Online 33, no. 1 (Nov, 2016): 177-220.
77 By the 19th century when Pascal Coste was in Isfahān, the galleries of the Khājū Bridge were still a desired destination for wealthy people who enjoyed the air and views, smoked hookah, and drank tea or coffee.
prepared coffee to the public. Given that he doesn’t provide any specific information beyond what is noted here, we are left to make an informed hypothesis. Thus, we can conjecture that the growing popularity of coffee during the late-16th and early-17th centuries, which led to the appearance of many coffeehouses around the Naghsh-i Jahān Miydān and Chāhārbāgh Street, could have inspired similar measures on/around the Khājū Bridge.\footnote{During a significant portion of the 20th century and until few years ago, these rooms functioned as coffee houses. However, we do not possess any evidence that can confirm their function during the 17th century.} for the many people who came to Khājū Bridge for diversion and restoration, lower-level rooms of the bridge could have functioned as coffee houses (Figure 5-11).\footnote{Coste, Pascal. *Monuments Modernes De La Perse*, (Paris: A. Morel, 1867),34.}

Another exciting element that De Bruyn mentions in his description of the Khājū Bridge pertains to the waterfalls that were created by incorporating several steps in the foundation of the bridge, thereby creating a type of theatrical water art for the public. The minor changes resulting from 19th-century repairs on the foundation of the bridge, which eliminated the steps in the central section of the foundation, did not hinder the bridge’s role in extending public space over the surface of the river. The remaining steps still function as a flexible element that during the dry season offer informal sitting platforms, and when the river flows more forcefully, orchestrate the rushing water into a beautiful water display. Kaempfer’s drawing of the Khājū demonstrates this playful quality and dramatic spraying and splattering of water as it descends the steps; his notes also confirm the amazement and pleasure of Isfahani people from the sight of these water acrobatics (Figure 5-8 & 5-15).\footnote{Here, the drama was not limited to the visual spectacle created by the foaming water, but also via the sound of water that rushed through the openings of the bridge, dropping and splashing, and finally by the touch of the mist that filled the air. Considered in the aggregate, these elements}
created a delightful multi-sensory experience that brought Isfahani denizens to the vicinity of Khājū Bridge.

It must be noted that although secondary sources and most contemporary visitors failed to report it, a simplified version of such architectural provisions were also incorporated in the Alalhverdikhān Bridge. Della Valle’s keen eye did not fail to notice the short stone wall implemented in the foundation of Khājū Bridge and located on the path of the stream. As the water dropped this short wall it created a small waterfall that inspired Della Valle’s admiration (Figure 15).81

Safavid Bridges: Between Infrastructure, Pavilion, and Public Space

For centuries prior to the establishment of Isfahān as the capital, bridges such as the Shāhrestan and Hassanābād facilitated passage across the Zāyandihrūd River, fulfilling their expected role as transportation infrastructures.82 In other words, these bridges treated the river as a border to traverse and a barrier to cross. Later, however, as the Safavids were exploring the performative capacities of architecture, the bridges that they constructed during the 17th century related to the river in a different way – engaging with it as a shared site for the public to frequent and celebrate. The royal ceremonies, public events, religious rituals, and, most importantly, opportunities for leisurely strolls and respite that took place on these bridges extended the everyday lives of the Isfahani citizens to the shores of the river, thereby unfolding a new chapter in the river-city relationship in Isfahan. Indeed, the importance of these bridges in activating the potentials that

81 Della Valle, Safarnameh, 31.
82 I am using the title of Hassan Abad bridge, which for a while was also in use in reference to the Khājū Bridge, to refer to the old bridge that existed in the same location before the construction of Khājū Bridge by Shāh Abbās II. We do not have any information about the architecture of this bridge.
existed in the vicinity of the river cannot be overstated. No longer a mere conduit over the Zāyandihrūd, the Khājū and Allāhverdīkhān bridges transformed the space on and around them into a vibrant public arena for recreation and spectacles of every kind.

Indeed, what enabled these new relationships was the architectural configuration and spatial arrangement of the new bridges, which offered opportunities for unprecedented multisensorial interaction with the river. Well aware of the seasonal and unnavigable nature of the river, the designer of the Khājū Bridge intelligently morphed the architectural engineering of the bridge and dam with design considerations that created impressive visual and experiential effects. Where in the upper levels the bridge offered denizens of Isfahān unparalleled visual access to the landscape, the lower level of the Kahju and Allāhverdīkhān bridges activated sight, touch and olfactory senses, and created a unique experiential engagement with the river. The dramatic water cascade created an amazing spectacle, the cooling breezes from the river provided respite in a hot climate, and the bridge offered unique leisure spaces that extended over the surface of the river.

These amenities also appeared in other public spaces of 17th-century Isfahan—albeit in differing forms. The new stream that flowed around the Miydān-i Naghsh-i Jahan, with plane trees that lined its path, as well as the central stream, pools, and small cascades that adorned the Chāhārbāgh Street, represent amenities that had previously been limited to the private spaces of the royal and elite residences. Visitors such as De Bruyn and Kaempfer also refer to stone and wooden seats that were implemented to encourage people to sit and take advantage of these pleasant settings.83 The gentle flow of the water in the rivulet (Jūy), its graceful dance as it dropped

and sprinkled, and the cool breeze that mingled with the shadow of the trees created opportunities for respite from the heat of the sun.

While these elements have long been central to garden design in the Persian Plateau—as well as in other areas influenced by similar cultural trends and climatic conditions—their presence in the public spaces of the city was a new phenomenon in Isfahan. The water and greenery that adorned the public Miydān and streets of 17th-century Isfahān made the familiar garden features accessible to the public. It has been argued that the Safavid empire as it emerged in Isfahān (and especially the reign of Abbās I) was considerably different from either the Mughal or Ottoman Empire in terms of the visibility and accessibility of the king and his public presence.84 In addition to the transient decorations, fireworks displays, and music that extended beyond the confines of the palace to embellish the larger city as a site for the royals and elites, other water-related features that had long adorned royal spaces—but largely invisible from the gaze of urban inhabitants—now followed the monarch out into the public.85 Similar to new urban spaces such as the Miydān-i Naghsh-i Jahān and Chāhārbāgh Street, the Allāhverdīkhān and Kahju bridges also functioned as public platforms where private royal practices found a stage outside the confines of walled gardens and royal hunting grounds.

84 Gulru Necipoglu, "Framing the Gaze".
85 The culture of transparency and visuality that Sussan Babaie observes in the public spaces such as the Maidan, the public market, and Chāhārbāgh Street is also present in the space of the bridge. Orchestrating this new visual culture, Shāh Abbās I positioned himself at the center of this composition. He repeatedly appears in the middle of the Maidan riding alongside his guests, at a private party pouring wine for his guests, or in a shop conversing with his subjects. Wherever he is, his active visible persona overshadows other currents and activity. Although none of his decedents demonstrated a similar extent of public exposure, Safavid kings did not completely retreat into the confines of their private gardens (at least until the close of Abbās II’s reign). Mahvash Alemi briefly mentions urban space as sites for public festivities, but she does not delve into details of how architectural and infrastructural projects (e.g., the construction of a bridge) created settings to host activities that were formerly limited to the garden spaces of the city.
In designing these bridges, the architects employed old techniques in a truly innovative fashion. Importantly, they created multifunctional infrastructures that defy the rigid, uni-functional nature of modern infrastructure as we know it. In particular, the design and function of the Khājū Bridge encapsulated the multiple ways in which the river interacted with the city, supporting the economic, royal, religious and public life of 17th-century Isfahan.

While it cannot be denied that Khājū’s function as a dam and transportation infrastructure was key to ensuring a well-functioning city, its reach was so much greater. As a transportation infrastructure, both the Allāhverdīkhān and Khājū facilitated an integral connection between the political and economic center of Isfahān north of the river, and the minority neighborhoods, royal establishments, and elite gardens located on its south. In effect, these bridges were instrumental in expanding the city southward beyond the river. As a dam, the influence of the Khājū Bridge extended beyond its immediate vicinity, and the lake that formed behind the dam was more than a decorative ornament for the royal complex. With its creation, the visual connection between the river and the tallar was transformed into a spatial and functional continuity. As a site for boating and illumination festivals, the lake performed as an extension of the royal space. More importantly, the creation of a lake facilitated the irrigation of agricultural lands in the eastern hinterlands of the city. The long-since disappeared Nahr-i Āsyāb (Water-Mill Canal), which is traceable on old maps of the city, carried the water further downstream, thereby contributing to the agricultural economy of the capital whose growing population was in constant need of food and raw produce (Figure 5-9 & 5-10).

What is essential to understand is that well beyond their utilitarian function, these bridges activated the Zāyandihrūd’s potential as an extension of the public spaces of the city in a manner unprecedented in previous centuries. Over the surface of the river, these two bridges fashioned
spaces for recreation and the consumption of drink and hookah that had been signature elements of the landscape along the Chāhārbāgh Street and Naghsh-i Jahān Miydān. Beyond a source of water, the Zāyandihṛūd River was intentionally incorporated into the emerging landscape of public recreation, social interaction, and conviviality. In effect, what stimulated this integration, and ensured it success was the cultural perception of water in the region which regarded water and by extension Zāyandihṛūd River as highly valuable for the cultural, economic, and physical well-being of local inhabitants.
Figure 5-1- Plan of the main level and lower level of the Allahverdikhan Bridge. The Chambers in the lower level of the bridge were open to the public, offering an exquisite resting place. From Coste, Pascal, *Monuments Modernes De La Perse*, Paris: A. Morel, 1867.
Figure 5-2- View of the Allahverdikhan Bridge, Isfahan, Iran, (Photo by the author, 2015).
Figure 5.3: View of the Allahverdikhan Bridge, Isfahan, Iran; the windows mark the location of chambers in the lower level of the bridge. (Photo by
the author, 2015).
Figure 5-4- Chardin in the 1660s, and William Ouseley (between 1810 and 1815), both complained about the indecent and erotic content of the mural decoration of the rooms located on the lower level of the bridge.
Figure 5-5- For the Nowruz of 1659, per the order of the king the courtiers decorated the galleries of the bridge preparing it for the Royal festivities. Residing in the central pavilion of the bridge, the shah enjoyed music, drink, view and fireworks on the river.
Figure 5-6: The sectional profile of the Khaju Bridge illustrates the six different passages it offered for crossing the river. It also showcases the manners in which it facilitated various multi-sensory relationship with the river.
Figure 5.7 & 5.8 - The underground canals implemented in the north and south banks of the river are visible in the drawings by Chardin (up) and Kamepfer (below). Up: From John Chardin's drawing of Khaju Bridge, Jean Chardin, *Voyages De Mr. Le Chevalier Chardin, En Perse, Et Autres Lieux De L'Orient*. Amsterdam: Lorne, 1711, Courtesy of LuEsther T. Mertz Library Rare Books Collection. Below: Seventeenth-century drawing of Khaju Bridge, Engelbert Kaempfer, Engelbert Amoenitatum Exoticarum Politico-Physico-Medicarum Fasciculi V. Lemoviae: 1712, Courtesy of LuEsther T. Mertz Library Rare Books Collection.
Figure 5-9: A water canal branched off from the river right by the Khaju Bridge is identifiable on the 18th-century Russian map of Isfahan. It is not possible to identify the exact branching location of the canal, but given that several mills are marked on the path of this canal, we can suggest that this is the same Nahr-i-Asiab (Mill Canal) that is identifiable in the 1964 map of Isfahan. Based on the reproduction of the Isfahan map produced by the Russian General Chirikov in 1851, Muhammad Mihryar, Fatullaev-Figarov, Sh. S., Farhad Fakhari, Bahram Qadiri, Asnad-i Tasvir-i Shahr-i Qajar, Teheran, (Danishgah-i Shahid Bihishti: Sazman-i Miras-i Farhang-i Kishvar (Pizuhishgah), 1999).
Figure 5-10- Traces of the now-disappeared Nahr-i Asiad (Mill Canal) is identifiable on the 1963 map of the city.
Figure 5-11- The central Pavilion and Lower Chambers in the Khaju Bridge
Figure 5-12- The highlighted volumes mark the staircases in the Khaju Bridge. Currently closed to the public these stairs allowed vertical communication within the bridge.
Figure 5-13 & 5-14- By virtue of its location at the intersection of river and the grand Chaharbagh Street, Allahverdikhan Bridge was an ideal spot for a short stop on any trip between the city and suburbs. Left: On the day of the Ab Rizan festival of the 1617, the king departed Naghsh-i Jahan complex, took the Chaharbagh Street and stopped at the bridge, where he spent the morning and part of the afternoon celebrating, entertaining guests, and watching the people as they played with water. Thereafter, he departed for another round of a more private feast in the house of an Armenian elite in the Julfa neighborhood. Right: In 1635, when Safi I entered the city accompanied with his esteemed guest (the Mughal ambassador) once again Allahverdikhan Bridge served as a station for a brief sojourn. Taking the ceremonial Chaharbagh Street on his way from the Hezar Jarib garden to the city, the royal assembly stopped at the bridge to enjoy the show that was arranged on the bank of the river. In both these occasions Allahverdikhan Bridge served as a public stage.
Figure 5-15- In the lower level of the Allahverdikhan Bridge, a short wall created a small waterfall (upper image). This feature was later enhanced in the Khaju Bridge where a series of stairs implemented in the foundation of the bridge created a dramatic theater of dancing cascades (lower image). Based on drawings from Pascal Coste, *Monuments Modernes De La Perse* (Paris: A. Morel, 1867), Courtesy of New York Public Library Digital Collections.
CHAPTER 6 – Conclusion

What is a river? A natural resource? A geographic entity? Or a social construct? In examining the relationship of a river with land, settlements and cities, and regional socio-economic activities, how should we conceptualize it? Throughout history, rivers have functioned in various capacities: as sources of food, navigation arteries, places of recreation, and geographic and/or symbolic borders. They were envisioned as sacred or evil entities with supernatural powers, and viewed and functioned as both destructive and constructive agents. Altogether, as multifaceted entities functioning in various capacities, rivers interacted with human settlements in a myriad of ways and across different scales.

Positioned within this broad purview, this dissertation ventured into the past to elucidate the roots of the interwoven history of Zāyandihrūd River and city of Isfahan. What role did the river play in the genesis, development, and life of 17th-century Isfahan? and How was the relationship between the city and river reflected in the physical and social landscape of the city? While previous studies have highlighted the centrality of the river in the genesis and prosperity of
Isfahan, they have seldom elaborated on the nature of this relationship. By answering these questions this study portrays the river as a multidimensional entity that affected the direction, form, and nature of urban development in 17th-century Isfahan. Furthermore, this work introduces the river and its banks as emerging public spaces that provided 17th-century Isfahān with novel sites of leisure and display on the fringes of the city. Whereas the prior five chapters are each dedicated to a particular aspect of the river-city relationship and its manifestation in the urban landscape of 17th-century Isfahan, this final chapter draws out concluding findings, raises new questions, and offers direction for addressing them in the future.

Though one of many settlements that emerged along the course of the Zāyandihṛūd River, Isfahān was the largest. From its genesis in the Zagrus Mountains, the river travels through a rugged landscape that features very little flat land for the development of an agrarian settlement. Almost immediately after the river reaches the foothills of the Zagros range, its water is branched off to the nearby fields, supporting patches of highly productive agricultural lands. The city of Isfahān emerged along a turning point of the river where it departs the foothills of the Zagros chains and enters an extended flat plain (Figure 1-4). Early communities that shaped the foundation of Isfahān settled both near its shores and in relatively distant locations, while subsequent growth of the city up until the late 16th century mainly took place farther north of the river.86

However, this spatial distance between the river and the city did not isolate their life from each other. Undeniably, as a landlock city, Isfahān remained dependent on the agricultural production of its surrounding hinterlands, both for the food consumed in the city and the taxation it received from the districts under its control – five (out of seven) of which relied on the

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86 See Chapter 2, pp70-72.
Zāyandihrūd as the major source of water for agricultural and horticultural production. Indeed, the river was pivotal in supporting the agrarian activities of the region and thereby providing food and raw materials for the city inhabitants of Isfahan. In effect, the river’s contribution to the food landscape of the city operated along a regional scale; nonetheless, examining this relationship requires us to expand our frame beyond the scale of the city and see the city-hinterland-river relationship within a broader scale.

As the largest river in Persian Plateau, the 250-mile long Zāyandihrūd River naturally fostered the development of settlements along its course. Meanwhile, the unnavigability and seasonal nature of this river played critical roles in shaping the characteristics and activities of those river-based settlements. Because the river’s volume was solely dependent on snowmelt from the Zagros Mountains, near-inevitable periods of low water capacity during the dry season necessitated the establishment of socio-political institutions that determined and controlled the distribution of water. Therefore, the prosperity of Isfahān required a well-functioning government with both the will and the power to oversee a community-government partnership in charge of preparing and implementing an efficient water distribution plan. In a region with infrequent rainfall and where access to water was essential for the agricultural productivity of land, not only was proficient operation of this system key to Isfahan’s development and prosperity, but any change in the pattern of water distribution had direct consequences for either the growth or the decline of settlements and regions.

As an example of the outcome of fluctuations in water shares throughout greater Isfahan, consider the lower stream districts of Barā’ān and Rūdashtin, which experienced a sharp decrease in their water share sometimes between the 14th and 16th centuries; the result of which was an enduring impact on their landscapes. The level of prosperity described in the accounts of Medieval
geographers – and visible in the large numbers of monumental architectural remains from this period – is not to be found during the 16th and 17th centuries. While sporadic textual references lead us to believe that this change in water share was implemented sometimes between the 14th and 16th centuries, no irrefutable historical evidence exists that enables us to narrow this time frame to a specific period and, therefore, to a specific impetus for the change. For example, it is not clear whether this change in water share was instigated by political motives – for instance, attempts to undermine certain families or groups holding power in the lower stream districts – or was due to a change in the environmental conditions of the area that demanded that such measures be instituted. Indeed, the ongoing depopulation and low rate of agricultural productivity in the lower stream villages may have their roots in centuries of water deprivation, which over time could have contributed to an increase in the salinity and decrease in fertility of the soil. Alternatively, major changes in the climate of the plateau could have affected the water share plan. Using the archival information to chart and compare the 19th-century water distribution plan and pattern of crop cultivation along the course of Zayanahderūd confirms the significance of devising an effective model for water distribution during the dry season. Therefore, any major changes in the weather conditions would have inevitably required modifications in the water distribution plan to ensure efficient water management.

Several avenues of research, which are beyond the scope of this project, can further enrich our knowledge of these issues and help us develop a better picture of the nature-culture dance in the area. Such an expanded investigation should involve mining available legal documents from the medieval period to the 16th century (e.g., royal orders, waqf documents, and chronicles) that would shed light on the power dynamics among the local landowners and new government elites.

87 See chapter 1, pp 50-55
A clearer picture of power dynamics will illuminate the likely frictions that may have instigated a change in the water distribution pattern as a means of curbing the power of certain groups and families. Additionally, searching the archive of the natural environment (eg. underground water reservoirs, change in climate conditions, and river’s water shed prior to modern interventions) can also provide us with key information. If any shifts in the pattern of water distribution were instigated by changes in climactic conditions, then information recovered by meteorologist, geologists, and archeologists can illuminate those patterns, and help us interpret the information recovered from textual archives.

The institution in charge of devising and implementing regional water distribution plan was, indeed, a solution established to overcome an environmental challenge, namely the seasonality of water resource in the area. In fact, the entire landscape of production in the Isfahān region – which transitioned from rice fields and fruit gardens in the west to wheat and barley farms in the east – was governed by access to water and soil fertility, both of which were heavily controlled and managed to ensure peak efficiency and productivity.

Political stability and population growth in the region during the reign of Shāh Tahmasb (1514-1576), followed by unprecedented development of Isfahān as the capital (1598 - 1722), put further pressure on the hinterlands as a source for feeding the more than half a million city inhabitants. Unfortunately, besides the estimated population figures reported by the European travelers we have no other statistics that can assist us in determining the city’s food consumption, land under cultivation, or the amount of water that was needed. While we have some information about the dietary practices of this period, more extensive studies are needed before we can make
any reliable estimations about the level of consumption of each crop.\textsuperscript{88} Therefore, based on our current state of knowledge, using estimated population figures to calculate quantitative data about arable lands and water requirements is not a viable option. Further investigations of technological conditions, soil quality, and other variables may enable us to create models that would help estimate food consumption, crop production, land under cultivation, and water requirements.

Despite the lack of detailed information about food production and consumption in Isfahan, textual and archeological evidence that testify to investments made in the hydraulic infrastructures of the region, indicate considerable attempts to increase the overall productivity and land under cultivation. Specifically, the construction of the Shāhi Canal (Black Canal), several campaigns to link the Kuhrang River to the Zāyandihruūd River, projects to redirect other water sources towards the Zayandheūd River, and construction of dams to elevate the water level so that water could be redirected more easily to irrigation canals were among the actions taken by various Safavid monarchs.\textsuperscript{89} Whether successfully implemented or not, investment in such projects testifies to a surge in demand for water, which the government tried to address by increasing monetary and labor investments in hydraulic infrastructures.

Indeed, without reliable access to water, neither the agricultural estates in the hinterlands nor the new neighborhoods that were developed south of the old city would have been able to enjoy the prosperity that they were known for. The large, grandiose gardens that distinguished these neighborhoods from the old city – as well as the streams, pools, and fountains that adorned the gardens and public spaces of these new districts – all relied on hydraulic infrastructures that ensured the delivery of water from the Zāyandihruūd River. Indeed, beyond their examination as

\textsuperscript{88} See Chapter 1, footnote 59
\textsuperscript{89} See chapter 2, pp 85-88.
individual design objects, these gardens, streams, and pools should be considered as part of the larger system of natural and man-made landscapes of the city.

To this end (and as detailed in Chapter 2), the pre-17th century water infrastructures, which circulated throughout the agricultural states and gardens south of the old city, were major drivers for the southward expansion of the city. It was by relying on these pre-existing water canals that the new neighborhoods could sustain large gardens and green courtyards. Indeed, the two major new neighborhoods that Abbās I populated with Muslim and Christian communities brought in from northwestern territories were both established on lands previously cultivated by water canals, which qualified them as excellent spots for establishing new colonies. In the process of converting agricultural states and gardens to residential neighborhoods, these pre-existing canals were implemented in the arrangement of houses, gardens, new public establishments, and fed a verdant landscape that was adorned with flows of charming streams and a dance of delightful fountains.

Whereas the Abbās Abād and Julfa neighborhoods were supported by the age-old irrigation canals, cultivation of new lands required the establishment of additional infrastructures. In fact, to realize his new suburban garden of Hezār Jarīb and a line of gardens established by his military and bureaucratic elites, Shāh Abbās I had to construct a new canal that brought water from about 15 miles upriver. Branching from the river at a higher elevation, the new Shāhi Canal facilitated the cultivation of a large portion of land south of the river, which was located on higher plain. The new canal not only was the main carrier of water for the Hezār Jarīb Garden, but after circulating throughout the garden it joined other streams. Together they created a rivulet that flowed along the middle of South Chāhārbāgh Street and distributed water to the gardens that lined either side of the street.
Even though Shāh Abbās I’s scheme for his Hezār Jarīb Royal Complex was fundamentally dependent on the Zāyandihrūd River, the complex was developed more than a mile away from the river. In contrast, in establishing his new royal suburban complex of Sa’ādatābad (Hizar Jarib-i Naw), Shāh Abbās II directly engaged with the river. Indeed, as detailed in Chapter 4, in transforming Safī II’s Sa’ādat Garden into a full-fledged daulatkhānih (an elaborate administrative-residential compound), Shāh Abbās II incorporated the river as an integral element of the complex, central to its spatial arrangement and court decorum.

A crucial element of the complex’s engagement with the Zāyandihrūd involved transforming a portion of the river into a lake, which then provided the spatial and functional core of the complex. To this end, the construction of Khājū Bridge represented far more than a utilitarian component of the burgeoning public infrastructure; rather, it was part of the broader vision for the expansion of Sa’ādat Garden into a full-fledged royal complex. Functioning as a dam, the Khājū facilitated the creation of a lake in front of the royal Āynih Khānih pavilion, while also accommodating other public and royal practices.

On the other end of the lake, a pedestrian bridge closed off the Sa’ādatābad Royal Complex in the west. Linking the new Haft-Dast residential-service quarters south of the river to the gardens in the north, the bridge provided a safe passage for the royal family, and especially for the female members of the court, as they moved between their private quarters and royal gardens on the other side of the river. The small rivulet that streamed along the middle of the bridge added to its charm and comfort, and its wooden parapets provided a protective screen. One can picture the ladies, now protected from the gaze of any uninvited outsiders, as they strolled over the pedestrian bridge while enjoying visual access to the lake.
Whereas the private section of the complex – including the Haft-Dast palace, the pedestrian bridge, and the gardens on the other side of the river – were spatially and visually blocked from the river, the Āynih Khānih Pavilion and the Saʿādatābad Garden, which were reserved for public audiences and royal feasts, were intentionally coupled with the lake. In fact, the spatial configuration of the palace, its longitudinal stretch towards the river, its mirrored decorations that reflected and refracted light, and the stream and pool in front of it all were arranged to draw the lake into the royal complex.

While Abbās II’s Saʿādatābad Complex may have been the largest and most elegant, it was certainly not the only development on the banks of the river. Since the early decades of the 17th century the elite and wealthy residents of Isfahān had realized the enormous potential that the Zāyandīhrūd’s vistas and cooling breezes had to offer. Near the Allāhverdīkhān Bridge, the north shore of the river was bordered with mansions and gardens of the Safavid elites, and on the south, the largest and most beautiful Julfa residences overlooked the river. By the mid-17th century, Shāh Abbās II had not only expanded Shāh Safī’s Saʿādat Garden on the shore of the Zāyandīhrūd River, but he had also commissioned other projects such as Tāwūs Khānih and Takiyeh Feyze along the river. In particular, for Takiyeh Feyz the king had demanded a building designed with doors and grand Iwāns overlooking the river. In the late 17th century when the English gentleman Fryer was visiting Isfahan, the gardens along the river extended all the way to the Farah Ābād Garden.

Even though through the water canals, pools, and fountains that were fed by the river, Zayandherūd had an invisible presence in the city, throughout the 17th century, the surface and banks of the river also grown into active sites of socialization, religious and secular practices, and

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90 For more detail see chapter 3, pp 115-120.
cross-cultural interactions. The available scholarship on 17th-century Isfahān has detailed the importance of Miydān-i Naghsh-i Jahan, coffeeshops, Chāhārbāgh Street, carvanserais, and the bazaar as spaces for interaction among the cosmopolitan public of the city. However, this focus on architecturally defined spaces has to a significant degree overlooked the opportunities that emerged on/around the river. Rituals and performances such as the Christian calendar’s Epiphany, Āb-Pāshān, and other royal ceremonies on the new bridges blended the river into the ceremonial calendar of the city, and brought the public to the shores of the Zāyandihṛūd River.\footnote{For detail exploration see chapter 3, pp 120-134.}

In particular, as demonstrated in chapter 3, on the day of the Epiphany, the dynamic nature of the ritual – coupled with the local Armenians’ collective memory of Jordan River – intersected with the material embodiment of the river. While the ceremony bridged between fictive and real time, the prayers of the Armenian priest and the oil that he poured into the water transformed the river into the (imaginary) sacred and purifying water of Jordan river. Furthermore, these religious events and practices created a spectacle that also brought non-Armenian Christians and Muslims to the shores of the river. While the river had heretofore been a physical barrier that separated Christians and Muslim neighborhoods, it now became the shared subject of attention. Blended with the cosmic calendar of the city, these rituals created a temporal geography for the city of Isfahān that turned the river into a shared site of meeting, exposure, and interaction between Christians and Muslims, royal and commoners, foreigners and locals.

In addition to these special occasions, the ongoing construction and new infrastructures along and over the river also created alternative sites of respite and social interaction on the fringes of the city. Indeed, while the Miydān-i Naghsh-i Jahān and the bazaar continued to function as the
major centers of Isfahan’s commerce and public life, new facilities that emerged near the river offered distinct opportunities for leisure and royal display.

Central to this new landscape were the two bridges constructed over the Zāyandihūd River. With their upper-level galleries, lower-level rooms, cascades, and other provisions designed to promote one’s multi-sensory contact with the water, these bridges created novel sites for recreation and sociability. In the context of 17th-century Isfahān and the broader early-modern world, such multi-sensory engagement with water, and particularly the panoramic visual access that the Khājū and Allāhverdikhān bridges offered, represented unique experiences rarely available to the public. The structural experiential features of the bridges were soon augmented by a range of other amenities (most notably those that offered coffee) further attracted people to the shores of the river. It must be noted, however, that while no physical gates or social regulations limited access to these new urban amenities, it did not mean that these spaces were frequented by all social classes. Most of the new neighborhoods, such as Julfa, Khājū, and Abbās Abād, were populated by well-to-do residents, many of which were associated with the court. Thus, given the proximity of these neighborhoods to the bridges, it is no surprise that these new spaces would have been frequented mostly by the upper strata of society.

Moreover, the spatial arrangement of these bridges, which consisted of a central passage and side alcoves, created a link between the contained interior space of the bridge and the external natural landscape of the river. While both bridges featured innovative arrangements in their plan,

92 See Chapter 5, 217-225
93 Haneda noted that the new city was occupied by Isfahani elites associated with the court. Therefore, the collapse of the Safavids led to the depopulation of this section of the city and its eventual decline; in contrast, the old city did not suffer any similar measures of decline. See Masashi Haneda. "The Character of the Urbanization of Isfahān in the Later Safavid Period." In Safavid Persia: The History and Politics of an Islamic Society, edited by Charles Melville, 368-87. London, 1996.
it is in the sectional profile of the bridges that we can really appreciate their novel design. Although functioning as utilitarian passage from one side of the river to the other, the elevated galleries of these bridges offered a commanding view of the river and its banks. With their perforated elevation these galleries also allowed certain level of visual access to the outside viewers. Indeed, the transparent interface of these bridges with the outside, coupled with their location at the intersection of the river and major streets such as Chāhārbāgh and Chāhārbāgh-i Khājū, further accentuated their novel urban configuration and turned them into excellent public stages for royal display.

It was a customary practice for the Safavid monarchs – notably Abbās I, Safī I, and Abbās II – to set up festivities on these bridges and transform them into an extension of their royal domain.\(^\text{94}\) Thorough careful employment of technologies and deliberate visual and material interventions they transformed the bridges into a different institution. Decorating galleries with textiles, mirrors, and paintings; setting up tents and awnings; pumping up water and creating pools and fountains on the upper levels of the bridge; and utilizing fireworks at night to embellish the already spectacular spectacle, they transformed a familiar infrastructural institution into a novel space for royal banquets. With the growing emphasis of the Safavid regime on public display and rituals to control hearts and minds, the bridges joined the miydāns, streets, and coffeehouses as sites of spectacle. While public center of the new city Miydān-i Naghsh-i Jahān and Ali Qapu Palace accommodated an array of royal theaters, the new bridges provided the Safavid king and elites with alternative spaces for royal feasts beyond the confines of their gardens, and in so doing carved out new royal spaces within the public.\(^\text{95}\)

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\(^{94}\) See chapter 5, pp 204-214.

\(^{95}\) See Babak Rahimi, *Theater State and the Formation of Early Modern Public Sphere in Iran: Studies on Safavid Muharram Rituals, 1590-1641 CE*. Leiden; Boston: Brill, 2012, chapter 5 and 7; Susan Babaie. *Isfahān and its*
The similarity between these Isfahani bridges and Renaissance Italian bridges such as the Rialto Bridge in Venice and the Ponte Vecchio in Florence, in terms of their function as an urban public stage, begs further study to explore possible design influences between Europe and Persia.96 The constant movement of people between Iran and Europe is well documented in a diverse array of materials – from letters sent by travelers, the goods they brought with them, and the impact that European masters and objects had on the art and crafts of 17th-century Isfahan. Not only the Safavid objects that found their way to Europe, but also drawings produced by Isfahani artists and murals that adorned the public and private spaces of the city are testimonies to this intercultural exchange.

Those traveling between the empires not only carried goods, but also transported a trunkful of thoughts, observations, and experiences. Their written accounts routinely communicated what they saw and experienced throughout their journeys in Persia (and other new lands), which they then conveyed back to Europe. Less is known about what they might have introduced to their host communities, whether describing it for the Shāh, his courtiers, and other elites with whom they interacted. Some of these Europeans even found themselves in the service of the Safavid court, which would have made their personal knowledge of other cultural traditions and artifacts all the more valuable and accessible.97

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97 For example, the English soldier Anthony Shirly, who later represented the Safavid Shāh in negotiations with European courts regarding an alliance against the Ottomans, is known to have been in northern Italy, as well as likely acquired several Florentine objects as gifts for the Shāh Abbās I. For the discussion on exchange of gifts between the Safavid and Europeans See Simpson, Mariana. "Safavid Arts and Diplomacy in the Age of the Renaissance and Reformation." In A Companion to Islamic Art and Architecture, edited by Finbarr Barry Flood and Gülru Necipoğlu, 951-971. (Hoboken, N.J.: Wiley Blackwell, 2017).
Additionally, while the traffic moved principally from West to East – with Europeans heading to Ottoman, Persian, and Mughal lands – by the turn of the 16th century, Safavid delegates had already arrived in Europe. Shāh Abbās I’s first such embassy under the joint leadership of Huseyn Ali Beg and Anthony Shirly not only spent several years visiting various European capitals, but is specifically known to have been welcomed by the Medicis and stayed in Florence. In such a context, it is not difficult to imagine oral accounts of these Italian bridges reaching Isfahān and inspiring designers and patrons.

While considering individual urban settings within the broader context of global interconnection is crucial and informative, paying close attention to local cultures and settings remains equally relevant and critical. On the one hand, the temporary decorations employed to transform these Safavid bridges into splendid imperial pavilions recall Turco-Persian tradition of soft architecture, which was an essential component of Safavid identity. However, the setting was supplemented with elements that challenge our perception of Safavids’ fixation on the past and testify to an ongoing attempt for innovation and novelty. In particular, we hear about the monarch’s emphasis on novel settings and see deliberate efforts to display a technical capacity for pumping water and designing water-integrated architectural elements, which were masterfully manifested in the pool created on the upper level of the bridge (as well as Ali Qapu’s tallar), high-reaching fountains and water jets, and pavilions with waterfalls.

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99 However, while I intend to acknowledge the interconnectivity of early modern world, as well as the necessity of seeing the empires of this periods as interconnected entities, given the absence of any concrete evidence I am hesitant to draw any direct connection between the Italian and Safavid bridges.
Unfortunately, the under-developed state of our knowledge about hydrology in Muslim lands and its historiography in Persia does not allow us to evaluate the new hydraulic features we see in Isfahān within its broader temporal and geographical contexts. Nonetheless, even if the required technical knowledge was not a new development at the time, its integration within the design of royal complexes, pavilions, and urban infrastructures deserves further attention. For example, techniques for constructing dams had been known since ancient times. In particular, the Timruids constructed dams in Khurasan that were essential to the agricultural flourishing of the region during the late-14th and early-15th centuries. However, when examined side-by-side with Timurid dams such as the Golestan Dam, Friman Dam, and Baisonghor Dam, which were basically compact solid structures, designers of the Khājū Bridge employed techniques that enabled them to construct a much lighter structure. Indeed, the role of the bridge as a dam represented only a seasonal function, which was facilitated with wooden dykes that would be installed in the lower level arcades of the bridge. Imagining that mere wooden boards could be sufficiently strong to block the flow of the Zāyandīhrūd seems impossible until we consider the underground canals that were implemented to balance the water pressure on two sides of the bridge, thereby facilitating the use of wooden dykes to control the river. The ability to conceptualize and then calculate these engineering provisions not only suggests an advanced knowledge of hydraulics, but also demonstrates the ability and desire to integrate this knowledge within the realm of inspired design.

100 Evidence taking us to the Achaemenid and Sassanid projects such as hydraulic system in Shushtar, contemporary Khuzestan-Iran.
In addition to the presence of the Zāyandihrūd, Isfahan’s larger natural ecology played a prominent role in the water culture that marked the landscape of the city throughout the 17th century. The dry and arid landscape of the Persian Plateau had always forced its population to explore and invent methods and tools to harness the limited water resources available in nature. This scarcity also endowed the element of water with a charm and desirability that was motivated both by its life-giving capacity, as well as its experiential properties. After all, this was a culture that had already made significant investments in the water architecture that adorned the private royal and elite gardens and pavilions. While pools and streams represent simple vehicles for collecting and transporting water (which is, at best, a reductive attribution), fountains, water towers, cascades, and innovative techniques for pumping water and choreographing its theatrical display are all testament to the esteemed place of water in both the public and private recreational landscape of this culture.

Therefore, while the Zāyandihrūd River and its associated hydraulic infrastructures were instrumental in supporting and guiding the direction of urban development in Isfahan, I argue that the significance of the river far surpassed its importance as a source of life-giving water. In effect, the natural environment was an affective domain of materials and events that influenced the ways in which the people of Isfahan imagined, managed, and framed the river through their construction activities. In this sense, construction of these bridges and the entire riverine landscape of 17th-century Isfahan should be considered so much more than a response to the environmental challenges that constrained the city. Rather, the bridges, canals, royal pavilions and other physical and social institutions that functioned in tandem with the river represent a deeply significant product of the ongoing physical and cultural dialogue between nature and the population of Isfahan— who tamed, framed, and interacted with the river across a range of scales. Finally,
throughout this pivotal era the Zāyandihūd River was much more than a line, a border to traverse or a barrier to cross. Rather, river was a living, vital space that inspired people to pause, to linger, to occupy, to look, and to socialize.
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Appendix

(A copy of the Tūmār Shiykh Bahāyī in (in Syāqī inscript)

from Hasan Husayni Abarī, Zayandeh Rūd Az Sarchashmah Ta Murdab. Iṣfahān: Gulhā, 2000)
بیوهای گروهی که در حوزه‌ی برخی از محلات شهر تهران و دیگر شهرهای کشور و خارج از کشور برای عضویت در این سازمان مشخص شده‌اند، به طور مداوم مطالعه می‌کنند و اقداماتی را برای افزایش کیفیت زندگی و بهبود حالت جامعه انجام می‌دهند.

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...
متن نویس 737

بجز آنها در اینجا می‌توانید با مراکزی که در کتاب آموزش زبان فارسی در آشنا باشید، شرکت کنید.

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PUBLICATIONS

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2016
“Madi and Qanat: Reclaiming the Vernacular Hydro-Infrastructure of the Persian Plateau”
in My Livable City: The Art and Science of It, (Oct-Dec 2016), p 92-98. (Co-authored with Vinayak Bharneh)

2015
Re-examining Persian Civitas: Networked Urbanities and Suburban Hinterlands in Erich Schmidt’s Flights,

2010

BOOK REVIEW

2016

FORTHCOMING

2018(expected)
Building Isfahan for Tomorrow: The United States’ Point Four Program and Discourse on Urban Planning in Iran in “Contemporary Architecture in Pre-Revolutionary Iran: The Dialogue Between Tradition and Modernity”, ed. Mohammad Gharipour. (Intellect Ltd)
HONORS, AWARDS, AND GRANTS

2017  SAH GRADUATE STUDENT ANNUAL INTERNATIONAL CONFERENCE FELLOWSHIP
      Society of Architectural Historians, ($1000)

2017  DUMBARTON OAKS MELLON TRAVEL AWARD,
      To attend the “Landscape of Preindustrial Cities” Symposium at Dumbarton Oaks, May 2017 ($500)

2016-17  ANDREW MELLON FELLOWSHIP IN ARCHITECTURE, URBANISM, AND THE HUMANITIES
         Humanities Institute, New York Botanical Garden ($43000)

2015-16  MIT-MELLON FOUNDATION GLOBAL ARCHITECTURAL HISTORY TEACHING COLLABORATIVE GRANT (GAHTC)
         For the project entitled “Peripheries of Contact - Beyond Geographies and Historical Flatland”, Commissioned grant to prepare 10 lecture modules towards Global Architectural History Course, In collaboration with Manu P. Sobti and Kate Malaia ($20,000)
         http://gahtc.org/modules/

2015  SCOTT OPLER GRADUATE STUDENT FELLOWSHIP
       Society of Architectural Historians ($1000)

2014  THE CHANCELLOR’S GOLDA MEIR LIBRARY SCHOLAR AWARD
       University of Wisconsin- Milwaukee ($5000)

2014  GRADUATE SCHOOL RESEARCH TRAVEL AWARD
       University of Wisconsin-Milwaukee, ($700)

2013  SAHARA FELLOWSHIP
       Society of Architectural Historians ($1500)

2012  THE BOB GREENSTREET HONORARY SCHOLARSHIP

2011.12  ARCC KING RESEARCH AWARD
          Architectural Research Centers Consortium

2012  GRADUATE SCHOOL TRAVEL AWARD
       University of Wisconsin-Milwaukee ($900)

INVITED LECTURES & PEER_REVIEWED CONFERENCE PRESENTIONS

JUNE 2017  Turning Vernacular into Imperial: Talar-Fronted Palaces of Seventeenth-Century Isfahan
           Paper Presentation @
           SOCIETY OF ARCHITECTURAL HISTORIANS (SAH) ANNUAL INTERNATIONAL CONFERENCE,
           GLASGOW, SCOTLAND
DEC. 2016 Manipulating Nature: Zayandehrud River as a Site of Royal Leisure and Recreation
Lecture @ SCIENCE, CONSERVATION & HUMANITIES SEMINAR, NEW YORK BOTANICAL GARDEN

OCT.2016 The Intertwined Life of the City and its River: Reading the Hydraulic Landscapes of Isfahan,
Panelist @ MELLON FORUM FOR RESEARCH ON THE URBAN ENVIRONMENT, PRINCETON UNIVERSITY

MAY 2016 Riverine Landscape of Isfahan: River as a Site of Leisure and Recreation
Invited Presentation @ SPACES AND PLACES OF LEISURE, RECREATION, AND SOCIABILITY IN EARLY MODERNITY (C. 1500-1800) GERMAN HISTORICAL INSTITUTE, LONDON

MAY 2016 Riverine Water Management and Urban Development in Isfahan: Making the Capital
Paper Presentation @ EMPIRES OF WATER: WATER MANAGEMENT AND POLITICS IN THE ARID REGIONS OF CHINA, CENTRAL EURASIA AND THE MIDDLE EAST (16th-20th Centuries) HONG KONG, UNIVERSITY OF HONG KONG AND LINGNAN UNIVERSITY

MAR.2015 Maidan in Cities of the Middle East: From Playground to Plaza
Invited lecture @ THE SCHOLAR AND THE LIBRARY LECTURE SERIES, GOLDA MEIR LIBRARY, UNIVERSITY OF WISCONSIN-MILWAUKEE

APR.2015 Safavid and Mughal Urban Bridges: Persianate Garden Traditions in the Public
Paper presentation @ 68TH SOCIETY OF ARCHITECTURAL HISTORIANS (SAH) ANNUAL CONFERENCE, CHICAGO

NOV.2014 Sculpting a Modern-Persian Identity in the City: Memorializing Ferdowsi in a Public Square of Tehran
paper presentation @ 48TH MIDDLE EASTERN STUDIES ASSOCIATION (MESA) ANNUAL CONFERENCE, WASHINGTON, DC.

APR.2013 Performative Architecture: A Theoretical Shift in Examination of Neighborhood Takiyehs in Persian Cities
paper presentation@ SYMPOSIA IRANICA, UNIVERSITY OF ST ANDREWS, UK.

NOV.2012 Mapping Cultural Landscape: A Step towards a Socially Responsive Design”
Paper presentation @ URBAN CHANGE IN IRAN, CONFERENCE AT THE UNIVERSITY COLLEGE OF LONDON, UK.

MAY 2011 Muharram Procession and Production of Space
Paper presentation @ 26TH ANNUAL MIDDLE EAST HISTORY AND THEORY CONFERENCE AT CHICAGO, UNIVERSITY OF CHICAGO.
ACADEMIC ACTIVITIES AND SERVICES

RESEARCH:

Fall 2017  RESEARCH PROJECT MANAGER
Design, direct, and coordinates research on the urban landscape of Newark, to excavate stories embedded in the built environment; and work closely with the media production team to integrate project research into curricular materials, exhibition, and multi-media story-telling projects.
Center for Migration and the Global City, University of Rutgers-Newark

Spring 2014  GRADUATE RESEARCH ASSISTANT
Research Project: *Entrapping Ephemeral Magic: Sensation and Reward in the Persianate Garden* (with Dr. Manu Sobti & Dr. Mohammad Gharipour)
School of Architecture and Urban Planning, University of Wisconsin-Milwaukee

Fall 2013  GRADUATE PROJECT ASSISTANT
with Professor James Wesley
School of Architecture and Urban Planning, University of Wisconsin-Milwaukee

Spring 2012- Spring 2013  GRADUATE RESEARCH ASSISTANT
Transdisciplinary Challenge Grant (with Dr. Manu P. Sobti)
Center for 21 Century Studies, University of Wisconsin-Milwaukee

TEACHING

Fall 2017  NEWEST AMERICANS: STORIES OF GLOBAL CITY
Honors College, Rutgers University-Newark (with Dr. Tim Raphael)
In extension of my role as research project manager for the Newest Americans I worked closely with students to carry out their research and devise innovative narratives for their stories.

Fall 2014  ARTH110- UNDERSTANDING ART
Adjunct Assistant Professor, School of Art, William Paterson University

Fall 2013  ARCH 310: FUNDAMENTALS OF ARCHITECTURAL DESIGN I
Instructor, School of Architecture and Urban Planning, University of Wisconsin-Milwaukee

Fall 2012  ARCH 310: FUNDAMENTALS OF ARCHITECTURAL DESIGN I
Teaching Assistant (Volunteer), School of Architecture and Urban Planning, University of Wisconsin-Milwaukee (with Dr. Manu P. Sobti)

Spring 2010- Fall 2011  ARCH 302, ARCHITECTURE AND HUMAN BEHAVIOR
Teaching Assistant, School of Architecture and Urban Planning, University of Wisconsin-Milwaukee, (with Dr. Gerald Weisman)
GUEST LECTURER AND STUDIO CRITIC:

GUEST LECTURER:

Fall 2015  Arch 300: Histories and Theories of Architecture (Dr. Manu Sobti)

Fall 2011, 2012 & 2013  ARCH 533: Signature Buildings in Geo-Political Context (Dr. Manu Sobti)

Fall 2010  ARCH 302, Architecture and Human Behavior (Dr. Gerald Weisman)

STUDIO CRITIC

Fall 2017  PGUD5110: Urban Colloquium 1: WORKSHOP (Instructor: Brian Mc Grath)

Spring 2015  Arch 815: Urban Edge Studio (Instructor: Dr. Manu Sobti)

Spring 2013  ARCH 420: Architecture Design I (instructor: Kate Malaia)

Fall 2012  ARCH 310: Fundamentals of Architectural Design I (instructor: Dr. Manu Sobti)

Spring 2012  ARCH 654: Learning from New Orleans (Instructor: Dr. Manu Sobti)

EXHIBITIONS AND SYMPOSIA:

Fall 2015  Assistant Organizer, Discussant, and Moderator, URBAN EDGE SYMPOSIUM, (organized by Manu P. Sobti)
School of Architecture and Urban Planning, University of Wisconsin-Milwaukee

Fall 2013  Assistant Organizer, ABOUT FACE - BUILDING ENCLOSURE SYMPOSIUM & EXHIBITION, (organized by Kyle Reynolds)
School of Architecture and Urban Planning, University of Wisconsin-Milwaukee