Architecture and Identity: The Occupation, Use, and Reuse of Mughal Caravanserais

by

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A thesis submitted in conformity with the requirements for the degree of Doctor of Philosophy
Department of Anthropology
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Abstract

Life, individual and collective, exists in reference to what came before; my research into the life histories of places explores the cultural threads which tie us to places and which allow us to make personal and collective connections between the past and the present. Understanding these life histories helps us understand the value and power historic places have in the world today. This thesis focuses on Mughal caravanserais from northwestern Pakistan, examining how they were initially intended to be used during the Mughal rule of South Asia and how they were reused in the periods that followed (Sikh, Afghani, British, and Pakistani). Caravanserais are walled arcaded buildings where travelers could stop briefly. After the Mughal Empire declined, caravanserais were reused by local people and/or taken over by subsequent governing bodies. Surviving structures are still used today, although their original appearance and functions have been altered to serve new purposes. My research is part of the Caravanserai Networks Project, directed by Dr. Heather Miller, University of Toronto.

I develop my survey method through comparative study of two caravanserais, Gor Khuttree and Pakka Khanpur. Using information from architectural survey, historic documents, and photographs, I create three-dimensional architectural models of Gor Khuttree’s occupations. I use access and planning analysis to characterize the use and alteration of the sites’ architecture. Conceptually, I develop a tripartite formation of place: formed, in practice, and in memory. As a multifaceted place, I consider Gor Khuttree’s life history; the occupations, identities, and memories associated with the site through time.
The City of Peshawar, central to this research, was at the time of writing in Pakistan’s North West Frontier Province. This province was renamed Khyber Pakhtunkhwa on April 15th, 2010. This research continues to refer to the province by its former name. This ensures continuity with published documents and the organizational names used by colleagues in Pakistan at the time of research.
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<td>Introduced in Mughal architecture by Shah Jahan, columns are usually rounded or vase shaped.</td>
</tr>
<tr>
<td><strong>Bangala</strong></td>
<td>The Mughal term for a roof with curved eaves and looking similar to a traditional Bengali hut.</td>
</tr>
<tr>
<td><strong>Baoli</strong></td>
<td>Underground step well, most common in western South Asia.</td>
</tr>
<tr>
<td><strong>Bulghar Khanas</strong></td>
<td>Kitchens for the needy, soup kitchens.</td>
</tr>
<tr>
<td><strong>Coved Ceiling</strong></td>
<td>Ceiling joined to the wall by a concave molding or zone of transition.</td>
</tr>
<tr>
<td><strong>Dado Line</strong></td>
<td>The horizontal line, usually about 1m above the ground, below which there is no architectural elaboration or decoration.</td>
</tr>
<tr>
<td><strong>False Gate</strong></td>
<td>An expanded cell system made to resemble an entrance gate in Mughal Architecture, implemented to maintain symmetry.</td>
</tr>
<tr>
<td><strong>Farman</strong></td>
<td>A royal mandate, proclamation, or decree.</td>
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<tr>
<td><strong>Feringhi</strong></td>
<td>Most often used in reference to foreigners, in Hindu, Urdu and Persian.</td>
</tr>
<tr>
<td><strong>Four-iwan Plan</strong></td>
<td>Four-iwans arranged axially around a central courtyard, strongly associated with Islamic religious structures.</td>
</tr>
<tr>
<td><strong>Go-down</strong></td>
<td>A storehouse.</td>
</tr>
<tr>
<td><strong>Hammam</strong></td>
<td>Bath, bath-house usually containing a number of rooms for each of the stages of bathing. Usually with three units, the first the dressing room, the second the cold room, and the third the hot room.</td>
</tr>
<tr>
<td><strong>Iwan</strong></td>
<td>A vaulted entrance or hall, often in use in Mughal architecture to refer to a pillared gallery.</td>
</tr>
<tr>
<td><strong>Jami Masjid</strong></td>
<td>Congregational or Friday mosque.</td>
</tr>
<tr>
<td><strong>Jharoka</strong></td>
<td>An architectural frame often used for official appearances of dignitaries, usually in the form of an overhanging oriel window supported by brackets.</td>
</tr>
<tr>
<td><strong>Kos</strong></td>
<td>Measure of length equal to approximately two English miles.</td>
</tr>
<tr>
<td><strong>Kos Minar</strong></td>
<td>Towers that mark distances.</td>
</tr>
<tr>
<td><strong>Lakhauri Brick</strong></td>
<td>Mughal bricks from the region of Lahore, characteristically small and used in the medieval period</td>
</tr>
<tr>
<td><strong>Marqarnas</strong></td>
<td>Concave elements in vaulted ceilings, usually arched.</td>
</tr>
<tr>
<td><strong>Masjid</strong></td>
<td>Mosque.</td>
</tr>
<tr>
<td><strong>Mihrab</strong></td>
<td>Arched niche in qibla wall of a mosque, faces Mecca.</td>
</tr>
<tr>
<td><strong>Minar</strong></td>
<td>A free standing tower.</td>
</tr>
<tr>
<td><strong>Nama</strong></td>
<td>An officially commissioned history; often refers to those of the Mughal emperors</td>
</tr>
</tbody>
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and their immediate entourage.

<table>
<thead>
<tr>
<th>Term</th>
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<td>Nautch</td>
<td>A style of dance in Northern India, also used to refer to the girls dancing in this style.</td>
</tr>
<tr>
<td>Pendentive</td>
<td>A concave triangular surface that allows a square structure to support a dome.</td>
</tr>
<tr>
<td>Pishtaq Panels</td>
<td>High portal facade often of gateways, usually found in association with an iwan. The Mughal form consists of a monumental arched niche usually covered by a half-dome enclosed by a rectangular frame around the shape of an inverted U.</td>
</tr>
<tr>
<td>Purdah</td>
<td>The practice of preventing women from being seen by men; can also involve the physical separation of the sexes.</td>
</tr>
<tr>
<td>Qibla</td>
<td>Direction of Mecca</td>
</tr>
<tr>
<td>Raj</td>
<td>Literally meaning reign, but here referring to a series of governors and princely states within the sub-continent that were controlled by the East India Company and then the British Empire.</td>
</tr>
<tr>
<td>Sanad</td>
<td>An imperial order.</td>
</tr>
<tr>
<td>Serai</td>
<td>An inn, caravanserai (Persian).</td>
</tr>
<tr>
<td>Squinch</td>
<td>An arch or system of gradually projecting and widening arches placed diagonally at the internal angle of a square structure thus allowing it to be surmounted by a dome.</td>
</tr>
<tr>
<td>Tehsil</td>
<td>An administrative division, similar to neighborhood.</td>
</tr>
<tr>
<td>Waqf</td>
<td>An inalienable religious endowment in Islamic law, typically denoting a building or plot of land the income from which is used for Muslim religious or charitable purposes.</td>
</tr>
<tr>
<td>Waziri Brick</td>
<td>Mughal brick often used throughout the northern subcontinent, 5-6 inches in length and 1 inch thick, and made of baked clay.</td>
</tr>
<tr>
<td>Zenana</td>
<td>Female quarters of a dwelling or a palace.</td>
</tr>
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Chapter 1 Introduction

My doctoral research focuses an archaeological eye on Mughal period caravanserai structures (16th – 18th centuries AD). These are locations of economic control and cultural display; transformative spaces for both the people who built them and those who occupied and reoccupied them through the Mughal period and into the periods that followed.

Caravanserais served as locations along highways where merchants, pilgrims, scholars, and government employees could stop for brief periods of time. Caravanserais provided protection from robbers, protection from inclement weather, an assured source of water for drinking, bathing, and ritual ablution, a place to perform daily prayers, a market place, and, in some instances, a manufacturing center (Sims 1978:97). They served as road markers for people traveling great distances; roughly equidistant on the landscape, the caravanserais could be relied upon to mark and segment a tiresome journey (Dar 1994:30). The medieval caravanserais discussed in this research can be found in both urban and rural settings. The caravanserais in each of these settings served different purposes and were constrained by different structural variables (Hillenbrand 1994:336).

1.1 Approaches

In this dissertation I identify and respond to two central research questions, one methodological and one social. The first question is methodologically focused. It considers how we can survey architectural spaces, specifically South Asian caravanserais from the 16th through 18th centuries AD, such that the structural information gathered facilitates in-depth spatial analyses. This central question includes several smaller components. What is the best approach for rapidly recording architectural features, especially in areas where survey team safety is a concern and where sites face imminent destruction? How do these recording strategies contribute to the development of architectural typologies? How can two-dimensional and three-dimensional models inform our spatial analysis of structures in the past? Finally, how can we combine functional spatial information with analytic space-syntax principles (access analysis) to create a more complete picture of changing spatial use and arrangement through time?

These component questions are addressed throughout this dissertation. In generating an approach to architectural survey that allows multiple lines of analysis, I have been guided by
theoretical considerations of how architecture is a product of, as well as a means of producing, cultural meaning and interpretation. Finding guidance in theories rooted in structuralism and practice theory, I have developed a system of architectural analysis that combines the survey and recording of the constructed form with functional interpretations about how structures were used in the past. I developed my approach to the rapid recording of standing architecture during my intensive survey of the Mughal Caravanserai, Gor Khuttree (Figure 1.1). My method for rapid but thorough architectural survey was also applied, as a test case, to an additional survey site, Pakka Khanpur Serai. The resultant survey method is expedient and low in cost, and constitutes both a useful first step to more intensive studies and a means of acquiring meaningful comparable datasets from multiple structures. It allows complex architectural information to be collected quickly and then expanded and interpreted post-collection. The resultant architectural data is then used to address complex anthropological questions about architectural spaces.

![Figure 1.1 Gor Khuttree Serai. East Gate interior facing east, 2007.](image)

The gathering of standardized survey data allows creation of architectural typologies capable of considering regional and temporal influences on both architectural form and associated spatial functions. Although sufficient data was not gathered during my PhD research to form new typologies, my survey methodology is designed specifically to encourage the
production of typologies in the future by creating a standardized yet flexible recording system. Using the survey data gathered from Gor Khuttree and Pakka Khanpur Serai, both two- and three-dimensional analyses are presented. The two-dimensional consideration of Pakka Khanpur Serai demonstrates the relatively detailed analysis possible using expediently collected survey data. When a survey is completed, even more detailed models can be produced, as demonstrated for the various phases of occupation for Gor Khuttree Serai. These phased models provide an opportunity to "experience" alterations to spatial arrangements. They represent the separation of intermixed architectural information into discrete phases of site use. The creation and analysis of the three-dimensional models of Gor Khuttree Serai were informed by functional information from previous archaeological reports and historical information, including primary documents by visitors to and users of the site since its construction. These sources include commissioned histories, journals, memoirs, military reports, drawings, administrative documents, and photographs.

The phased models produced for the gate systems of Gor Khuttree Serai were analyzed using access analysis. By assigning functions to the rooms within these gate systems, I combine the study of physical spatial arrangements with consideration of the functional uses of spaces. This develops a more nuanced picture of architectural change and reuse than functional or access analysis alone. I evaluate and compare the paths of access within the Gor Khuttree gate system for each phase of occupation, showing that alterations to access paths correspond with historically documented changes in the function of specific spaces, as described below. These changes highlight how spatial arrangements reflect the underlying cultural systems habituated through spatial use.

Tied to my first methodological question is my second, social, research question. This second question considers what the production of memory and identity have to do with the reuse and reoccupation of places through time. This question is again comprised of a number of smaller components that are specific to the site central to this research, Gor Khuttree Serai. How specifically was the Mughal Caravanserai at Gor Khuttree used in the periods since its creation? Can we interpret the site’s life history? Can we identify changes in identity and evoked memory associated with a place by looking at the use and arrangement of architectural space over time? Finally, can architecture be used as a proxy for ruling systems of power, control, and economy?
My interpretations and responses to these questions are drawn from holistic theoretical approaches to landscapes and the places that populate them. I consider the formation of memory and identity through places, and at a number of levels of ‘knowing’ a specific place. I define the concepts of place as formed, place in practice, and place in memory, as they contribute to an understanding of the life history of a given locale. We are moving, in the archaeological study of the reuse and reinterpretation of structures through time, toward the life history of a given site.

Life histories of artifacts consider the production, distribution, consumption, reuse, and discard of objects (see Schiffer 1976, 1975). The life history of a structure will similarly involve study of a structure’s conception, construction, occupation, reoccupation, abandonment, and ruin (Ashmore 2002:1178), concepts that all involve some formation of associated memories and acts of both remembering and forgetting. Ashmore (2002) establishes life history as a term for describing the study of places through time and within the practice of socialized spatial archaeology. Ashmore’s (2002) approach to places, and especially the built environment, informs my approach to the life history of the place Gor Khuttree. The life history of a given place considers the “evidence for human recognition, use and modification of a particular position, locality, or area over the full time span of its existence” (Ashmore 2002:1178). Life history is the common thread in this research, allowing and drawing together the vast array of theoretical and methodological considerations used in my examination of caravanserai use, reuse, and reinterpretation in Northwest Pakistan.

I also continue to find guidance in structuralism and practice theory as applied to the role of architecture in the production, reproduction, and alteration of overarching cultural systems (Bourdieu 1977; Foucault 1977; Giddens 1984; Lefebvre 1991). Agents are capable of effecting change on the system, and the products of culture, by necessity, reinforce and recreate certain structured principles, memories, and identities. In chapter two, I examine the structural principles that underlie spatial arrangement and use, in order to explore the ways that people can ascribe meanings to spaces. People use structures to encapsulate and tangibly anchor collective identities and memories of places; these anchored identities and memories can then be actively and passively altered as site occupations and uses change. I extend the spatial anchoring of these identities and memories to the ability of archaeological sites to foster a sense of national identity, especially within a post-colonial setting. Archaeological sites, places dense with history, can be used to legitimize and homogenize senses of self in reference to shared historic
narratives. History fosters personal and collective connections to the past, and can encourage individuals to form national identity connections to geographical spaces.

1.2 Results

Places and spaces are produced and reused because they fill some functional and cognitive roles within a landscape. Analysis has shown that the place Gor Khuttree was used repeatedly by a number of groups. After the creation of the caravanserai at the place Gor Khuttree during the Mughal period, the site became an important center. This location was then used and reused by subsequent bodies as a place from which to govern and interact with the persons in the surrounding landscape. The reasons for constructing and re-occupying this structure are complex. The motivations for each phase of occupation are hypothesized based on firsthand textual accounts of the site’s occupations alongside later historical accounts. Using these sources, the functional uses of the spaces within the serai are assigned.

Access and planning analysis of the phased occupations of Gor Khuttree Serai reveal that the overall structural arrangement of the site is reworked in each subsequent period of occupation to allow for new uses and functions (section 7.2 and 7.3). A symmetrical pattern of spatial organization is established in the Mughal period. In this pattern, the symmetrical gates served as administrative spaces, controlling entrance to the interior courtyard and cell spaces. Once access was gained to the interior, the courtyard and accommodation spaces were highly integrated with little spatial restriction places on users. During the Sikh occupation, alterations to the spatial arrangement are identified. The serai as a whole is no longer symmetrical. The West gate is expanded and dominates the overall spatial arrangement. Each gate, however, retains its internal symmetry. The alterations identified from the architectural survey align the spatial arrangement of the site with the new functional site uses. The pattern of spatial arrangement established in the Sikh period is again altered in the British period. In contrast to the Sikh period, the British period alterations come from the removal of doorways and not from structural additions (as was the case in the Sikh period). The West gate is repurposed to serve British period functions, and as a result the alterations made to the gate’s spatial arrangement are indictors of differing functional uses of these spaces between the Sikh and British periods.

These analyses reveal that spaces and places took and continue to take on different roles within the multiple levels of landscape experience. Through examination of contextual historic information about the site and analysis of the functional and physical arrangements of
architectural spaces, I correlate changes in architectural use with periods of occupation and the differing functional motivations of the site’s users. Memory, identity, and power are not directly observable in any single context, but the strength of these existential processes and their associations with specific architectural structures can be seen in the formation and reformation of spatial occupations through time.

I conclude that the reuse of Gor Khuttree Serai is a product of the malleable functionality of an architectural form coupled with the formation of a collective memory of the space. These memories allow users to make associations between places, and the spaces within them and the projected identity of the site’s occupiers. The Mughal-period use of the site does not occur on terra nullius, but on a place with an existing identity and shared memory of use. Building on this memory, the Mughal serai construction aligns the site with the political and economic identity expressed in imperial constructions. I conclude that monuments and structures can stand as proxies for rulers and as structural embodiments of the power and the economic strength of the Mughal Empire. This is an embodiment of power that was manipulated by subsequent users of the structure. Caravanserais were a means of facilitating movement through the Mughal Empire and were locations of economic interaction; thus the production and control of these spaces was an act of economic control and power production, one that is reinterpreted in subsequent phases of occupation (see sections 3.4 and 8.1 for elaboration on these interpretations).

This memory and identity at the site are then mapped onto by users in subsequent periods and altered to suit their new needs and new site uses. The Sikh occupation, which follows the Mughal, builds its own associations between the Mughal serai and the administrative, household, and performative aspects of the site. This refines and aligns the collective associations and meanings of the place with the strict authority and rule of the Sikh Governor. The British occupation of the site takes over from the Sikh. It plays on a memory extension at the site, and emphasizes the connection of the site with Sikh control and administration. Finally, the restoration of the site, undertaken in the present, is seen as an extension and extrapolation of the identities, memories, and associations originating in the Mughal period, and refined in the Sikh and British periods. The resultant palimpsest of memories, identities, and occupations is considered in relation to the role structures play in the recollection or re-creation of a shared national identity in today’s geo-political context.
1.3 Overview

Chapter two introduces the terminology and theoretical considerations that underpin the remainder of this dissertation. This includes a review of the social theories that shaped my architectural analysis as well as an introduction of my tripartite conception of places: formed, in practice, and in memory. It also examines the work of Kostof (1985) as a holistic and nuanced approach to architectural studies, leading to a final examination of the terms “monument” and “monumental” as applied in this research. Chapter three examines the current state of knowledge on caravanserais, looking specifically at the form and function of these structures at their time of construction. Chapter four introduces the documentary evidence used in this research. It then considers the site-specific background for Gor Khuttree Serai and the city of Peshawar. This examination offers the context within which to situate my examination of the place Gor Khuttree as formed, in practice, and in memory over time. Chapter five outlines the analytical methodologies used in my examination of discrete spaces. This begins with an overview of the existing approaches to architectural survey in South Asia and is followed by a comprehensive presentation of the survey methodology I developed within this research. This method allows researchers to gather architectural and use information expeditiously from a surveyed site. Three-dimensional modeling is also presented as an analytical methodology in association with access and functional analysis. Chapter six presents the survey results from Pakka Khanpur Serai, demonstrating the value of the proposed survey methodology for the expedient but thorough recording of a site. Chapter seven expands on chapter six’s example of an expedient survey and presents the results of the detailed survey of the place Gor Khuttree. This detailed analysis considers the development of the site over time and moves toward the study of the life history of a place. Chapter eight draws together the diverse collection of methods, analyses, and interpretations found throughout this work. It responds to the question of what the production of collective and personal memories and identities have to do with structures being reoccupied through time. I conclude with the consideration of the life history of a place and the future directions of this research.

I turn now to chapter two, and my consideration of social theory as applied to architecture.
Chapter 2  Social Theory and Architecture

This chapter examines concepts of landscape and the built environment. It addresses how caravanserais, as places, are components of the landscape that are conceptually shaped through human interactions with the built environment. It also considers how places serve as mnemonics that can encourage and shape specific acts of memory and associated formations of identity. Understanding the landscape and built environment is the first step in unraveling the complex system of interactions between place(s), space(s), memories, and meanings. How humans structure the world around them is an exchange between form, function, and meaning.

To begin a discussion of the built environment, and the places within it, it is first necessary to define these terms. The built environment refers to all things constructed and altered in the creation and use of space by humans (Lawrence and Low 1990:454). This admittedly vague definition is a necessary one, as human physical alteration of the natural world involves both the real and the conceptual bounding of space and the assignment of meaning to human locations. Thus, the built environment can refer to entire urban landscapes, entire buildings, or components of structures such as windows, doors, and roofs. The built environment includes bounded spaces that, although not formally enclosed, denote a specific area and evoke and encourage certain activities. It also refers to formal places of worship, such as shrines and erected monuments (Lawrence and Low 1990:454). Place in this research is seen as a component of the built environment and is involved in the social production of space (Lefebvre 1991). It exists as the culmination of human experience and association at a specific locale, and has been the subject of a great deal of academic review and consideration (Buttimer and Seamon 1980; Feld and Basso 1996; Gupta, Ferguson and Rouse 1992). Ashmore (2002:1176) suggests that “[t]he qualities of place are complex and mutable, materially embodying sequential decisions and dispositions”. Thus, the study of any specific place, such as the place Gor Khuttree in this research, involves the consideration of the interplay of a large number of factors that shape the formation of the material correlates of human activity.
2.1 Social Theory

2.1.1 Structure and Function

Research into environmental psychology considers the relation of actions and experiences to place, a consideration that has historically led to structuralist theories. Lawrence and Low (1990) provide an overview of the application of structuralist theories to the analysis of the built environment. Structuralism is a framework that addresses the unconscious mental structures that pattern our cultural behaviors. The concepts of structuralism are founded in the work of Claude Levi-Strauss (1963:132-163) who, working from the ideas of the linguist Saussure, saw the construction of our mental template as dependent on the conception of rules as binary oppositions. For Levi-Strauss, the world could be understood by exploring our hard-wired responses that reflect some foundational behavioral syntax held within our being and yet unknown or unconscious in its use. This initial foray into structuralism within archaeology and anthropology netted healthy criticism. Concerns can be raised about the static implications of inherent structured practice, and about the pre-programmed nature of structure, removing any consideration of action, agency, or the individual. Responses began to incorporate Levi-Strauss’s theory of structure along with the concepts of practice and agency.

With his 1977 publication of a Theory of Practice, Bourdieu synthesized structuralist theories of embedded culture and the re-creation of cultural norms through a habituated and inherent system commonly referred to as habitus. Habitus can be conceived of as a series of dispositions, developed by an individual, to respond to encountered conditions. Bourdieu’s work developed from his ethnographic work on architectural meaning and involves the incorporation of doxa, a concept that defines our learned and unconscious beliefs and values, relative to habitus as the means of socially reproducing doxa. Habitus is used to represent “the strategy-generating principles or… framework of cultural dispositions through which individuals gain an understanding of ‘how to go on’ in social life…. Habitus is seen to be neither wholly conscious nor unconscious, but to exist through embodied, routinized social practices” (Giles 2000:10). We can see the transfer of habitus and its implications across time and space by theorizing the interplay of individual and collective habitus as a means of re-creating and altering, intentionally and unintentionally, the cultural system in which people are involved. The application of habitus and practice to the study of the built environment allows the incorporation
of choice into a structuralist system. Imperial caravanserais are part of a structured approach to trade and travel, yet their individual life histories reflect the choice and experiences of site occupants over time. These decisions and site uses reflect underlying structural systems, as well as actions and choices made within these systems by individual agents.

The study of socially and culturally structured practice grows out of the work of Giddens (1976, 1984, 1989) and of Bourdieu (1977). Dobres and Robb (2000) as well as Hodder et al. (1996) offer more developed discussions of practice (praxis) and its importance from an archaeological perspective. Giddens’ structuration theory, advancing Bourdieu’s concept of habitus, provides a theoretical approach to space creation and use that can be carried into real archaeological applications (Barrett 1988). Giddens (1984:118-119) uses the concept of locale to discuss the bounded spaces that are the backdrops for “institutionally embedded social encounters and practices”, and which are then regionalized, or zoned, based on the dialectic of public and private. We conceive of locales, or locations, as “the intersection of the social, spatial, and physical” (Fisher 2007:25). For Giddens, structure is not rigid but can be manipulated. The reproduction of structure through time depends on the continued involvement of social conduct. As Fisher (2007:20) suggests, “this involves the recursive nature of social life, in that every act of production is also an act of reproduction”.

Urry (1991:172) has criticized the lack of “place” in the theory of structuration. However, Giddens (1989:279) himself suggests that place equates with locale and that locale is more useful when discussing human actions and engagements than a geographically-situated construct of “place” could be. Urry (1991:172-173) argues that Giddens does not account for the political nature of space or, by extension, place. Urry also notes that space has different meanings that depend on the observer or user. The built environment, and by extension places, exist in form, practice and memory, and depend entirely on the social production of space. As an insight into social geography, Lefebvre (1991) emphasizes that space is a social product. As such, space as a social act affects spatial practice; it is essential to and underlies the reproduction of society. For Lefebvre (1991), this involves the hegemonic production of capitalism. Space and its production are a means of control, and potential sources of domination and power. Lefebvre (1991) further discusses how structures play into social reproduction, particularly within the capitalist economy.
Giddens (1989) allows these considerations of the social production of space and place, even if he does not present them clearly. Giddens (1989:280) acknowledges that locales shape and are shaped by the production of meaning. Therefore, structuration theory does allow a means of assessing the built environment, and situated places, with consideration of how human action and agency shape meaning, where “spatial structure is now seen not merely as an arena in which social life unfolds, but rather as a medium through which social relations are produced and reproduced” (Gregory and Urry 1985:3). If we apply these concepts to caravanserai s, then we can view serais as places that participated in the reproduction of a cultural system through habituated use. They are also places that, when physically altered, reflect alteration to the underlying culture system.

Foucault’s post-structuralist work (1977) on the role of the built environment in the lives and landscapes of individuals seems another likely choice as a guide to the interpretive analysis of caravanserai space. I am not comfortable, however, with the direct application of Foucault’s concepts of space as a disciplined body. Foucault’s (1977:26) work on the creation of “docile bodies…subjugated, used, transformed and improved” seems initially an apt approach to imperial caravanserai spaces, as institutionalized and controlled locales. However, in the analysis of caravanserais, the ubiquity of form relates to and allows a multiplicity of functions. These spaces may structure human actions but they do not dictate the actions or necessarily constrain individual choice. Unlike the prisons, hospitals, asylums, etc., that Foucault’s (1977) work addresses, serais are spaces open to use and reinterpretation. Serais can take on direct aspects of power production and maintenance, but they do not bound action in the same dialectic as is seen in institutional spaces that are defined by strong power discords. The power to control within serais is often constituted through display and association and through the evocation of shared history associations and meanings. This will be discussed later in this section, as well as in chapter eight’s discussion of the use of archaeological sites as places charged with memories and identities.

It is important that we do not rely too heavily on a solely structuralist perspective as this can be criticized for its lack of attention to cultural specificities; it is important that we consider the structuration of action and cultural production within the appropriate historical context. Hodder (1986) defined contextual approaches to archaeology. Contextual archaeologists acknowledge that agents are knowledgeable and that their actions both structure and reproduce
social institutions across space and time. In this research, I consider users of architectural spaces within and through a number of specific contexts, most importantly the historic and cultural contexts within which the actions and intentions of users were constructed, both consciously and unconsciously. Contextual archaeologists, using the metaphor of text, ‘read’ and decipher meaning encoded in material culture by reviewing it within its historical context (Giles 2000:8; Hodder 1986).

What architecture means to the people who build and use it has been considered by a number of researchers (e.g. Barrett 1994; Blanton 1994; Fogelin 2006; Geertz 1993; Hodder 1986; Locock 1994; Parker Pearson and Richards 1994; Rapport 1990, 1988, 1976, 1969). The fundamental premise of this research is that built architecture is meaningful to the people who constructed, altered, and occupied it. The relation of meaning to architecture is also related to the period of occupation and the cultural context within which actions and experiences are situated. My premise is that contextualized architecture reflects a society’s underlying cultural structure and, as such, information about culture and its associated systems can be read from architectural details and the use and arrangement of space. Thus, in periods of construction, form does not equal function but instead follows function, as proposed by Rapoport (1976:82) in his suggestion that social and cultural factors (meaning, value, techniques, and so forth) shape buildings and these forms are then refined by environmental and material factors. Function can therefore be inferred from a careful and converging study of various lines of evidence extracted from the analysis of a building’s form. However, in the re-use and reinterpretation of existing space, function will be affected by form as the form preexists and is adapted to new functions. Thus, architecture may influence norms as well as reflect them as in the discussion of practice, *habitus* and contextualization above, and Hegmon’s (1992) discussion on style.

2.1.2 Memory and Identity

Beginning with the consideration of architecture as part of the built environment, I expand my theoretical consideration to research on archaeological landscape and the contingent ideas of place making, identity formation, and the evocation and creation of shared memories and meanings. These topics and the resultant approaches are anchored in the work of Bourdieu (1977), Foucault (1977), Giddens (1984), and Lefebvre (1991).
Again, landscape formation involves the formation of places, which Van Dyke (2003:180) sees as the intersection of time, space, and self. Landscapes and memories are intertwined in the formation of places, where places specifically have the power to evoke memories (Basso 1996; Lowenthal 1985; Rubertone 2008:13). For Rubertone (2008:13), the act of place-making involves both the construction of a place, as a bounded space, and the inscribing of that place with social meaning and memories. Monuments and monumental structures become places whose purposes are hinged on the association of shared and collective memories. Yoffee (2007:3) sees identity, memory, and landscape as impossible to study separately, as each depends on the formation of the other. To study the reuse of a caravanserai through time, it is necessary to consider the role of that structure in the surrounding landscape and built environment, in the recollection of collective or social memories, and in the formation of identity.

Research on memory involves consideration of how individual and personal memories are formed and maintained, as well as how these unique experiences are transformed into something more commonly called collective memory (Holbwach 1992) or social memory (Ricoeur 2004). Social memory accounts for our collective notions about the past and it is multiple and conflicted (Van Dyke and Alcock 2003:2). There is, in all considerations of landscape, place, memory, and identity, an acknowledgment of the many factors shaping any aspect of these concepts. They are all multi-vocal, variable, and seemingly archaeologically elusive. We need to understand that recollection of an act or event, the enacted memory, is fundamental to the use of memory in structuring or shaping social or cultural processes. Humans are fundamentally grounded in our sense of historicity (Boric 2010:4), as we use the past to define who we are, and how we relate to the world around us and the events unfolding within it. If individual and collective memories are chains that attach individuals to places, things, and each other, then archaeology extends these chains of memory and explores the evolution and adaptation of memory and associated identities through what Foucault (1972:4) has called “great continuities of thought” and Ashmore (2002) has termed “life histories”.

Anthropologists and archaeologists have approached memory and remembrance from a number of epistemological positions. Research has looked at remembering and forgetting (Forty and Kuchler 1999), the material components of memory (Meskell 2004; Renfrew 2001), the temporal scales through which memories can persist (Alcock 2001; Bradley 2003), the resultant
continuities and discontinuities of acts of remembrance (Ingold 2000, 1993), and the narrative identities that are based on a shared sense of memory (Basso 1996; Holbwach 1992). Identity formation through memory is personal as well as collective. We relate ourselves to the collective through memories of sameness while we define ourselves as individuals through memories of selfhood (Boric 2010; Ricoeur 1991). Holbwach (1992) has suggested that we can remember individually only as part of the cultural whole. Many of our individual memories are situated within the current of collective thought and thus self and whole are inseparable and reflexive, as are all aspects of landscape, place, memory, and meaning explored in this research. In this research, the identities that are shaped through caravanserais are the product of collective memory associations with specific constructed spaces.

Memory in archaeological practice often depends on material objects and architecture to serve as mnemonic devices for historical actions or narratives, as I will demonstrate is the case for the Gor Khuttree Caravanserai. For Soja (2000), archaeological materials occupy the “thirspace” located somewhere between their formation and use in the past, and the interpretative roles they play in present constructions of the past. Thus, these materials and objects become representative images of a ‘past’, through which narratives and events are recalled, potentially reconfigured, and emphasized through memories (Boric 2010:8). The ability of memory to persist is where its power to define and shape identity stems. Memory must occur in sustained contexts and requires re-visioning to endure; memories must maintain relevance or they are lost (Halbwachs 1992 [1950]). Bergson (1981) has considered habituated memory alongside event-specific memories, where some acts of remembrance are learned and habituated through practice and thus endure beyond the individual, while other acts of remembrance are specific and are often defined by a lifespan or less. For Mughal caravanserais, an imperial identity was fostered by habituated memory associations to power and control, while specific memories associated with the site’s users are more commonly bounded by a single lifetime.

The relationship of memory to place can be hegemonic, where memory can reaffirm shared belief, oppose ruling systems, and question attempts at historic power legitimizations. Ingold (1993) observes that the environment, and by extension the landscape and the built components of it, are pregnant with the past and as such are not merely referents to historical
processes but rather the actualization of a historical palimpsest. The environment is not telling a story; it is one (Ingold 1993:152).

The use of monumental architecture as an act of legitimization and collective remembrance is a well-established practice in the formation of power systems around the world. Community identities, and by extension imperial identities, vis-a-vis a sense of national identity, are created through some sense of shared social history (Alcock 2002; Basso 1996; Blake 1998; Hobsbawn; Jonker 1995). Identity formed through these material expressions of place are thus shifting and malleable, able to be altered, contested, and adapted. Alteration to places can adjust the shared experience of collective memory and thereby adjust the identity or identities they evoke or invoke in their users. In the legitimization of ruling power systems or economic systems, the creation of a shared sense of history, of a collective memory, is more important than ensuring the validity of that history. Therefore, archaeological practice can be involved in the production of history but also in the uncovering of histories concealed, created, or intentionally forgotten in these acts of legitimization and collective identity formation. Boozer’s (2010:139) work on the importance of memory and identity formation in the legitimization of the Roman Empire has demonstrated that “memories of heritage – be they real or mythical - are particularly potent forces in the collective imagination of identity”.

As Alcock (2001) suggests, the past, when rearticulated and presented, allows imperial agents and common peoples a place to express social and political identities and beliefs. Sinopoli (2003) demonstrates how the past can be used as a link between systems of rule and the means of legitimizing the right to rule. Her work demonstrates that legitimization through historical referents can be complex and multi-vocal and can demonstrate ties that extend beyond a single monolithic history (Sinopoli 2003:28). In some cases, those seeking legitimization deliberately reference these historic memories while, in other cases, these memories seem the by-product of an expanded and interconnected political environment (Sinopoli 2003:28-29). Historians and archaeologists attempt to extract the various threads of remembered historical narratives and to resolve which are intentionally woven into collective identities and which are unintentionally incorporated through association. If the memory used to legitimize an action can be uncovered, we cannot consider these legitimizations as singular acts; legitimization through recollection requires continued reiteration. Archaeologists must ask why aspects of the past were employed within a given temporal framework, why some memories were evoked unaltered
in subsequent periods, why some memories are altered or reinterpreted from a point forward through time, why other memories were forgotten entirely, and why still other memories are forgotten and then re-remembered after some temporal break. We must also consider who forms the audience for these acts of memory and who is intended to use them to form their sense of identity (Sinopoli 2003:32). At Gor Khuttree, we see the emphasis and expansion of certain memories and associations to legitimize site occupation, while other memories are collectively, and perhaps intentionally, forgotten (section 8.1).

Insoll (2007) affirms that archaeology is necessarily about identity. In this research, I discuss a Mughal identity for the place Gor Khuttree which subsequent site users altered. This identity is intertwined with the archaeological work and identity associations constructed at the site today. Identity can be about sameness when expressed within a collective and it can also be about difference when used to express uniqueness and self. Identity is not a normative construct. Archaeologists often use identity to discuss communities that are traditionally absent from historic consideration: gender identities, age-based identities, religious identities, and identities dependent on sexuality (Insoll 2007; Meskell 2007). These directions have placed the archaeology of identities in a potentially polemic position. When archaeological research is used to define, ascribe, and limit ethnic and cultural affiliations of people in the past, it can also define, ascribe, and limit ethnic and cultural affiliations of descendent groups in the present. The oft-cited examples from Nazi Germany stand as a reminder of the power of archaeology to justify powerful ethnic associations (Arnold 1990; Anthony 1995). We make and remake ourselves through reference to identities within the past; the gravity of these associations should not be ignored.

The impulse to preserve the past is part of the impulse to preserve the self. Without knowing where we have been it is difficult to know where we are going. The past is the foundation of individual and collective identity; objects from the past are the source of significance as cultural symbols (Hewison 1987:45).

Lowenthal (1985:xv) stated that “the past is omnipresent”. In our interaction with the past, archaeologists and historians are situated both to attempt reconstructions of the past in the past and to consider the implications of the past on the present. Archaeologists can look at history as it contributes to heritage management involving marginalized groups, the study of oral histories, and political and nationalist manipulations of the past (Van Dyke and Alcock 2003). Again, Sinopoli’s (2003:32) work at Vijaynagagra has demonstrated the importance of
the archaeological site in interpretations of the past, and also in association with current national and regional discourses. Similar involvement of archaeological sites in nation making and identity formation are explored in section 8.3.

In order to discuss identity and memory as legitimizing forces in the past, we need to determine how they relate to the material culture that we uncover today. How is a caravanserai a mnemonic for memories and associated identities? How are archaeological sites mnemonic devices to uncovered pasts? What archaeologists seek are archaeological indicators of memory coherence over the longterm (Meskell 2003:36). These are habituated acts of memory that are referenced in and meant to be read from the built environment. Bradley (2003:221-222) has suggested that memories become unstable within 200 years, a time line that can be lengthened in societies with recorded histories. For Bradley (2003:222-223), monuments and, in my work, caravanserais, serve to trigger memory and are as susceptible to alteration over time as oral traditions or recalled memories. In this research, I examine monumental structures that were everyday components of the built environment (for discussion and definitions of monument, and monumental, see section 2.3). Thus, the ability of a structure to house a memory or memories, to evoke identity associations, and to legitimize economic or political power must be extended to more vernacular forms.

As with all memories, those invested in structures are not static. They alter with transmission and interpretation and there is a “progressive distortion of history”, whereby linear history and discrete memories become problematic to identify (Bradley 2003:223). There is a clear interplay between time scales and an intermixing of legitimizing memorials. My research at Gor Khuttree Serai demonstrates how the use and reuse of a structure depends on a number of factors. These include the continued association of that place with specific acts of administrative memory and identity formation.

The importance of archaeological sites as mnemonics for historical memories can also involve the preservation and conservation of such sites. The work completed on Gor Khuttree Serai has involved the restoration and conservation of the structure to reflect variable periods of occupation, including the south-wall cells and East Gate of the Mughal period, the West Gate and Shiva Temple of the Sikh period, and the Fire Brigade of the British period. Thus, the occupational history of the site, the multiple histories and the acts of remembering that are contained within the materiality of the place, are compressed in the present and shown as a
palimpsest. This draws into question whose past is preserved, whose history recollected, and whose formation of identity presented (Rubertone 2008:14-28). It remains the task of the viewer to interpret the memories presented in and by structures, and to respond to associations and identities that are formed through sites of memorial and remembrance (Yoffee 2007).

Materiality is a tangible correlate of memory practice (Mills and Walker 2008:16). Thus the study of archaeological material culture can reveal information about acts of remembrance and identity formation through the repetition of practice and the persistence of social action and associations through time. The multiple paths to analyzing the past mean that alternative and forgotten histories can be explored and are able to stimulate the development of archaeological method and theory (Knapp 1996).

My research moves from consideration of the imperial Mughal identity represented by caravanserai structures, to the collective recollection of this identity in subsequent periods of occupation. In these subsequent periods, new identities of control are created through the use of Gor Khuttree Serai. The memory of the Mughal imperial identity is altered, or realigned, to aid in legitimizing the new users and new uses of the site. I discuss in chapter eight the British period use of Mughal and pre-colonial architecture in South Asia. I tie the various successful British uses of Gor Khuttree Serai to their ability to build on previous patterns of use. Like all site users, they alter the collective memory of the site in the minds of its users, building off of that which came before. I continue my analysis of these changing identities of occupation and associated collective memories into the modern Pakistani period. Doing this allows me to consider the role that heritage sites play in the formation of national identities, especially as a post-colonial response. In the section that follows, I examine the formation of collective identities through historical linkages between current populations and the historic peoples represented at archaeological sites. I look at several specific examples of the use of archaeological sites in the sub-continent to reify nationalist identity associations to historic places that legitimize some current sense of belonging. The thread of Mughal imperial identity at the site is formed in the Mughal period and is altered in each of the periods that followed. This is an ongoing process. Memory is never complete, as the active uses of the site demonstrate.

2.1.3 Collective Identities and Post-Colonial Nationalism

Archaeological sites are places where new memories and interpretations about the past are shaped. They are places where a version or versions of history can be presented to the
public, and where senses of nationalism, often within a post-colonial context, can be created through collective identity associations. In some ways, archaeological sites can illuminate aspects of historical memory that have been lost; archaeology can memorialize alternative and unknown histories (Rubertone 2008:14). Young (1993:5) notes that in this way archaeological sites, as places of remembering, relieve the viewers of their memory burdens. Visitors to managed archaeological sites have constructed histories presented to them and are no longer expected to make their own associations with the past in that location. Visitors no longer feel guilty about having lost some tangible connection to the past as a reconnection can be found through archaeological collective remembrance.

Colonialism and the post-colonial response have been presented as a struggle and a negotiation, often presenting Western governments as emergent and particular (Pels 1997:163). They are emergent in that the complex system of Western colonial governance arose from the interaction of multiple “simple” interactions that were not necessarily directed. These multiple simple interactions amassed to constitute a government that was concrete in both space and time. The post-colonial response to the legacy of the colonial period was constructed through the adjustment of the social self and the reformulation of what it means to be of any particular place, ethnicity, or religion. Anthropology has focused on the power struggles that result from these reformulations and the lasting impacts of these reformed senses of self as they enter the discourse of nationhood and national identity. Historically focused on the interactions between the colonial occupier and the occupied or indigenous, more recent work (Dirks 1993, Stocking 1991, Stoler 1992, and Taussig 1992) has acknowledged that these points of contact and the resultant events and actions cannot be separated by side (occupier/occupied) and are most fruitfully considered as a holistic experience (as expressed by Malinowski in Mair 1938). This calls into question the role of the anthropologist or archaeologist in these analyses, including consideration of our own social conditioning and the historic actions of our discipline to form self-other relationships or to resist analyses that support formalized government or the actions that result from some perceived cultural subjugation. In post-colonial responses, the past and the present are not easily separated. Nationalism, often resulting from the post-colonial restructuring of an inherited colonial system, involves “the elaboration of a real or invented remote past” (Kohl 1998:223).
Discussion of the use of archaeology within the sub-continent often begins with the presentation of acts of appropriation and control by the colonizing British in the 19th century. The power to control heritage, and the past, can be seen as a means of legitimizing the right to rule. The British were heavily involved in the movement of antiquities out of South Asia and into European museums (Lahiri 2000), although on a far smaller scale than in Egypt or the Near East. The sense was that, as a more civilized body, the British had the right to interpret and record the sub-continent’s past and to save it from destruction by the people who lived in the region (Lahiri 2000:689). The effects of this policy of removal and appropriation of historical site control were lasting. Fear among some local people began to develop with regards to British-run archaeological work; people were worried that recording of sites or architecture in the form of monuments or temples would mean their certain removal for ‘preservation’ (Lahiri 2000). A similar sort of unease was echoed by some villagers during my 2007 survey work in the Punjab, who were equally concerned about the current Pakistani government taking over their land if it was reported as being a historic Mughal caravanserai site. Similar sentiments are expressed in online blogs about historic sites within South Asia today.

Smith (2000) notes a similar colonial legacy in the action of the government in Bangladesh, where structures would become heritage centers in order to save them from the perceived and in some cases actual destruction by locals (scavenging brick, reuse for menial purposes). Lahiri (2000:689) suggests that acts of conservation undertaken by the British can be seen as a means to downplay or distract attention from colonial violence and instead emphasize the beneficial aspects of the imperial identity. Curzon, as a member of the Archaeological Survey of India (ASI), called for the restoration of historic sites that had been altered to house British government spaces so that they would represent a culturally sensitive approach and image of colonial rule (Lahiri 2000:689).

Hobsbawm (1992:9-13) has suggested that nationalism is what happens in advance of the formation of a nation, the creation of a shared identity, thus necessitating the formation of a discrete nation state. This sense of shared identity can be achieved through a number of means, and its formation is not passive. National identity exists only where people both construct and live it (Smith 2000:705). As Trigger (1995:277) suggests, the regional and national histories shared by a collection of peoples serves as a source of pride and can form oppositional identities to those formed in colonial or imperial legacies. Post-colonial nation states inherit identities that
were constructed and formed during colonial rule. Post-colonial formation of nation states is often involved in the development of a sense of self. The movement toward the formation of nation states follows the formation of a national identity that unifies collective action toward the end goal of nationhood. Thus, nationalistic identities do not necessitate the formation of a nation state, although nation states require the initial unification of persons through a nationalist identity. National identities, however, are always in the making and never made, they are contingent on the culture and ideals of the active populace and can be fluid in their formation. Thus their formation, legitimization and negotiation are often aligned with the production of history and the archaeological construction of the past.

Archaeology and the formation of historical narratives can be used to anchor a nationalistic identity to a region or place. It can form relationships, real or imagined, between the past and the present and these relationships can be used to legitimize a nationalistic identity. Archaeology can also be used to justify rights of control, to control culture, to control history, to control land, or even to justify the occupation of the geo-political territory of an ‘other’ (Kohl 1998:240). The involvement of archaeology in the construction of identity and nationalism in the sub-continent has been well documented within India. For example, Shaw’s (2000:693) work on Ayodhya has discussed the “20th-century propaganda aimed at reconstructing a national identity based on a pristine Hindu and specifically pre-Muslim past”. Shaw has shown that ritual landscapes are often undervalued in such political contestations of place, as historic ‘truth’ is sought through the archaeological analysis of the site. Shifting social memories affect the invention of traditions and the meanings associated with certain places and objects over time. The contestation over the space, Ayodhya, a place of religious importance for Hindu, Muslim, Jain, and Buddhist believers, has garnered international attention with regards to the nurturing of nationalist identity while also calling into question rights to the past in places where “ownership” is contested (Nath 1991, Ratnagar 2007, Thapar 2000). Shaw (2000) suggests, correctly I believe, that such created meanings are as valuable as actual historic events in the construction of ideational landscapes that involve the incorporation and renegotiation of preexisting forms. What is most important in the value of a place and the formation of its meanings, archaeological fact or the proliferation of an associated collective memory?

Smith (2000), in her work on the building of national identity through archaeology, looks at the situation in Bangladesh, where construction of a national identity is anchored by
national heritage and archaeological sites. Here archaeological sites become symbols of heritage and identity but are also places of recreation and leisure (Smith 2000:701). They perpetuate the belief that the nation has a unique heritage, which corresponds to the recent political boundaries of Bangladesh, despite other more broadly held beliefs and previous national identities as East Pakistan, as part of British India, or as Bengali speakers, etc. The museums associated with these archaeological sites emphasize the relationship of archaeology, folklore, and personal experience (Smith 2000:702), encouraging visitors to form personal attachments with heritage which demonstrates that the nation has a history that is temporally deep and relevant as a defining aspect of identity today. Material and archaeological remains offer a temporal anchor to fledgling national identities (Khan 1972:22).

A major effect of the British focus on the recording and preservation of “monuments” was the creation of ASI, which has become a strong organization with power to influence and reflect politics in India to the present day, as the Ayodhya fight illustrates. The involvement of the ASI in the preservation of monuments, and by definition architecture, emphasizes the value of spaces and places in the formation of identity and memory. Architecture as a means of non-verbal communication conveys values, aesthetics, and ideologies. The Taj Mahal remains a familiar example; this structure is held to be the symbol of India and is one of the most recognized structures in the world. It is, however, the tomb of the wife of a ruler descended from occupying outsiders. Why were the Mughals highlighted in the history of the sub-continent and in the formation of its collective identity while the British were not? Now that the pendulum has begun to swing in the opposite post-colonial direction, are we any better prepared to address what structures mean to the people who use them, or why spaces become empowered with meaning and take on roles in identity formation? What becomes increasingly apparent is that the meanings of specific buildings depend on their associations with specific actions, histories, or cultural referents (Lang, Desai, and Desai 1997:1-3). Thus, constructions of the Mughal-period are not resisted but in many cases protected and venerated. Had the Mughals been replaced by an ‘other’ that did not galvanize resistance among the population, it is uncertain how history may have remembered them. Alternatively, as the British used a series of Mughal puppet rulers essentially to govern the very late Mughal Empire from behind the scenes, we might argue that the British were encouraging veneration of the Mughal Empire so that they could continue to benefit from their initially economic relationships to the sub-continent (see Kenny 1995 for an examination of British hill stations in India as a separation of imperial authority). I return to the
concepts outlined in this section in chapter eight, where I discuss the memories and identities that underpin the reoccupation and reuse of the site Gor Khuttree throughout the Mughal, Sikh, British, and Pakistani periods. In the next section, I return to consideration of the landscape formations and engagements that underpin all interpretations in this research.

2.2 Engagements in the Landscape

The function of caravanserais is complicated and involved many levels of engagement on the part of their patrons. I begin this section by examining three conceptions of places within the built environment and how specifically caravanserais can be perceived within each of these constructs. These concepts highlight the multiple roles and functions of caravanserais within Mughal and later landscapes.

The three approaches are used to structure this discussion are modified from those that Knapp and Ashmore (1999:10-13) originally presented as the constructed landscape, the conceptualized landscape, and the ideational landscape. I use the terms places formed, places in practice, and places in memory. Caravanserais served roles in each of these perceptions of place, and were ascribed meanings and functions in relation to their construction, conceptualization, and ideational role within each. These conceptions of place are not discrete, and in many instances caravanserais fill multiple roles. I have applied these labels in order to frame the discussion that follows in chapter three on the inseparable nature of architectural form and function.

In addition to these perceptions of places within the built environment, I consider the epistemological framework that Kostof (1985) proposed for the study of the complete context of a structure and its landscape. This approach to architecture is similar to studies of the life history of a place as previously outlined and described by Ashmore (2002). Kostof’s considerations provide an additional lens through which to conceptualize the built environment and the places within it. Given his direction of study, historic structures, and the value he places on the contextual experience of space and place, it is not surprising that much of what Kostof proposes about the meaning and value of historical architecture mirrors what archaeologists are often trying to accomplish. Kostof (1985:7), in *A History of Architecture: Settings and Rituals*, says “[a]rchitecture is a social act and the material theater of human activity”. I begin by outlining
the concepts of places formed, places in practice, and places in memory, and then discuss the inclusion of Kostof’s approaches to the study of the built environment as they apply to each of these place conceptions.

2.2.1 Places Formed
Places formed are similar to what Knapp and Ashmore (1999) describe as the constructed landscape. Analysis of both involve study of the built environment. Included is how people physically alter the landscape, thus structuring it and making it purpose-driven in its layout. Caravanserais are found throughout the Islamic world and are generally of similar form, although they serve a host of functions. Regional variations in form may relate to the architectural preferences of people indigenous to the region of construction, or of those merchants and others who most often use them. Regional variations in form may also relate to different activities taking place within the structures, whether unique to each structure or related to regionally restricted economic activities.

Related to the form of the caravanserais are their varying functions; the form of these structures creates multiple spaces that can contain multiple activities with varying purposes. I have redefined the constructed landscape (Knapp and Ashmore 1999) and applied the concept of places formed to be a constructed place which serves/contains multiple functional spaces. Furthering this, I allow that the value of places formed is not tied just to the form of a given structure, or place, but also to the functions the place hosts. Doing so ties the concept of a place formed to the concept of a place in practice, where form and practice are interdependent.

2.2.2 Places in Practice
Landscapes are “interpreted and given meaning through localized social practices and experiences” (Knapp and Ashmore 1999:11). Knapp and Ashmore go on to suggest that conceptualized landscapes have value ascribed through natural features and not constructed features. Expanding this concept within this study of caravanserais, I have altered the conceptualized landscape to include the practices (social events, acts, and engagements) that occur within the constructed features of places formed. Religious, social, and cultural meanings
are invested in the function of the caravanserais. Although they are intertwined, places formed focus on the constructed form, along a form-function gradient, while places in practice focus on the specific uses of places formed. The activities carried out at the caravanserais, the functions of the caravanserais and their role in the surrounding landscape shape the conceptions users have. Conceptualizations of the functional purpose of a given caravanserai will reflect the multiple roles of the caravanserai in the political, economic, and social structures of the occupying body. A trader on a non-religious trade journey may perceive the caravanserais in practice as an economic distribution center, and a marker on a journey of economic function. On the other hand, individuals in positions of political power might view the caravanserais as taxation locales and revenue generators and subject populations may view it as a locus of unwanted and exploitative foreigners. Again, the multiplicity of caravanserai functions means that the individual’s perception of the form can involve many interpretations. The place in practice serves as a midpoint between the tangible place formed and the more ephemeral place in memory.

2.2.3 Places in Memory

The ideational landscape of Knapp and Ashmore (1999) involves the landscape in relation to spiritual, religious, economic, and political concepts; places in memory expands on these non-tangible characteristics. In many cases, this involves place as a marker for important historic or mythical events. Pilgrims often used caravanserais as rest stops. As such, the caravanserais served a pivotal role in the religious pilgrimages of the people who used them. They dotted the ideational landscape as route markers, measures of progress for a journey that could take a year or more to complete. These spaces became embedded with social and religious meaning. Similarly, as markers on an economic journey, the caravanserais would become embedded with economic and political meaning, again inextricably linking them to the memory of a place held by both individuals and the collective. As places that house economic activities, they can become mnemonics for systems of economic control. The place in memory depends on the practices, actions, and agents that occupy it through various periods. A place in memory does not need to be defined, or confined, by a place formed; however, in some cases the ideas formed around or through a place or space can be related to the constructed form of the caravanserais. For example, if we allow that caravanserais stood-as place holders for Mughal
imperial authority, then they became monuments to the ruling political doctrine, enshrining authority and reinforcing political and economic control. Economic and political control are tangibly referenced in the place formed; however, they remain mental constructs with non-tangible principles. Similarly, the place in memory can produce tangible referents despite their essentially non-tangible nature. Place in memory can be the most difficult to observe and correctly identify, as inferring meaning and experience is a further abstraction of any material remains investigated. How can we explore individuals and their experiences within a place or space? The most likely means of exploring this involves evaluation of standardized associations and meanings within bounded culture systems, considering historic first-person accounts of spaces, and allowing the tangible aspects of architecture and material culture to speak for past systems of feeling and belief. We cannot hope to access the entirety of any place in memory but we cannot ignore its importance in shaping behavior or its involvement with any landscape or built environment. These concepts shape the analysis of memory and identity formation, which involve the assignment of meaning to places. These are issues further discussed for the site Gor Khuttree in chapter eight.

The caravanserai offers a valuable opportunity to associate an ideationally motivated journey with a constructed and tangible form. This relates to the continuing occupation of caravanserai spaces and their resultant alterations through time. The historic importance and continued occupation of these spaces reflect the societal values adhering to places in memory (Fisher 2007; Khol 1998; Orser 1999). The interplay of form, function, social, religious, economic, and political meaning within the caravanserais presents a unique opportunity to observe the multiple applications of places and the symbiotic relationships that exist between them. This discussion of landscapes as places formed, places in practice, and places in memory is valuable as an interplay that allows consideration of the quantitative analysis of the built environment through the syntactical properties of spaces, alongside the qualitative and derived functions and meanings that surround certain components of the built environment. In this system of landscape formation, each variant depends on the formation of the others and creates a tri-partite definition of the components of a complete landscape and the construction and consideration of the life history of a given place. The life history of a place can be seen as the intersection of these component place formations (Figure 2.1).
2.2.4 Kostof

The study of architecture from an archaeological perspective is weighted to the historic period, and early criticism of Kostof’s (1985) work has centered on the “historicizing of pedagogy” (Pyla 1984), taking issue with his textual overview of the world’s architecture that privileges the western world. These criticisms are valid, yet the approach that Kostof details for the study of the built environment remains valid as well, including his observations on the oneness, setting, community, and meaning of architecture that are below. How do we engage in the deep archaeological study of structures, their arrangement, and their context, in periods where textual information is rare and where architectural remains can be piecemeal and hard to define? We can begin in periods with historical referents, developing culturally appropriate comparative samples, and then, equipped with this knowledge, move towards untangling the less tangible architecture of the deeper past.
Kostof (1985) laid out four principles of architectural survey: oneness, setting, community, and meaning. The consideration of all leads to a more complete understanding of architectural history in South Asia and its place in culture and society. I will now outline these four principles and discuss them in relation to archaeological aims and practice.

2.2.4.1 The Oneness of Architecture

The first principle put forth by Kostof (1985:8-9) is the oneness of architecture. This means that the material aspects of every building need to be looked at in their entirety. To only focus on the constructed form at the time of creation leads toward technological determinism, assuming that technology and by extension technological knowledge alone define or dictate a building’s appearance. Likewise, although we may be interested in one aspect of a structure and wish to compare it with similar aspects of other structures, we should not separate these features from those that surround them. Buildings and their components must be the focus of study, not the components of a structure stripped of their architectural context. We cannot, for instance, present a study of minaret types devoid of any discussion of the buildings on which they are found; meaning is tied to context as places are formed, house practice, and create or shape memory. In the absence of context, assignments of meaning must proceed carefully. For archaeologists, this presents a significant concern as we are often presented with architectural fragments out of context. We should not as a result refrain from the study of these components; however, we do need to consider, their original position as best we can, and inform our interpretations with as much contextual information as is available (see previous discussion of contextualized archaeologies in section 2.1).

For example, a detailed analysis of exterior paintings on the West Gate of Gor Khuttree Serai should consider the composition and execution of this decoration relative to the location of application and the intended viewing audience. Only then can significant comparisons with the technique, form, and material properties of similar paintings at other structures be undertaken. The decoration can also be considered on varying scales, as part of the total gate structure (Figure 2.2), as part of the individual architectural element that it adorns, here an arched entranceway (Figure 2.3), and then as an individual motif applied by the hand of a trained artist or craftsperson (Figure 2.4).
Figure 2.2 Interior Façade of the West Gate, Gor Khuttree complex, 2007, facing west.

Figure 2.3 Interior Facade showing the left interior stairway, stairway A, of the West Gate, Gor Khuttree complex, 2007, facing west.
This consideration of the oneness of architecture brings us to Kostof’s (1985) second principle, the setting of architecture.

2.2.4.2 The Setting of Architecture

“No building is an isolated object, sufficient onto itself” (Kostof 1985:10). It is an object that must be considered within its context, that being the building’s landscape and the geography that surrounds it. Researchers often think of structures in South Asia relative to the religious and state structures that surround them (Asher 1992; Koch 1991; Parihar 1999). However, less consideration has been afforded to the non-imperial and non-monumental structures that fill a landscape, also to their geographic surroundings (see Fritz 1997, 1999, at Vijaynagara for exceptions). We can consider structures in relation to all that surrounds them, including secular and religious structures, monumental and vernacular structures, and geographic elements. Kostof (1985:10-12) includes the vernacular realm of architecture in his consideration of setting, but we need to move beyond its simple inclusion and begin to address what forms the vernacular, and how it acts back on the monumental and shapes the experience of a city or space (Hancock 1986:32); see section 2.3 for further discussion of the terms monument and monumental as applied in this research. I, and others, expand Kostof’s approach outside of the urban environment and consider the setting of rural structures (Hancock 1986:32). Settings consider the constructed form, the place formed, and also the “natural” environment.

When we consider structures over time, as this dissertation does, through creation, use, abandonment, reuse, or repair, we must then consider the changing context of the structure and
how this variable context changes the way that a structure is experienced and used. A building that was constructed to allow its singular view from a number of vistas will be greatly affected by the construction of additional structures around it. For example, the contextual understanding of a kos minar (towers used to mark distances along roadways) that is now surrounded and overwhelmed by a bustling town or made short in appearance by the accumulation of sediment affects our experiential understanding of the form (Figure 2.5).

Figure 2.5 Kos minar from Baja Lines, Garhi Shahu, Lahore, Punjab, Pakistan (The News, Sunday, 29 July 2007).

When looking for periods of repair and reuse, I consider how changes in setting affect not only the structure but the ways that people relate with and through the structure to the place(s) it defines.

Two very different lines of analysis come out of this consideration of architectural setting: the study and re-creation of architectural history (more akin to the place formed), and the study and re-creation of changing architectural experience (the place in practice and the place in memory). Archaeologists must remain careful that our focus on assigning function to structures does not disembody buildings, removing them from their settings and thereby severing them from user experience. The setting of Gor Khuttree Serai demonstrates the importance of this principle. Figure 2.6 shows the oldest portion of the city of Peshawar from a Google Earth satellite image. In this image the locations of Gor Khuttree Serai and Bala Hisar Fort can be identified (both structures present during the mid-Mughal period). We can also identify the perimeter of the city wall that originated in the late Mughal/Durrani period and was reinforced and expanded during the subsequent Sikh occupation (Durrani et al. 1997:205; Raverty 1852:15-16). Jaffer (1945:122) records that it was built first during the Sikh period and reinforced by the British; however, in support of this he references the 1931:299 Military Report
and Gazetteer on the Peshawar District which does not consider the earlier document by Raverty (1852) mentioned above. Raverty’s (1852) report records in some detail the expansion, not creation, of the wall during the Sikh occupation.

Figure 2.6 Google Earth 2009 Image showing the outlines of the Old City of Peshawar (C); Bala Hisar Fort (A); and Gor Khuttree Serai (B).

We do not know exactly how the landscape was organized during the Mughal period of construction of Bala Hisar Fort and Gor Khuttree Serai. Certainly, Peshawar as a settlement existed at this time and these structures were built in relation to forms that preexisted. It is of interest to observe the structures that surround these constructions today, and that have grown in relation to these pre-existing forms. In fact, the Old City of Peshawar can still be outlined despite the removal of the majority of these city walls, as the presence of the walls in the past has shaped the development and growth of the city around them, so much so that people living inside this once-walled area still refer to themselves as living within the Old City. Regardless of whether or not the walls still stand in any given area, they continue to mark a spatial and mental
boundary. The wall is an example of a “place in memory” that is, in many places, no longer existent in practice or form. Each of these structures, the serai, the fort, and the city walls, are interrelated and depend on the forms and landscape around them. Any understanding of them must include consideration of their contextual settings for any period in time. Structures occur within settings (landscapes) and feed into the meaning and arrangement of these spaces. These settings are made up of communities of architectural forms.

2.2.4.3 The Community of Architecture

For Kostof (1985), the architectural community includes all structures regardless of their placement on the scale of vernacular through monumental constructions. All buildings, no matter their size, status, or consequence, deserve to be studied and have something to tell us about the past. The periods and stages of city, town, or village expansion and contraction can help illuminate periods of growth and decline. In terms of monumental architecture, observation of the vernacular structures that surround a building over time may tell us more about the value of the ‘monumental’ structure than any study of the building alone. When a building endures to be studied, it reflects the durability of its construction and material components. However, a structure’s continued curation and its endurance as a social and cultural artifact also reflect the choices made by the people who have surrounded and experienced the monument and interpreted its meanings. The preservation of a structure is the result of continuing use or value assigned to it that makes preservation desirable for future generations. This architectural veneration is an ongoing process in many cultures, where values attributed to buildings, landscapes, and artifacts are often renegotiated within changing cultural systems (Maynard 2000; Wallace 2003). My study of Gor Khuttree Serai draws heavily on this principle and addresses the reasons for architectural reuse, preservation, and re-interpretation over time (topics further developed in chapter eight).

2.2.4.4 The Meaning of Architecture

All questions about the meaning and uses of architecture must consider time and purpose. Time here implies sequence; like all things and people, buildings exist in a fourth dimension with “threads extending from it [the building] backwards and forwards, to other buildings whose existence has touched or been touched by it” (Kostof 1985:18). The creators of buildings commonly take some inspiration from other structures. Once built, buildings may also inspire new constructions, as noted in the second and third principles, setting and community. As a result, they may be seen as incorporating historical referents as well as serving as referents
themselves. Rejecting a historically deterministic approach to architecture, whereby structures are attempted copies of other structures, Kostof instead (1985:18) proposes that structures are influenced by others that predate them and they themselves can influence structures that come after them. Considering structures as linked to others potentially showing similar structural forms but not entirely derivative allows the innovation and adaption of structural elements and new constructed forms. The development of architecture is not a unilinear progression where each structure is an interpretation of a historical referent. Rather, aspects of all structures have historical referents just as aspects of all structures show innovation and creative design. In order to understand the development of architecture, we have to acknowledge the value of historical forms while also allowing for innovation of new and abandonment of old design principles. The alteration of structures over time emphasizes this principle further. Reused and reinterpreted structures may show internal discord in their construction or design elements. This discord may be evidence of different approaches to design and space use over time. Thus, the architectural community must be examined as a whole to seek understanding of inherent forms and temporal sequences of development. This can then guide the creation of typologies and the temporal assignments of alteration, abandonment, and repair. Places and the spaces they contain are constructed, places are then conceptualized by their users to house specific functional activities and practices, and the practices that occur in these bounded spaces create memory and associated identities.

In order to bound space for practice and use, structures define places by circumscription and accent. Bound places become discrete spaces of action as they are demarcated by construction. The resulting structures and their structural components then serve as the backdrop in which practice, the personalized enactment of function, occurs. Thus, it is not surprising that certain settings encourage the enactment of certain practices and the formation of specific memories and identity associations. See the discussion of Gor Khuttree’s uses in chapter four and impacts of these uses on the formation of memories and identity in chapter eight.

Keeping Kostof’s (1985) four principles in mind, archaeological research into the built environment in South Asia takes a new direction, one not simply focused on the period of construction, constructed purpose and use, but looking at places and the built environment as organic and evolving settings that continue to frame and influence experiences and activities.
2.3 Monuments, Monumentality and Vernacular Architecture

Before turning to the analysis of architecture more specifically as part of the built environment (chapter three), I define the terms monument, monumental, and vernacular as I apply them in this research. Architecture is something more than buildings and simple construction, and the discipline has long separated itself from engineering and construction, marking itself as something more than technological problem-solving or the physical creation of structures. Instead, architecture and historical studies of architecture have often concerned themselves with the study of structures designed by known architects who view their work as high art and serving a purpose greater than simply bounding space; work that is embedded in social and cultural meaning and thereby worthy of intensive study (Fletcher 1975[1896]; Millon 1965; Pevesner 1976). Using a system of definition outlined by Vitruvius, architecture is *venustas* (beauty) and not *utilitas* (function) or *firmitas* (structure) (Kostof 1985:13). In this view, the appearance of architecture is emphasized, acknowledging that architecture is both a product of and a tool in service to the state, religion(s), and those with social, cultural, or coercive power. Structural appearance helps define and identify structural monuments, monumental architecture, and vernacular architecture. This are outlined and discussed below.

Archaeologists are often asked to reflect on the value of the “Monument”, be it Stonehenge, the Pyramids of Egypt, the Taj Mahal, or the Great Bath at Mohenjo-Daro. In doing so, we have historically diverted our attention from the lives of the common people and from the day-to-day architecture of the people we study. Consideration of vernacular architecture returns the research focus to the structures that housed people, their actions, ideals, and enterprises. The study of vernacular buildings differs from the study of monuments, although it can involve monumental structures.

Monuments include those architectural forms whose intended use is to serve as representations or reminders of individuals, events, or belief systems associated with specific places or spaces (Elliott 1964:52). Monuments are often large structures that dominate their landscape or their settings, indicating their importance by some combination of size and physical appearance; many are meant to be viewed from the exterior and assume some degree of users’ or viewers’ knowledge in that they are not explicit in their meaning (Trigger 1990:119; Elliot 1964:52). Some monuments are easily identifiable as to their function; for example, within their specific cultural context, tombs share a similar plan or appearance that is easily
recognized and function both to house and commemorate the dead. Monuments are not habitation sites of the average person and although they serve specific functions, typically these functions seldom involve the day-to-day activities of life. Instead they represent acts of memorial and are involved in the enactment of social meanings (Dillehay 1990:223). Monuments stand separate from daily life and reflective of underlying belief systems; in Western approaches to architecture, this has been represented as the separation of object from subject in monument interaction (Thomas 1990:169). In certain situations, people are meant to interact with monuments. Thomas (1990:169) suggests that “meaning does not inhere in space, it is evoked and read into it” and thus, through engagement with monuments and the creation of experience, humans come to value certain attributes of the demarcated landscape. Landscapes are meant to be read, remembered, and memorialized through the experience of a given place.

Monuments have been seen by archaeologists as evidence for increasing economic and social stratification (Renfrew 1979; Shennan 1982). Research has also explored monuments as artifacts of elite ability to control and extol resources (see Chapman 1981; Trigger 1990 for examples). Certainly most anthropologists see monuments, especially those from archaeological contexts, as symbolic systems of legitimization (economic, political, and/or religious) (Hodder 1982; Shanks and Tilley 1982; Shennan 1982). In this research, the value of monuments is not to be downplayed but rather to be reconsidered along the lines of the inherent monumentality of all structures, as every structure signifies a place of activity, control, access, influence, experience, and ritual. Monumentality is something all structures can achieve although not all structures can be monuments.

Monumentality is often used interchangeably with monument and I find this misleading. Monuments are specific kinds of construction, erected in acts of memorial and intended to reinforce, evoke, and remind the viewer of a specific collective memory; Greenblatt (1996) discusses the role of monuments in the formation and crystallization of collective remembrance. Monumentality is not something I tie directly to form or function. Monumentality can be assumed by any structure, place, or space. A grain of sand is not a monument, but it can take on the social and cultural values of being ‘monumental’. To begin to address what makes a structure monumental, it is first necessary to define those aspects of the built environment that are not monuments, those that have commonly been referred to as vernacular. In so doing, I also
hope to clarify the position of structures such as elite residences and religious edifices within this system of definition.

“Vernacular” and “vernacular architecture” are often used to describe the constructions of the average person. A more robust definition of vernacular architecture can be achieved if we consider as vernacular not just the everyday houses or workplaces of the masses, but all buildings that belong to a ‘type’ of which there are many others of the same ‘type’ at any given time (Lawrence 1983:19). Mercer (1975:1), who first suggested this approach, imagined that vernacular structures were a social phenomenon and were most aptly defined in terms of their relative numbers. Thus, vernacular is a category relevant to the day-to-day lives of the working class majority, but can include professionally planned or constructed buildings especially when the type of such buildings is common; for example, schools (Groth 1999:444). Burnskill (1981:24) suggests that vernacular structures can include buildings that are permanent, that provide for the activities of “ordinary” people, that can be strongly related to place, and that often use local materials in their construction or present regional choices in construction material or principles. Caravanserais demonstrate many of these vernacular characteristics.

Vernacular architecture and monuments can function in both sacred and secular realms. I suggest that although structures recognized as monuments trend towards sacred spaces and vernacular architecture toward secular, neither of these defines the degree of monumentality a structure may demonstrate. As Petherbridge (1978:193) has stated, “(m)onuments and public buildings do not, however, exist in isolation but play a particular symbolic role in a total spatial and hierarchic system of building and decorative forms, serving to reinforce political and social structure and religious belief”. In furtherance of this, I return to the concept of monumentality and how structures can take on monumental socio-cultural roles whether they are vernacular structures or monuments in form. Structures can occupy a place somewhere between the definition of monument and vernacular. I include within this group of structures those that take on cultural or social meanings beyond the functional requirements of their enclosed spaces. These are monumental-vernacular structures; places that form collective memories and identities while being common throughout a landscape and serving the needs of the average person.

Institutionalized structures can be thought of in a similar way. Hospitals and prisons are utilitarian and they are often monumental in their physical size and more importantly can serve
as referents to overarching political ideologies and social constructions of community and identity.

Trigger (1990) discusses in depth the formation of monumental architecture. He outlines the defining feature of monumental structures as the scale of the structure and its elaboration (decoration) exceeding its functional requirements (Trigger 1990:119). He goes on to suggest that monumental architecture is often better constructed than vernacular architecture and as a result is more likely to survive into subsequent periods (Trigger 1990:120). One of the most helpful observations made by Trigger (1990:128) is that the kinds of monumental architecture constructed in a given period can reveal the social processes at work as they draw together new social, political, or economic systems. For this research, this is an exceptionally helpful way of considering the interpretive value of the caravanserai as a vernacular construct with monumental value. Elliot (1964:52) called such vernacular monumentality the ‘monumental non-monument’, those structures that adopt the characteristics and socio-cultural impacts of monuments despite having non-monument or more everyday functions. This is something Greenblatt (1996:36) called ‘zero-degree monumentality’, where socio-cultural importance, especially in the evocation of shared meaning and memory, is assigned to a structure that is not overtly assigned to this memorial function. Trigger eloquently summarizes that “monumental architecture makes power visible and hence becomes power rather than merely a symbol of it” (1990:122). In light of these ideas, I consider monumental architecture to include those components of the built environment that serve as symbolic representations of power, be it economic, political, or religious. Within this system of monumental structures, I include palaces, forts, religious constructions, and commissioned trade and travel amenities. These structures house activities, enact memory, and encourage identity and are therefore “monumental”. I reserve the term “monument” for structures there were constructed for the purpose of remembrance and that do not serve day-to-day functional requirements.

This chapter overviewed the terms and theories that underpin the methodologies, analyses, and interpretations drawn throughout this dissertation. The chapters that follow draw on these theories and definitions as I explore the use and reuse of caravanserai structures, and consider the identities associated with caravanserai spaces and contingent in the production of meanings and memories for site users. Next, chapter three contextualizes the study of Islamic
caravanserais and looks specifically at the Mughal expression of this pan-Islamic structure and
the state of Mughal caravanserai typologies.
Chapter 3 Mughal Caravanserais in their Larger Context

Caravanserais are structures found along trade and travel routes. Essentialized rest-stops where travelers sought shelter and supplies, caravanserais are found throughout the medieval Islamic world, though variations in style, size, and the facilities offered do exist. This chapter offers an overview of Mughal caravanserais and caravanserai forms in general. The research on caravanserais is founded in the study of Seljuk (Tukel 1969; Yuvuz 1997), Ottoman (Sauvaget 1937, 1939, 1940; Unal 1973, 1978) and Safavid (Housego 1974; Kleiss 2002; Siroux 1974) serais, often using Persian (Kleiss and Kiani 1995) examples as the foundation for comparative studies and trait lists (Hillenbrand 1994, 2003). I begin by presenting the generalized pan-Islamic caravanserai form and associated functions. I then present the generalized form and function of specifically Mughal caravanserais. This situates my research, as I attempt throughout this dissertation to look at Mughal caravanserais first as entities in and of themselves (following the work of Dar 1999, 1994), and second as structures that are part of a corpus of functionally and structurally related buildings across medieval Islamic trade routes.

Among Islamic architectural historians there is a widespread view that form does not determine the functions that occur within constructed spaces. Many Islamic buildings have similar forms (for example, mosques and tombs), and these forms may have a multiplicity of functional uses (Grube 1978:10; Hillenbrand 2001:165; Lewcock 1978:130). The study of the life history of any caravanserai is the study of both the functional and monumental components of the constructed form. Serais are monumental-vernacular structures that dominated the rural caravan landscape (see section 2.3 for further discussion of monuments and monumentality). Caravanserais serve as locations; places toward which people move and within which certain social identities are constructed.

3.1 Generalized Pan-Islamic Caravanserai Forms

The caravanserai form is believed to have Persian origins and likely developed out of the form of Roman forts sometime around AD 1 (Sims 1978:98). Depending on the region in which they are found (and in some cases who built them), caravanserai structures are referred to by various names (Table 3.1).
Table 3.1 Terms Caravanserai Type Structures.

<table>
<thead>
<tr>
<th>Root Language</th>
<th>Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persian</td>
<td>(C/K)aravans(e/a)rai,</td>
</tr>
<tr>
<td></td>
<td>(C/K)aravansaray,</td>
</tr>
<tr>
<td>Persian/Turkish/Arabic</td>
<td>Khan, Han</td>
</tr>
<tr>
<td>Arabic</td>
<td>Funduq “hotel” or Qasr “fort”</td>
</tr>
</tbody>
</table>

Hillenbrand (1994:331) and Koch (1991:68) describe the standard form of caravanserais of the Islamic world and Western Asia as square buildings around a central courtyard with a single monumental entrance (see Figure 3.1). They have blank exterior walls that may have air holes (or perhaps drainage holes) at the base (Hillenbrand 1994:331). Grube (1978:11) notes that serais can rarely be interpreted from their exteriors, as their high undecorated walls have little relation to their interior organization. Rounded bastions mark the corners and may continue along the sides. There may be a vaulted vestibule between the entrance and the internal courtyard. The central courtyard is surrounded by raised platforms on which arcades mark the equally sized cells that housed travelers (Sims 1978:101; Petersen 1996). In some two-storied serais, the lower part of the cells is used to store merchandise, while travelers resided in the upper level (Hillenbrand 1994:331; Sims 1978:88). Animals were often stabled in the corners of the central court and a water source (most often a well) is usually found at the center of the courtyard (Hillenbrand 1994:331). In a variation of this form, some caravanserais contained baths in their corner sections and the animals were housed separately from the travelers (Sims 1978:101), often along the exterior walls of the structure.

In many serais, inscriptions can be found near the gates. These often dedicated the serai to someone (often the person who commissioned the structure), and include details about who made the serai, its date of completion, and a religious quote. Inscriptions such as these can be very useful for dating serais, but since many serais have been left as rubble outlines, these inscriptions, if they ever existed, have long since vanished. Inscriptions can be seen as labels, religious texts, and statements of power and control (Ettinghausen et al. 2001). Similar to all textual sources, inscriptions need to be cautiously employed when drawing conclusions about dates, power assertions, and reasons for construction (see chapter four).
Islamic caravanserais often incorporate a *four-ivan* plan into their constructed form, a tradition borrowed from the pre-Islamic Sassanian dynasty (3rd-7th centuries). An iwan is “a vaulted hall, walled on three sides, with one end entirely open” (Petersen 1996:130). The *four-ivan* plan involves the placement of an iwan in each of the walls lining an interior courtyard and is a common component of Islamic architecture. In serais this becomes the gate systems and false gates that represent modified iwans and are balanced for symmetry across the courtyards (see Figure 3.1 for a generalized caravanserai plan).

![Figure 3.1 Generalized Four-ivan Caravanserai Plan.](image)

The earliest identified caravanserai remains date to the Umayyad period (7th-10th centuries) and are found in Syria, where they conform to a standardized plan (Petersen 1996:146). The earliest identified Islamic caravanserai is Qasr al-Hayr ash Sharqi, 100 km from Palmyra at the intersection of the road to Iraq and Damascus and dated to AD 727 (Ettinghausen *et al.* 2001:37). As early as the 8th century, form similarities among functionally diverse Islamic architecture began. A similar plan to that described above began to be used for fortresses, caravanserais, madrassas, and mosques (Sims 1978:102).

During the Seljuk period (10th-14th centuries) caravanserais became associated with towns and became centers for trade; it is during this period that the more specialized Persian
term ‘caravanserai’ arises, as khan structures were adapted to cater to caravans (Petersen 1996:146). The diffusion of the four-iwan plan in caravanserai form is greatest after the Seljuks popularized it in the 10th century and further adapted the four-iwan plan to mosques, madrassas, palaces, etc. (Petersen 1996:130). By the 12th century, caravanserais had become a standard feature of Islamic architecture, and most caravanserais after the 10th century appear to have been modeled after the Seljuk plan with similar structural arrangements found in Safavid (16th-18th centuries) and Mughal (16th-19th centuries) constructions.

Ottoman (13th-20th centuries) caravanserais were a variation on the enclosed courtyard form as the central courtyard in these structures is absent or much reduced, and complex stabling systems were often attached. During the mid-Ottoman period (16th century), we also see the addition of amenities such as baths and mosques in the caravanserai complex (Petersen 1996:147).

Mughal caravanserais, as discussed below (section 3.3), are most similar to the standardized Islamic form established in the Seljuk period. They share more similarities with the caravanserais of the contemporary Safavid period in Iran than they do with contemporary enclosed Ottoman caravanserai spaces.

3.2 Generalized Pan-Islamic Caravanserai Function(s)

The discussion of form in the previous section also introduced some associated caravanserai functions. As is often the case in architectural discussions, form and function assume a duality and it is only by attempting to discuss them as separate entities that their interdependence, or at least our architectural perception of it, becomes evident. This interdependence echoes the roles that such structures played as places formed and places in practice, and sets the necessary allusions to the interpretation of places in memory. In this section I look specifically at the functions associated with the pan-Islamic caravanserai form or those aspects that contribute to places in practice.

Standard caravanserais were meant to house and provision merchant caravans. Caravans typically comprised merchants traveling together for safety, their merchandise, and individual travelers who attached themselves for safety and companionship (Parihar 2008:17). Activities at serais involved providing fodder, food, bathing facilities, religious buildings, blacksmiths,
clothing, and travel accessories. Whether a serai was in a rural or urban setting may have influenced what provisions it provided and the functions it was expected to accommodate. Often, serais in city settings included spaces to accommodate shopkeepers and merchants who might use such spaces infrequently to permanently (Hillenbrand 1994:336). Rural caravanserais met the immediate needs of the travelers and served as sheltered and protected centers; as such they were also necessarily located near a water source and required some means of acquiring local and/or imported supplies. Some serais had provisions to accommodate both the everyday traveler and elite members of society. The entrance gate and additional larger rooms were often used to house important guests as well as resident staff and caretakers (Sims 1978:101). After the fourteenth century, some serais housed mills, bakeries, and tea shops (Sims 1978:101). Some Ottoman caravanserais are described as ‘city-like’ in the large number of functions they served. A review of the amenities and facilities provided in these Ottoman structures is informative. The Mughals were surely aware of the provisions afforded in Ottoman structures, and as the Ottomans were their rivals, it is likely that they would have tried to provide similar amenities in their own constructions. Khan al-Qutaifah, an Ottoman caravanserai, had its own water supply, ovens, public kitchens, fountains, mosques, washrooms, merchant stalls and shops, public baths, and garden spaces (Hillenbrand 1994:352).

3.3 Generalized Mughal Imperial Caravanserai Form(s)

It is difficult to define a Mughal architectural style relevant to an analysis of all Mughal architectural forms. This difficulty arises from the variable architectural referents on which the different types of Mughal structures were based. For example, some Mughal structures drew on Persian forms, some on earlier Indo-Islamic forms, and some on Hindu forms, styles, and traditions (Martin 1978:264). Mughal style is the end result of a process of acculturation (Hillenbrand 2001:270); it is the mixing of various styles to various degrees within various buildings (Asher 1992:1-18; Grube 1978; Khan 1985:42; Koch 1991:14; Martin 1978:264; Petersen 1996:199). Regional variations in style are further confounded by periods of rebuilding and reuse. It is therefore necessary that typological studies be undertaken so that serais may be understood in relation to their region, period of construction, use, reuse, rebuilding, reinterpretation, and abandonment.
Three main points must be made in the analysis of Mughal structures. First, the style of Mughal architecture is supra-regional and yet allows regional building traditions and styles (Koch 1991:14). Second, the study of caravanserais is the study of both the secular and the monumental. Third, serais are functional structures that served largely utilitarian purposes, and punctuated trade routes especially, in a rural landscape. It is the aim of the space analysis undertaken in this project to address the interplay of form and function within Mughal-period serais and to establish a research strategy for analyzing standing architecture that comprises the category monumental vernacular. These points are situated in the discussion that follows and evolve from the consideration of the tripartite formation of place as established in chapters one and two.

Caravanserai-like structures existed in the sub-continent prior to the arrival of Islam. Although the form of these structures was entirely different and the scale was much smaller, the use of rest-houses along transit routes in India is noted in historic documents (Deloche 1993:160). These structures were also founded and maintained by charitable donations (Deloche 1993:160); thus, the act of pious endowment was certainly not new to the sub-continent with the arrival of Islam.

It is during the Mughal period that we see the standardization of the exterior form of South Asian caravanserais, with similar approaches to the formation of gate systems and exterior walls as in both the Seljuk and Safavid forms. We also see the elaboration of decoration on these exterior facades. This practice reflects the influence of non-Muslim indigenous traditions that were adapted to use on a more standardized Islamic (Timurid-Persian) form (Grube 1978:12; Koch 1991:43). Mughal imperial constructions were often grand in appearance and, to a lesser extent than in mosques and palaces, this opulence also applies to the caravanserais (Parihar 2008:82). Most of the Mughal serais discussed in both the academic and historic literature are urban serais associated with other monuments (often burial monuments or pilgrimage locations) or monumental palaces. This association with other monuments means that descriptions of them are more common than for rural or non-monument related urban serais. The form of urban complex serais, however, is less defined as their arrangement depends on their incorporation into a larger complex. Urban serais that are a part of larger complexes were often constructed with more permanent stone material, as opposed to baked brick (Dar 1994:28). As a result, urban serais were more likely to be commissioned by members of the ruling elite
and their immediate entourage who were responsible for the commissioning of the larger city-based complexes. The difference between these imperial-commissioned-complex serais and rural serais, more commonly commissioned by local elites, is one of degree, where access to resources for construction and the resultant choice of construction materials was often limited by the wealth and power of the caravanserais commissioner(s).

South Asian serais fall into the corpus of pan-Islamic forms but represent a specific refinement of this generalized type. Here, I outline what is believed to be the generalized form of Mughal imperial caravanserais that were not part of imperial complexes. There also exist serai forms that are less standardized in plan and were unique responses to specific caravan or merchants’ needs. I include in this outline imperially commissioned structures or structures that emulate imperial commissions; these structures show much more regularity in their form than do smaller regionalized constructions and are responsive to the imperial desire to support trade and travel by provisioning travel amenities across the empire. I refer to these as “standardized Mughal caravanserais”, in that they attempt to conform to some imperially constructed concept of what a caravanserai should look like and include.

Mughal serais typically have two to four entrances (Dar 1994). Internal features of the serais as described by Dar (1994:28-31 1999:112-113), Deloche (1993:168), and Koch (1991:65-68) included a bazaar that ran from gate to gate, and a mosque somewhere, perhaps two (one for women and one for men) if space permitted, within the open courtyard. Serais that were located close to or within cities are less likely to have internal mosques. A well is usually found within the open courtyard of the serais and/or just outside their fortified walls. If there was a first floor, it was likely accessed via a staircase in the main gateway or by staircases near the corner bastions. Mughal Emperor Jahangir (reign AD 1605-1627) is credited with introducing public baths inside serais, a practice that was continued by others (Dar 1994:31).

The general morphological form for Islamic caravanserais as outlined by Hillenbrand (1994) and Koch (1991) is essentially the form seen in Mughal imperial or standardized caravanserais. Some alterations stem from regional variations or specific occupational modifications. “(U)niformity [in both the Islamic and more specifically the Mughal period] was achieved by the reduction of the architectural vocabulary to a few forms” (Koch 1991:93). It is the idiosyncratic variation in the architectural details of serais, as opposed to their generally
ubiquitous shape and layout that makes these structures difficult to date or even identify to period (Dar 1999:112).

In the creation of chronological typologies the emphasis is most often on stylistic variants and the relation of these variations in time in order to form a relative chronology. Thus, stylistic studies of form for typology building take two intertwined directions: the use of style as an expression of cultural values (including the transmission of information) (Giles 2000; Hegmon 1992), and the use of style as a tool for the creation of typologies (Burnskill 1985, 1990; Conkey and Hastorf 1990; Davis 1990; Hegmon 1992). As part of the expression of cultural values, there are varying economic, political, and ideological motivations for building creation, decoration, and use. Thus, the consideration given to caravanserais as places (formed, in practice, and in memory) reflect the interrelated meanings and roles of such structures in the creation of typologies.

The use of style as a tool in typology creation is familiar in archaeology. The creation of seriations and the sequencing of type forms are the basis for many typologies and typological relationships. Style as applied in frequency seriations is seen as an indicator of change through time where the incorporation of stylistic changes happens slowly over time and is reflected by the gradual decline of the pre-existing style’s popularity. Architectural styles often follow similar frequency variations over time with popular styles appearing, dominating, and then gradually declining in use. This understanding of architectural style and any related changes in construction forms is based on style serving as a representation of, at the very least, the cultural choices of people to reproduce certain styles. Style is “a way of doing something, and …involves a choice among various alternatives” (Hegmon 1992:518; see also Sackett 1985:119-115); it involves a way of doing, thinking, believing, and producing (Hodder et al. 1996:45). Style, and by extension the generation of form and type, change through time and this variation through time when identified is the basis of chronological typologies.

Style, a seemly innocuous word, is in fact the embodiment of action and choice. Style reflects individual as well as collective choice, and alteration in any style over time reflects the interaction of a broader system of influence than is contained in the item undergoing transformation. Alteration to the popular decorative style for pottery, for example, can be a signature for alteration in the entire cultural system. Likewise, it can reflect the changes in or personal preferences of an artifact’s maker. Thus we ‘read’ pots (material culture) and we accept
as fundamental that they reflect past peoples and in some way mark cultural decisions, identities, and interpretations. Style is often considered outside of technological constraints but in the formation of architectural typologies style change over time may have as much to do with technological change as it does with individual expressions of choice (of technology, design, decoration, etc.) or personal identity. As a result, we need to pay close attention to the underlying causes of stylistic variation. Why do structures change over time and how do those changes reflect the non-tangible cultural aspects in the minds and motivations of the creators and users of spaces and places? In this research into caravanserai form and functions, style is an operational choice. It is a means of elaborating a given form and allows the display of cultural choices, be they individual or institutional in nature. It is something that can emphasize specific functions and elaborate prescribed forms.

The multi-vocality of style in the construction of serai form is an important consideration in the creation of architectural typologies. If we aim to create chronological typologies of caravanserais that speak to some temporal changes in design and structure then we need to ascertain what attribute(s) serais exhibit that can be used to assign them to a typological category. These attributes are most helpful if they are highly diagnostic, by nature of regional or temporally constrained presence or absence. These attributes are also most valuable if they are well defined and depend more on the formation of the architectural body than on the variable application and multi-vocal interpretation of style.

Variation, even that limited to changes in the decoration of a standardized form, often lends itself to typology creation. However, the variations observed in the details of serai construction are not temporally confined nor do they align into a sequence of structural alteration. Rather, a common form persists over the Mughal period and variation in form often comes from stylistic and decorative principles that may have had more to do with regional esthetics than with stylistic change over time, a problem further confounded by the repair and reoccupation of older buildings. It is also possible that some of the pre-Mughal caravanserais were used into the Mughal period with some degree of architectural alteration.

The creation of chronological or functional typologies depends on a number of factors, the most significant of which is the definition of an attribute or host of attributes that defines the inclusion or exclusion of a given structure within the defined typological categories. Typologies are reductionist but they are a helpful way of patterning data, such that patterns observed in the
present can be related back to some relevant action in the past (Banning 2000:55). A major difficulty with the formation of typologies of South Asian serais is the limited sample size currently available. As a result, the attempts at typology creation to date (Dar 1994; Khan 1990) are based on a system in which a given typological category may have a sample size of one and the entire typology may have an n value equivalent to the number of prescribed typological categories. The system of survey presented in chapter five (section 5.2) offers an alternative to the study of serais, in that categories are not defined at the outset. Instead, data are recorded in such a way that patterns can be sought after the structure has been reduced to a coded classification. In the remaining portion of this chapter, I present Hillenbrand’s (1994) comments on attributes important to caravanserai typology creation and examine the typologies constructed by Khan (1990) and Dar (1994).

Hillenbrand (1994:337) suggests that rural as well as urban serais should be broken down into sub-categories based on size, chronology, location, building material, structural techniques, and range of facilities. The creation of a typology in this vein is the aim of the Caravanserai Networks Project, the project within which my doctoral research is situated. The creation of this typology will form a basis from which interpretations can be drawn about use, reuse, reinterpretation, abandonment, and embedded and embodied economic and social systems. In this work, I seek to use as many lines of convergent evidence as possible to date serais or assign regional associations. For example, the integration of information about the floor plan, architectural details, textual references from both inscriptions and journals, and material culture remains can be used to suggest the date of creation of various serais and also dates of possible repair and rebuilding. Examples of this are provided in chapters six and seven.

Khan (1990) and Dar (1994) have attempted to define a typology of Mughal caravanserais within the Indian sub-continent on the basis of both form and function attributes. They break these serais into four (Khan 1990:133-136) or five (Dar 1994:22-26) forms respectively. They present these types as form-based classes, but then apply functional attributes to each form (Table 3.2). Although examples of these four or five types exist within the Mughal caravanserais repertoire, mixtures of each functional and morphological form also occur. These groups are outlined below and can be conceived as variants on the standard plan adjusted to variable functions and construction constraints.
### Table 3.2 Simple Serai Typology (After Khan 1990:133-136 and Dar 1994:22-26).

<table>
<thead>
<tr>
<th>Fort-cum Serai</th>
<th>Mausoleum-cum-Garden Serai</th>
<th>Way-side Serai</th>
<th>Town-Serai</th>
</tr>
</thead>
<tbody>
<tr>
<td>-Single gateway and four solid corner bastions.</td>
<td>-Near to a garden or mausoleum room</td>
<td>-Common along highways but also found in towns/cities</td>
<td>-Rest houses in large townships</td>
</tr>
<tr>
<td>-Similar to the structure of Mughal period forts</td>
<td>-Likely to be urban serais, related to monumental structures.</td>
<td>-Typically have two gateways, bastions are replaced with corner rooms.</td>
<td>-Located close to the gateway of the town/city and near the main market.</td>
</tr>
<tr>
<td></td>
<td>-Bazaar, a mosque and a well in courtyard.</td>
<td></td>
<td>-More mercantile and commercial spaces.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1) **Fort-cum Serais** (Table 3.2): All serais are forts in that they close up for the night and offer protection to the people who reside within. These fort serais, however, have only a single gateway and four solid corner bastions. These kinds of serais are common in the early 16th century A.D., before the rule of Akbar (AD 1556-1605). No such structures survive in Pakistan today and only limited examples can be found in India. Often they had parapets on the tops of their exterior walls that allowed soldiers protection while defending the structure.

2) **Mausoleum-cum-Garden Serais** (Table 3.2) are defined by the proximity of a garden or mausoleum. These are likely to be urban serais related to monuments. Several serais of this type exist in the Mughal imperial complexes in Delhi, Lahore, and Agra. Some contain mosques and have *four-iwan* arrangements with internal water sources.

3) **Way-side Serais** (Table 3.2) are commonly seen along highways between large city centers but also occur within these centers (e.g., Gor Khuttree Serai). These serais
typically have two gateways; the solid corner bastions of the fort-cum-serais are replaced with enlarged corner rooms. This is the most common form of Mughal caravanserais in the Indian sub-continent and most closely aligns to the standardized Mughal Serai form. There was usually a bazaar, a mosque, and a well within these serais.

4) **Town-Serais** (Table 3.2) are essentially rest houses in large townships, located close to the gateway of the town/city and near the main market and important parts of urban centers. These serais may have a public _hammam_ in them and may be irregular in footprint, particularly where they have been constructed within an already architecturally-populated environment.

5) **Custom-clearing Serais with Double Compound** (Table 3.2): these serais have two compounds with one larger than the other. They are effectively two way-side serais joined by a common gate. Dar describes the function of such serais, “[o]ne would enter the bigger sarai through its northern gate, wait here until allowed to pass into the adjoining smaller sarai through the connecting door and went out through the southern gate after his documents were checked and clearance obtained” (1994:26). This category may represent an outlier or sub-type more than a defining type, as only one such serai has been located, the Badarpur Serai near Delhi, India.

In addition to the typological efforts of Dar (1994) and Khan (1990), other researchers have looked at specific examples of standardized Mughal serais in the sub-continent. Taj Ali (2000) offers an overview of the _baolis_ (step wells), bridges, and caravanserais along the Grand Trunk Road in Pakistan. He offers some specific analysis of the Gor Khuttree Serai that is further reviewed in chapter five (Ali 2000:89-94). Parihar (2008, 1985) looks at the Mughal constructions, including caravanserais, in Punjab and Haryana within India. These works offer valuable information about specific structures and the form(s) they may have taken in the past. Likewise, the work of Begley (1983) and Deloche (1993) further illuminate specific serais and some of the routes across the sub-continent through the medieval period (8th-18th centuries).

As noted earlier, the generation of a caravanserai typology for Mughal South Asia is affected by the relatively small number of surviving structures available for study. This does not imply that such typologies are not valuable, but that any produced must consider the nature of the sample they derive from. The survival rate of Mughal serais requires further examination.
and involves consideration of who commissioned these structures and how they were constructed.

In the wider Islamic world, rural serais were often built using funds from elites who were fulfilling a political or religious obligation to the emperor of the time (Sims 1978:97). In some situations, serais could be built by a member of the elite both as a tribute to an individual and in support of the region’s economic development. Serais were also constructed as pious acts meant to support persons on religious pilgrimages. Unlike the grander forms of Mughal architecture - palaces, mosques, and imperial complexes - isolated serais, both urban and rural, often did not withstand the test of time. Many caravanserais have not survived unaltered through time; often these Mughal structures were altered in subsequent periods. Some had their bricks and construction materials actively scavenged by local residents (Begley 1983:174; Deloche 1993:172). Thus, the brickwork associated with many of the serais can be seen in the brickwork used in the local villages. Serais dating from the early Mughal period are largely identifiable by their foundation outlines, with perhaps some exterior walls or portions of the substantial gateways remaining (Figure 3.2). The survivability of these structures seems to be additionally dependent on the ability of a given structure to continue to serve a purpose within its built environment as the landscape around it was abandoned, reconstructed, and repurposed through time.
Figure 3.2 Taraori Serai, Karnal District, Haryana, India. As seen from Google Earth 2009 (29°48′15.99″ N, 76°55′18.53″ E). Note the presence of two gateways (A and B) and the exterior wall (outlined in yellow). However, the entire interior section and cells have been replaced with recent constructions.

3.4 Generalized Mughal Caravanserai Functions

How do the Mughal and later period caravanserais function and how were they conceptualized by their users within their social, political, and economic systems/structures? The conceptualization of serais by users relates to the multi-functionality of serais as places. They served a number of functions. Travelers including pilgrims, merchants, and scholars used them. The serais offered protection from robbers and inclement weather, and were places at which to rest and restock needed supplies on long journeys or to store goods for longer stays in urban settings. For travelers on long-distance journeys, serais served as route markers and places to rest or stay safely. As rest places, serais offered mosques at which daily prayer could be performed, as well as markets and bazaars where supplies could be purchased and repairs made to caravan trappings (Peterson 1994:51; Sims 1978:97).
Travel was an important aspect of life during the Mughal period for religious, economic, and political reasons. Many subjects engaged in journeys that had religious and economic motivations. For Muslims, travel to Mecca is one of the five pillars of the faith (Petersen 1994:47). The Qur’an commands, “Pilgrimage to the House is a duty to Allah for all who can make the journey” (Sura iii as quoted in Sims 1978:97-98). Pilgrimage was also a central aspect of various Hindu traditions. Pilgrims of all faiths traveled to religious centers, tombs, and places of spiritual enlightenment (Asher 1992). In order to fund these journeys, pilgrims commonly combined their religious travel with economic activities (Insoll 1999:113-114). Finally, travel undertaken for economic and political reasons brought court officials and merchants to serais. Some were relaying information from the imperial court while others were collecting the taxes and revenue from the serai and the surrounding regions (Nijjar 1968:224). In later periods, serais were used as relay posts for mail transport, although by the British period in the sub-continent _dak_ bungalows were preferred for this purpose.

Records of visits to caravanserais during the Mughal period can be found in the journals of travelers from a variety of backgrounds (Sims 1978:98). These texts heighten our understanding of the functions and perceptions of caravanserais use. An excerpt from the records kept by Friar Sebastian Manrique describes his journey through the Indian sub-continent in February of AD 1641, and refers to serais that he frequented along the route between Sirhind and Lahore (Begley 1983:177):

> [We] traversed many towns and large villages situated along the very road itself, all well and plentifully supplied with provisions and good Caravanserais. Some of the latter are handsome and particularly well built, in which we could not find room to stop owing to the stream of passengers of all sorts and conditions, who were at that time following those roads, owing to the presence of the court at Lahore (Manrique 1641, as quoted in Begley 1983:177).

Note from this passage that the serais were well used and that in some instances travelers were unable to find accommodation within them because of the volume of highway travelers. During the Mughal period, travel was intense and serais were well warranted by the number of people using the roadways. The growth of the Mughal Empire led more people to engage in long-distance travel either to reach the emperor’s capital, to engage in trade, or to make pilgrimages in this time of relative political stability.
Pietra Delle Valle of Italy noted on his AD 1623 voyage through the sub-continent that serais in India were not like those he had seen in Persia and Turkey (which conforms with the form differences previously noted among Mughal, Safavid, and Ottoman structures). He describes the interior of the serai in Ahmadabad as being like “whole great streets of the city designated for the strangers to dwell in” (Delle Valle 1623, as quoted in Ansari 1975:106). This description likely refers to the presence of bazaar structures both surrounding the exterior of the serai courtyard and expanding to fill the space within. Some travellers encountered serais that were already in a ruined state. William Finch, in his account of his AD 1608-1611 travels, records that the ‘Kings saray’ inside the northeast Gate of Agra was once a stone structure but was then in ruins, the cause for which he does not address (Finch as quoted in Foster 1921:149). Other serais visited by Finch on this trip were described as being both beautiful and well appointed, such as Chapperghat Serai: “here is one of the fairest serais in Indain, liker a goodly castle then a inne to lodge strangers; the lodgings very faire of stone, with lockes and keyes, able to lodge a thousand men” (Finch as quoted in Foster 1921:179).

There was usually no fee to stay over at a serai; however, in some instances fees were charged to patrons who wished to make use of the more private cells located off the central courtyard (Begley 1983:168; Khan 1990:114). Those who wished to stay in the courtyard itself were usually allowed to do so without charge. Serai Nur Mahal, Jalandhar district, Punjab, India has an inscription associated with its gate that reads “[t]aking payment from travelers is forbidden, the Nawab Zakarya Khan Bahadur, governor of the district, having exempted them. Should any Faujdar of the Doab collect these dues may his wives be divorced” (Nijjar 1968:204). Begley (1983:168) estimates that upwards of 2000 or more travelers could be housed within an average rural serai. Larger caravanserais might have had special rooms in the entrance block for important guests or for the serai’s permanent caretakers (Sims 1978:101). Deloche (1993:179) discusses the amenities offered in South Asian serais during the rule of Sher Shah Suri (AD 1540-1545). Services included lodging both for Muslim and Hindu believers, hot and cold water, beds, food, and grain for horses and camels, all distributed according to the rank of the arriving individuals and in many cases all paid for by the government (Deloche 1993:179). Surrounding the serais were villages and agricultural lands allocated to provision the serai and its patrons (Deloche 1993:179-180). These lands served as endowments established by the person who commissioned the serai.
The memoirs of various Mughal Emperors indicate that they frequented serais during their travels (for a summery see Asher 1992). It is unclear whether specific serais catered to the imperial court or if all serais were equally frequented (Begley 1983). Iqtidar Alam Khan (1990:114) has suggested that most serais were frequented by members of the middle class who lacked the sophistication of the Mughal aristocracy. He feels that the majority of serais were intended for middle-class patrons and that serais with larger resting quarters may have reserved these spaces for members of the upper-class, “who despite their prejudice against the middle class cultural ethos of the karwansarays, were often obliged to avail themselves to these facilities” (Khan 1990:137).

Imperial patronage of serais involved more than just occasional visits; it also included the endowment of funds for serai construction. Mughal Emperors were on the whole well-traveled people who realized the need for safe highways across their lands. Highways facilitated the safe travel not just of merchants but also of statesmen, revenue collectors, and military personnel. Thus, when emperors called for the construction and improvement of serais, bridges, and wells, they were investing in the economic and political well-being of their land. Religious tolerance allowed people to travel freely and frequent multiple serais and townships. Although utilitarian constructions, serais were monumental vernacular forms that stood out on the landscape as beacons demonstrating the economic and political wealth, power and presence of the empire (Ettinghausen et al. 2001:39).

Thus, there were multiple motivations for the construction of imperial serais or imperial-emulating serais. One of the less tangible motivations for the construction of imperial serais in particular was the need to express power, both economic and political, across a vast geographical area (Figure 4.1). The method of rule of the enormous Mughal Empire (described further in section 4.2), the largest political unit in South Asian history, required that the emperor and his power was a constant presence in the lives of the people he ruled. This required a mobile court; an emperor and his entourage travelling his lands and engaging with subjects while also maintaining a face of authority and creating a physical referent to rule (Sinopoli 1994). The travel amenities constructed and maintained by imperial funds served a function not dissimilar to the travelling Mughal entourage or the monumental capital. These imperially commissioned trade and travel constructions are in a sense the embodiment of the imperial rule,
communicating the right to control and the right to negotiate both economic and political interactions and engagements.

Sinopoli (1994) considers the interplay of ‘capital’ as place (via the occupation of measurable and content-filled land) with ‘capital’ as centers of administrative, economic, and ideological control. She summarizes that in “some respects, the Mughal capital as locus of activity can be seen as synonymous with the location of the Mughal ruler, whether in a mobile camp or in a large constructed ‘capital’ city” (Sinopoli 1994:294). As Sinopoli goes on to explain, Mughal capitals were many and shifting and were intertwined in the movement of the emperor and his travelling court. The imperial capital sometimes took the form of large tent cities that served as centers of Mughal administrative and military operations. Even when central capitals were established, they were often inconsistently frequented by emperors who were often absent for over half of their reign. What becomes central then in this research is the extension of the concept and meanings behind a mobile court and an absentee emperor, to the political and economic power housed in trade and travel amenities. These amenities served as places that maintained an imperial referent despite the fact that in many cases the structures themselves were rarely, and in some cases never, afforded imperial visitation. The ability of trade and travel amenities to become place holders for imperial political and economic power and actual agents in the formation of imperial identity and power is based on the ability of the court to conspicuously display wealth in creating structures that are intelligible as symbolic and functional referents to ruling power structures.

The fact that power was embedded in these structures is apparent in the actions of Jahangir’s wife, Nur Jahan (Begley 1983:170). Nur Jahan is often credited with encouraging her husband to undertake many construction projects during his rule. However, she is also suspected of trying to increase her own power by building structures and dedicating them to herself. The fact that she was able to achieve great power is reflected in the writings of an agent of the Dutch East India Company. The agent remarks that “[s]he erects very expensive buildings in all directions – serais, or halting-places for travelers and merchants – intending thereby to establish an enduring reputation” (quoted in Begley 1983:170).

In similar fashion to that of Nur Jahan, Mughal courtiers also endowed the construction of serais. By so doing, these individuals sought to accrue power to their name and win favor with the emperor. Often courtiers built serais in areas where they lived or exerted some form of
economic or political control, though the overt (sometimes equally true) motivation for
collection was typically altruistic or devotional (Asher 1992; see Levi’s 2001 comments on
the economic security of pious endowments). Thus, they legitimized their position by creating a
utilitarian building that benefited the people over whom they exercised control. Friar Sebastian
Manrique remarks that the serais are “sometimes erected at the expense of the neighboring
villages, sometimes at the cost of rich, powerful men, who erect them in order to keep their
memory green or to satisfy their conscience, and large sums are left for such works which in
their opinions are works of piety and acceptable to God” (as quoted in Begley 1983:178).
Edward Terry offered a similar comment in his travel records of AD 1616-1619, “[f]or their
workes of charitie many rich men build sarraas, or made wells or tankes neere to haigh-wayes
that are much travelled, where passengers may drinke” (Terry quoted in Foster 1921:325).

What happens to Mughal caravanserais after the Mughal period? The answer to this
question depends on where the serai is located and what purpose it served within the new
administration. Many serais continued to be used to support travel and trade networks. Some
serais were abandoned as trade routes shifted and structures once on main roads were now
distant from them. Additional serais were constructed in some regions as new centers of power
and administration emerged. Deloche (1993:92) points out that the “New Military Road”
developed in AD 1781 was later replaced with the “current” road in AD 1838 (commonly
referred to as the Grand Trunk Road, from Sonoargaon in the Narayanganj District of
Bangladesh to Landi Kotal, North West Frontier Province, Pakistan). The position of the
“current road” represents “the single significant deviation to which the Grand Trunk Road was
subject” though smaller changes to secondary roads also occurred.

Little is known about any specific polices of later administrations towards caravanserais.
We know that trade remained important, as did concerns with the ease of military movement
around the sub-continent. British sources mark the existing travel routes in the sub-continent
and highlight the resources available for the traveler in each town (Ansari 1975). These lists
often include what serais were available, some of which are noted as being new constructions.
This suggests that trade and travel amenities were still supported in the British period. We also
see through these British documents the construction and provisioning of dak bungalows, post
houses and smaller guest houses constructed in a mixed British-Pan-Indian style and used by
British persons while on, most usually, government-related journeys (Nijjar 1968). This
represents a growing separation in this period of the amenities available for foreign visitors from Europe, including Europeans who had become residents of India and worked for the British government, from those available to the more common caravan or local traveler. More recently, some serais have become historic sites or been turned over to tourist functions. More common in Iran, but of increasing consideration within India and Pakistan, is the use of caravanserais structures as tourist bazaars and hotels. The reuse of these structures on the basis of their perceived historical value is a theme more fully developed in chapter eight. Even more have fallen into disrepair and been reused by the local populace as houses or stables. Deloche (1993:172) points out the “numerous ruins in the ancient fortified towns which lined the route from Agra to Delhi, where now buffaloes are stabled within walls of red sandstone, with columns and sculpted windows, and where perhaps royal retinues had formerly been sheltered”.

3.4 Concluding Remarks

The architectural form of Mughal caravanserais had an essential core to which various changes were made either in response to their function or to local preferences of the people involved in their creation and use. This core consists of an approximately square gated enclosure that contained a courtyard, cells of some form, a well, and, often, a mosque. This form is seen repeatedly in floor plans of serais (Parihar 2008), although it varies somewhat geographically. I highlighted these variants in my discussion of the (four or five) types of serais defined by Dar (1994) and Khan (1990).

It is clear that the form and function of caravanserais in general are interrelated. It is also apparent that caravanserais had complex and multiple impacts and relationships with the political, economic, social, and religious lives of the people who used and built them. This reflects the role(s) of specific serais as places formed, as places in practice, and as places through which memories were evoked and meanings ascribed.

In this chapter, I established the general plan of Mughal Imperial caravanserais and outlined the practices that occurred in these places, placing them in the political and economic climate at the time of the serais’ construction and florescence in South Asia, the height of the Mughal Empire. In chapter four, I consider the documentary sources that can be used to expand our understanding of how caravanserais functioned and appeared in the past as well as how they were used in the periods following their initial construction. My goal is to expand on places as
formed and move toward considering caravanserais as places in practice and in memory. I look specifically at how documentary evidence can provide a context within which to interpret alteration and adaptations to a place over time.
Chapter 4 Underpinnings: History, Documentation, and Architecture.

To understand the architectural and experiential history of caravanserais it is necessary to review the historic documents related to these places and spaces. I begin this chapter with an introduction to documentary research. The relevant Mughal, Early European, and British documents are introduced and their strengths and weaknesses as data sets considered. As a part of this review, British and post-British architectural studies are presented. These studies represent the intersection of historical travel accounts with interpretive architectural histories. These lines of textual evidence are considered with regard to the information they present and the biases they introduce and continue to perpetuate in the study of Islamic and post-Mughal architecture within South Asia. I then present a historical overview of northwestern South Asia during the Mughal period, focusing on the architectural contributions of various emperors. This historical overview is necessary to establish how Mughal architecture was formulated, how it changed over time, and how these changes have affected the perception of Mughal constructions that survive into the present. Serais are often difficult to date due to their non-conformity with reign-based styles; however, we need to understand these reign-based styles, to interpret the work of researchers using this categorical system. I conclude this chapter with a detailed history of the study region: the Peshawar Valley, the city of Peshawar, and the place Gor Khuttree.

This research has involved review of materials held in several libraries. Some published textual information was garnered from the University of Toronto libraries, including several of the Mughal Emperors’ *namas* (official histories), written by court-appointed writers and approved by the emperors themselves. The University of Wisconsin-Madison library provided relevant documentary sources, including numerous volumes originally published in South Asia that are difficult to obtain in North America. I also spent 11 days at the India Office Library within the British Library in London. Its South Asian historic records included original traveler’s journals and memoirs, associated photographs and sketches, maps, military documents, gazetteers, missionary documents, and translations of Mughal and Ottoman texts. A final and somewhat unexpected source of historical information has come from the Internet. This has included information from blogs and personal websites created by people who have lived near or visited caravanserais or who are sharing the information they received from family members. In many cases, historic photos of caravanserais on the internet (more than 50 years
old) are being posted by persons who have some connection to South Asia through military service, either their own or members of their family.

4.1 Documentary Research

My approach in this research is to combine historic and archaeological data in a reflexive discourse, one that expands the exploration of the life history of a place and the uses of space within it. In this fashion, documents and archaeological information must be combined as neither can serve as the sole basis from which to understand the past (Giles 2000:2). We first need to establish each discipline’s view of the past before we can integrate them to create a more complete and better informed view (Rahtz 1984:110). As discussed in chapter two, only through consideration of multiple lines of evidence can we understand the formation of places within the built environment.

My approach to the use of historical documentation in archaeological research allows each source of evidence to inform the interpretation of the other. Documents as material culture are tools through which specific forms of communication are structured; recognition of this allows theoretical approaches that do not reduce the importance any single source (Giles 2000:3). The use of multiple sources of evidence is commonplace in archaeological interpretations. Text supplies another source and with consideration of its associated strengths and weakness, can be combined with additional data sources to create a more complete and full understanding of the past (see Moreland 2001 and Little 1992 for further discussion). By using textual references to serais, information can be gathered about occupation-period uses and structural alterations. The types of historic sources whose analyses and compilations I employed are summarized in Table 4.1.
Table 4.1 Categories of Historic and Documentary Sources (adapted from Little 1992:3).

<table>
<thead>
<tr>
<th>Period of Composition</th>
<th>Category of Documentation</th>
<th>Specific Source(s) used in compilation works and analyses</th>
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<tbody>
<tr>
<td>Mughal</td>
<td>Letters, Private Papers</td>
<td>Letters</td>
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<td></td>
<td>Public Display and Official Archives</td>
<td>Names (Official Histories of the Emperors)</td>
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<td>Court Paintings</td>
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<td>Farmans (Royal Decree)</td>
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<td>Inscriptions/Makers Marks</td>
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<td>Tax Records</td>
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<td>Early European</td>
<td>Literature/Letters</td>
<td>Travellers Records/Journals</td>
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<tr>
<td></td>
<td>Maps, Pictorial Archives</td>
<td>Maps</td>
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<td>Sketches</td>
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<td></td>
<td>Mission and Church Sources</td>
<td>Missionary Documentation</td>
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<tr>
<td>British</td>
<td>Literature/Letters</td>
<td>Travellers Records/Journals</td>
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<td></td>
<td>Maps, Pictorial Archives</td>
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<td></td>
<td>Mission and Church Sources</td>
<td>Church/Mission records</td>
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<td>Scholarly Institutions</td>
<td>Geographic Surveys</td>
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<td>Archaeological Survey of India</td>
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<td>Historical Societies</td>
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<td>Transient Documents</td>
<td>Gazetteers</td>
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<td>Newspapers</td>
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<td>Local Sources and Opinion</td>
<td>Oral Histories</td>
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<tr>
<td>Modern</td>
<td>Transient Documents</td>
<td>Newspapers</td>
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<td>Internet Web Sites</td>
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<td></td>
<td>Local Sources and Opinion</td>
<td>Oral Histories/Blogs</td>
</tr>
</tbody>
</table>
4.1.1 Mughal Documents

The Mughals were prolific record keepers. There are many archives of the letters they exchanged with their variable allies and enemies, the Ottomans (Farooqi 1996). We also have records of their political correspondence with representatives of the various countries that came to visit them from Europe as well as detailed records of taxes paid by inhabitants of various regions and economic sectors of the empire (Habib 1982). The most intriguing of these records with regards to caravanserais and architectural endowments are the namas of the emperors. These namas are the official histories of each emperor as commissioned and overseen by them. Researchers have varying approaches to these records. Most (Asher 1992; Lal 2003) see them as summary comments on the activities of the emperors though certainly biased to present the emperor favorably. Regardless, the information recorded in them varies from the day-to-day records of the goings-on in the Mughal court to more detailed accounts of journeys taken by the emperors. It is in the latter that we find information about the caravanserais used by specific Mughal Emperors. In the court accounts, we also see references to the call for the creation of travel amenities and the need to continue such pious and economic acts of construction.

The information garnered by Asher (1992) in her descriptions of the architectural involvements of the Mughal Emperors presented later in this chapter come from these namas. These volumes do not detail information about the means and methods of construction but they are useful as a means of tracking the construction projects undertaken by the empire, reviewing any funds allocated to such projects, and assessing timelines of construction. I also review the farmans, or official decrees from the emperors, in search of additional information about construction projects and associated issues. I draw information from the cumulative research on these historic documents provided by specialists on the Mughal administrative and bureaucratic system (Habib 1982; M.A Ali 1995; Ansari 1984). All of these consulted records have been translated, and this raises additional concerns about changes that may have inadvertently taken place and what information may have been lost in translation. It suffices for this research that the information taken from these records is not detailed and is primarily used to reference the presence or absence of caravanserai structures.

I also consider the information held in the collections of officially commissioned court paintings, as discussed by several experts (V.N. Desai 1990; Dimand 1953, 1944; Soucek 1987).
These paintings provide some visual information about construction practices. In particular, the construction of Fatehpur Sikri was depicted in a series of small paintings (Smart 1974). Information can be garnered from these representations about how construction was approached, the use of models or plans, the presence or absence of architects, and the general process by which buildings were erected. These paintings depict the major construction projects undertaken by the emperors and by their courtiers, and are accompanied by recorded histories. They assist the interpretation of the histories and are part of the Mughal Imperial power system supported by architectural veneration. It is important to recognize however, that these are idealized views, based on perception or recollection rather than direct observation.

An important source of information about Mughal period constructions can be garnered from inscriptions and makers’ marks. Trautmann and Sinopoli (2002:493) raise the interplay of text as material culture in relation to the analysis of textual history and archaeological material culture, where they suggest “…sources seem to belong both to archaeology and history, making it impossible to draw a line between the disciplines that is hard and fast”. Inscriptions are discussed by Khan (2003:298-300) in his overview of the Islamic architecture of South Asia. The use of Arabic or Persian inscriptions on both secular and monumental buildings began in South Asia during the Ghaznavid period (10th-12th centuries), although those attributed to this initial period in South Asia are significantly less ornate then those seen on cenotaphs of the sultans in Ghazana (Khan 2003:298). Islamic inscriptions decorate passageways into buildings and provide information about the date of construction, sometimes both commencement and completion, and the position and importance of the patron. Some also list the name of the architect, and in particularly resplendent examples the name of the calligrapher also appears (Khan 2003:298). Mughal epigraphy was influenced by the epigraphic practice of the Lodi dynasty (Khan 2003:298). The Lodi’s were the last Delhi Sultanate to control Delhi prior to the Mughal conquest and inscriptions from this period are frequently found on palace complexes, cenotaphs, and mausoleums and contain the information outlined above as well as a verse from the Qur’an. Serais are believed to have been often inscribed over their entrance gates, although few inscriptions have survived (Begley 1983). The serai of Amanat Khan, near Amritsar, India, has an impressive inscription (Khan 2003:300). Nur Mahal Serai, near the city Nur Mahal, Punjab Province, India, also has a well-known inscription (Cunningham 1970[1878-79]) and I personally observed the presence of an inscription panel at Pakka Khanpur Serai, near
Rawalpindi, Pakistan (surveyed in section 6.1.2) although the inscription itself has been removed and/or lost.

4.1.2 Early European Documents

Documents relating to early visits by Europeans to the Mughal Empire come largely in the form of traveler’s journals and Christian missionary records. The earliest are by Portuguese Jesuits who were guests of the courts of Akbar and Jahangir (Maclagan 1982). In fact, we can trace the movements of Jesuit missionaries from Agra to Kabul and back in AD 1581 in the writings of Father Anthony Montserrat, a Jesuit missionary who travelled with Akbar (Maclagan 1982). There are also records from Italian, German, Spanish, French, Venetian, and Dutch merchants in Lahore throughout the 17th century (Maclagan 1982). These early travelers’ accounts often make mention of the means and modes of travel across the Mughal Empire, although they offer little specific information about the structures visited. Instead, they record the experiences of the travelers on these journeys. I have examined a number of early European documents, including the travel writings of Pietra Delle Valle, Edward Terry, William Finch, Friar Sebastian Manrique, and others, as presented in the works of Grey (1982), Maclagan (1982), and Foster (1921).

4.1.3 British Documents

The British, through the East India Company, established de-facto control of the Indian sub-continent in AD 1803 with the conquest of Agra and Delhi (Nath 1989:1). For the British, this marked the beginning of an extensive period of study of all things Indian. Official and academic studies were undertaken on a range of topics. The results were presented in numerous texts, many of which contained information about architecture.

Published materials from the entire British period most often take the form of personal memoirs, diaries, journals, and traveler’s accounts. These documents were written by Europeans working and travelling within the sub-continent and were largely intended for an audience in Britain as accounts of travels and exploits in a far-away land. As such, these documents are romanticized and contain oriental and colonial accounts of personal experiences and travels in South Asia. We also see in the early texts the “subordination of material culture to
text” (Trautmann and Sinopoli 2002:495). Material culture is described in these accounts only when found in association with some text that either references the object or is seen to explain or give it meaning. As sources of information about architecture by untrained architectural observers, these early texts are most useful as testaments to the experiences of space and place; they are impressionistic and likely architecturally faulty when referencing particular styles of structures. The architectural typologies produced in these early periods must be considered through a European lens of architectural interpretation.

In the archaeological study of South Asia, these sources are important for identifying potential locations of caravanserais, especially in regions where little to no architectural remains are detectable today. They also give insights into how serais functioned and how they appeared to and were experienced by travelers. Travelers experienced serais differently. Some travelers saw caravanserais as well-managed and functional travel amenities while others saw them as derelict and neglected relics from a bygone era. These impressions may also represent a real variation in serai use and appearance, including regional variations and change over time, or may simply result from different authors’ attitudes and preconceptions.

I evaluate accounts of serai visits in several ways. First, I look for records of visits to the same serai by numerous travelers; second, I see if alterations to the structure can be tracked in these documents; third, I consider the context of the serai and the region at the time of the visit; and finally, I consider the context and bias of the individual observer who observed the serai. All of these factors influence a traveler’s account of a serai, and variable and conflicting reports need to be evaluated (see the discussion in sections 7.1.9.5 and 7.1.9.6 where variable historic accounts of Gor Khuttree are assessed).

In addition to personal narratives, we also have from the British rule of the sub-continent the first archaeological records of architecture. These records offer, for the first time, a separation between the presentation of history and archaeology (Trautmann and Sinopoli 2002). This work begins with the publications from the Asiatic Society of Bengal founded by William Jones in AD 1784, which later became the Royal Asiatic Society of Bengal and, finally, the Asiatic Society (Nath 1989:2). These institutionalized studies and surveys were primarily focused on the pre-Islamic and hence pre-Mughal architecture, largely because of the interests of the British in the ruins of stupas and other Buddhist monuments (Trautmann and Sinopoli 2002:498). However, despite this emphasis there are references to “Muslim” monuments,
tombs, and mosques. Studies with focuses such as these can be found in several early 19th century journals, including the *Asiatic Researches*, and the *Journal of the Bengal Asiatic Society*, and the latter’s *Memoirs and Proceedings*. The influence of these writings and writers culminated in the creation of the government Department of Archaeology in January of AD 1863 and the archaeological survey of monuments that ran from AD 1862 through AD 1947 (Nath 1989:2) and indeed it continues today. In its initial phase, the survey was led by Alexander Cunningham and was published in the *Reports of the Archaeological Survey of India*. The initial survey covered the entirety of northern India and resulted in the publication of 32 volumes containing information on monuments from all periods. Of interest here are the medieval monuments related to Mughal rule, especially caravanserai creation. The focus in these initial surveys was on Mughal imperial complexes, forts, palaces, tombs, mosques, and to a lesser degree, caravanserais.

The first publication specifically on the architectural history of India was by James Fergusson, who surveyed and studied sites from AD 1835 to 1845. His *History of Indian and Eastern Architecture* (Fergusson 1876) included a chapter on “Mogul Architecture” in which several tombs and mosques are described (Fergusson 1876:557-569). This work was later expanded and reprinted under James Burgess (1910). Fergusson made several mistakes in his use of European and “Indian” terminology, and in his discussion of construction techniques and temporal styles; however, his research was the earliest detailed recording and critical analysis available. Additional works were produced by Vincent A. Smith (1919) and E.W. Havell (1913). Percy Brown (1965, 1964) produced a two-volume study of the history of architecture in the sub-continent from the Buddhist through Islamic periods. Much of the research presented in these two volumes is on locations that Brown was unable to visit and as a result the records and interpretations presented are difficult to assess. Brown also relied heavily on the comparison of forms and styles to those found in Italy, Greece, and Rome, essentially linking all artistic developments within the sub-continent to precursors in other ancient civilizations (as criticized in Nath 1989:6).

A series of regulations regarding heritage resources were established in the early 1800’s, beginning with the Bengal Regulation of AD 1810 that allowed the government to intervene whenever a public building was in danger from misuse. Following this, the Indian Treasure Trove Act was established in AD 1878, and finally the Ancient Monuments Preservation Act
was put in place in AD 1904. Viceroy Curzon (AD 1898-1905) established a policy for the conservation of monuments. Under these new guidelines additional publications were undertaken and more intensive data recorded about historic sites and monuments. Of particular interest to this research are the studies and translations of Arabic and Persian inscriptions from medieval monuments published initially as the *Epigraphia Indo-Muslemica* (1907) and later as the *Epigraphia Indica*, both from the Archaeological Survey of India.

These publications represent significant financial and time expenditures on behalf of the imperial government and the scholars involved in their creation. Although in many cases, interpretation of the data may seem superficial by today’s standards, much of the underlying data is reliable and valuable as a record of structures existing during the period of study. It is vital, however, when using the data found in these archaeological sources to remain critical of the period of creation, the ambitions of the writers/researchers, and the general political and cultural atmosphere of the British in India at the time of writing.

### 4.1.4 Contemporary Documents

My consideration of modern documentary evidence, largely dating from the 1990’s onward, has amounted to the review of online resources including but not limited to newspaper articles, personal accounts of architectural and archaeological sites, photographs of known serai locations, as well as internet blogs and discussion groups. These sources have provided information about the architecture of the sub-continent, and present discussions and individual opinions of the value of these spaces and places and their popular interpretations. These sources are at once incredibly interesting and fraught with conjecture and misinformation. In certain cases, the information presented is entirely inaccurate, misrepresenting the use of the structure, its date of construction, its meaning, and its intended uses. In other cases, the information presented is accurate and reflects a close familiarity with the structure by locals and visitors alike, some of whom have clearly done significant historic and academic research. This information, transient and non-academic, has provided valuable information about previous uses of sites and the ways in which they have been used and reused by people in these regions today, they also provide clues about how people perceive these places/spaces and how they envision their importance as historical structures and referents back to the history of the sub-continent. These sources can be considered as the equivalent of oral histories with a component of modern
ethnography. The information gleaned from them will be understood through this epistemological lens. The evaluation of contemporary popular meanings in the discussion of identity formation, alteration, and maintenance is presented in chapter eight.

4.2 General South Asian History and Architecture: From the Mughal Empire to British Rule

Post-Independence (AD 1947) architectural research in South Asia has been led by a number of figures, most notably Asher (1992), Khan (1990), Koch (2001, 1991), Michell (1978), Nath (1989, 1988, 1982, 1979, 1976, 1972), and Parihar (2008, 1985). Research on Mughal architecture has focused on the classically monumental and imperial. Architectural and art historians have considered the palaces of the emperors and their families along with the religious and burial memorials that they commissioned during their reigns. Those researchers moving away from strictly palatial and religious monument studies have re-centered their focus on the large forts, fort-complexes, and major city centers (Fatehpur Sikri, Lahore Fort, Delhi, and Agra). Catherine Asher (1992) has written the definitive overview of Mughal architecture from the perspective of an art historian. Architecture of Mughal India serves as an overview of the Mughal period and, in particular, of architectural developments during the reigns of each Mughal emperor. Asher considers what defines each emperor’s artistic style and architectural contribution. Asher visited many of the Mughal sites within India and has studied these sites in relation to their textual documentation. Asher (1992) reviews the rise and decline of each Mughal Emperor and discusses, with reference to supporting historic details, the architectural leanings of these rulers and the degree to which their personal reign was marked by architectural growth and artistic development.
The Mughal Empire extended over a large geographical area including sections of present-day India, Pakistan, Afghanistan, and Bangladesh. Over time, the strength and geographic size of the Empire expanded and contracted many times. These periods of expansion and contraction reflect the land conquest strategy of the Mughal Empire, and the subsequent land acquisitions, losses, and recoveries that muddle the history of the period are characteristics of this expansionist approach to rule. Figure 4.1 shows the Empire as it appeared during several stages of rule in the sub-continent.

The Mughal Empire dates from AD 1526 to 1858 (Table 4.2) and was at its climax “one of the largest centralized states that ever existed before modern times, considerably surpassing in wealth its Ottoman and Safavid rivals” (Asher 1993:281). The first Mughal emperor, Babur, was from a central Asian Turkic group and claimed that his father was a descendent of Timur and that his mother was a descendent of Genghis Khan. The Mughal emperors were on the
whole successful war leaders. Babur began his territorial base by supplanting the Delhi Sultanates under Sultan Ibrahim Lodi in AD 1526 (Lal 2003:53). The Delhi Sultanates included a number of Turkic and Afghan dynasties that ruled northern India from Delhi from the late 13th through early 16th centuries. These dynasties include the Mamluk, the Khilji, the Tughluq, the Sayyid, and the Lodi. The foundations of the “Indo-Islamic” or “Indo-Muslim” culture is attributed to the Sultanate rule within the sub-continent, though actual Muslim rule in Northern India began with the Ghurid occupation of Delhi in AD 1192 (Welch and Crane 1983:123). The architectural influence of the Delhi Sultanates can be seen in the persistence of Tughluq architecture and its inclusion into the fusion of architectural styles that is characteristic of the Mughal Islamic architectural synthesis. As the Mughal’s expanded their empire, they came into contact with and eventually supplanted the Deccani Sultanates, who were a series of Muslim medieval kingdoms of south and central India (see Alam and Subrahmanyam 2004 for further discussion of the Deccan frontier and Mughal expansion). By defeating or forming alliances with these and other northern polities on the Indian sub-continent the Mughals were able to unite a large geographical area.
Table 4.2 Generalized Timeline of Political Units in the Control of Northern South Asia.

<table>
<thead>
<tr>
<th>Date (AD)</th>
<th>Historical Period</th>
<th>Archaeological Period for Peshawar (after periods in Ali et al. 2005:239)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1526-1530</td>
<td>Reign of Babar</td>
<td>Early Mughal</td>
</tr>
<tr>
<td>1530-1540</td>
<td>Reign of Humayun</td>
<td>Early Mughal</td>
</tr>
<tr>
<td>1540-1545</td>
<td>Sher Shah Suri</td>
<td>Suri</td>
</tr>
<tr>
<td>1545-1554</td>
<td>Islam Shah Suri</td>
<td>Suri</td>
</tr>
<tr>
<td>1555-1556</td>
<td>Humayun restored</td>
<td>Early Mughal</td>
</tr>
<tr>
<td>1556-1605</td>
<td>Reign of Akbar</td>
<td>Early Mughal</td>
</tr>
<tr>
<td>1605-1627</td>
<td>Reign of Jahangir</td>
<td>Mughal</td>
</tr>
<tr>
<td>1628-1658</td>
<td>Reign of Shah Jahan</td>
<td>Mughal</td>
</tr>
<tr>
<td>1658-1707</td>
<td>Reign of Aurangzeb</td>
<td>Mughal</td>
</tr>
<tr>
<td>1707-1858</td>
<td>Reign of Later Mughals</td>
<td>Late Mughal/Durrani/Sikh</td>
</tr>
<tr>
<td>1857/1858</td>
<td>War of Independence</td>
<td>British</td>
</tr>
<tr>
<td>1947</td>
<td>British withdraw from India</td>
<td>Post Independence</td>
</tr>
</tbody>
</table>

The Mughal rulers were some of South Asia’s most prolific builders and were involved in the construction of numerous monuments, monumental buildings, and vernacular constructions not to mention cities, roads, agriculture sites, etc. Mughal rule signaled a period of change for the people living in South Asia in economic, political, and eventually religious structures. As invaders to the sub-continent the Mughal rulers brought new architectural ideals to the region, and thus their influence can be traced through the architecture they built and the involvement of these structures in the social and political landscape. However, regional architectural traditions were also incorporated in these structures, sometimes for practical reasons such as material constraints, building technology, and expertise, or as deliberate social
and/or political statements. The categorization of Mughal structures therefore needs to take into account regional differences in construction and style while also synthesizing the large pan-imperial architectural developments.

The building florescence seen during the Mughal reign served two purposes. First, the Mughals built centers for imperial administration and second, their construction projects served to display the greatness, wealth, power, and piety of the leaders and the imperial court. These constructions revealed the power and grandeur of the leading elite and were tangible reminders of this influence after the reign of an individual emperor had passed (Khan 1985:51). Akbar’s appointed court historian wrote “[a] good name for kings is [achieved by means] of lofty buildings … that is to say, the standard of the measure of men is assessed by the worth of [their] building and from their high-mindedness is estimated the state of their house” (Qandahari English translation in Brand and Lowry 1985:290-294, as quoted in Koch 1991:13). Building projects were also undertaken by non-imperial patrons and their motivations to complete these structures may have been personal, economic, political, religious, or any combination of these factors (Begley 1983:175-178).

The rulers best known for their architectural achievements include Akbar (AD 1556-1605), Shah Jahan (AD 1628-1658), and Aurangzeb (AD 1658-1707). However, “the buildings produced under the patronage of the Mughals belong to a single continuous tradition” (Khan 1985:51) and thus the typological evolution of these structures and their regional development are key aspects of this continuing research. Though most well known for the construction of the Taj Mahal during the reign of Shah Jahan, Mughal construction was wide-spread and served in many ways to unify the Mughal Empire by linking the various regions through the act of construction.

Mughal architecture is famously synergetic as it incorporates various styles and solidifies their differences into one cohesive and spectacular result, a characteristic true of most empires. Mughal architecture has roots in early Islamic, Persian, and Hindu structures inherited from the Delhi Sultanates, Timurids, and northern Indian traditions respectively (Asher 1992:1; Koch 1991:10-15; Parihar 1999). Throughout their reign, the majority of Mughal subjects were non-Muslim, mostly Hindus (Asher 1992:1), so it is not surprising that the architecture of the period was influenced by the religious traditions of a vast portion of the imperial populace. The incorporation of various religious and regional styles waxed and waned over the nearly 300
years of Mughal rule. According to Asher (1992:1), in the beginning the emperors largely ignored the architectural styles of local peoples; during the reign of Akbar (AD 1556-1605), however, we see the incorporation of indigenous styles both Hindu and Muslim.

The complicated historical narrative involving regionalized architectural development will not be synthesized here for the whole of South Asia. I have summarized in Table 4.3 some of the major architectural contributions of the first six Mughal Emperors. Instead of a specific overview of each of their reigns and individual architectural contributions, I focus below on the regional historical and architectural development of the city of Peshawar. This city and its development is the context within which the life history of my central site, Gor Khuttree, unfolded and continues to unfold. Therefore, I only examine larger imperial developments when relevant to the specific focus of my doctoral research. For additional information on the character of Mughal rule, the rise and involvement of the East India Company, the collapse and regionalization of later Mughal rulers, and the eventual takeover of the sub-continent by Queen Victoria see Bose and Jalal (2004), Richards (2000:225-298), and Stein (1998:201-318).
Table 4.3 Major architectural characteristics and developments during the reigns of the primary Mughal Emperors.

<table>
<thead>
<tr>
<th>Mughal Emperor</th>
<th>Defining Architectural Characteristics/Developments</th>
</tr>
</thead>
</table>
| Babur          | - Use of pendentives and squinches in dome transitions  
                 | - Marqarnas transition zones (Figure 4.2)           |
| Humayun        | - Use of red sandstone and marble façade work       |
                 | - Chatris (domed pavilions)                         |
                 | - Trabeate (post and lintel) systems for halls      |
| Akbar          | - Red sandstone                                     |
                 | - Continued use of trabeate system                  |
                 | - Founding of Red Fort in Delhi, and Fatehpur Sikri |
                     | (Desai 1970:48)                                     |
| Jahangir       | - Garden construction                               |
                 | - Lahore capital complex                            |
                 | - Emphasis on surface decorations, façade work.     |
                 | - Increasing use of marqarnas (Figure 4.2)          |
                     | (Koch 1991:70)                                      |
| Shah Jahan     | - Construction of capital; Shahjahanabad (Delhi)    |
                 | - Taj Mahal                                         |
                 | - White facades, marble and burnished stucco        |
                 | - Bangala roofs                                     |
                 | - Baluster columns                                  |
| Aurangzeb      | - Regionalization of Mughal architectural style      |
                 | (Asher 1992:252; Desai 1970:58)                     |
4.3 History of Peshawar and the Location Gor Khuttree

As one of the oldest cities in the region between Central, South, and West Asia, Peshawar has for centuries been a center of trade (Gill 1986:250). Durmai et al. (1997:187) have observed “that the rise and fall of Peshawar has been closely linked with the story of all those who entered the western passes”. In order to discuss the construction and occupations of the imperial Mughal serai, Serai Jahanabad or Gor Khuttree Serai, in the city of Peshawar, I first outline the history of the Peshawar valley and the city of Peshawar. Understanding this regional history helps to situate the discussion of why the serai at Gor Khuttree was constructed, why the location of the serai was chosen, and how control of the serai shifted so many times and resulted in the structure’s reuse and adaption even into the present period.
Figure 4.3 Locations mentioned in the text. Compilation from Google Earth 2010.
4.3.1 The Peshawar Valley and the City of Peshawar

The city of Peshawar is the modern day capital of the North West Frontier Province of Pakistan. It is located 40 km from the eastern border with Afghanistan in the Peshawar valley (Figure 4.3). Over its history, the city has seen various changes in control related to the movement of groups into and out of South Asia through the Khyber Pass. This pass is one of several mountain passes that allow easy passage between the eastern and western sides of the Hindu Kush mountain range. The position of Peshawar in relation to this pass has allowed the city to flourish as a supply center on one of the main South Asian travel and trade routes. Though an economic boon, this position also puts the residents of Peshawar in the path of any group intent on conquest and control of the Peshawar Valley and the lands to the east. Thus, the city has experienced numerous changes in control and its historic populations have constantly realigned themselves in order to benefit from the strategic position of their city. The history of the Peshawar valley has been synthesized in the works of several researchers, which I summarize here (Dani 1995; Jaffer 1945; Khan 2004; Nichols 2001). I also draw on the detailed information recorded in the British military reports on and Gazetteers of the Peshawar District from the mid 19th and early 20th centuries.

Table 4.4 Chronological table of important events in the Peshawar Valley since the beginning of the Islamic Period.

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD 976-1192</td>
<td>Ghaznavid Empire</td>
</tr>
<tr>
<td>AD 1192-1505</td>
<td>Slave Kings, Khalji Dynasty, Lodi Dynasty, Yusufzais</td>
</tr>
<tr>
<td>AD 1505-1738</td>
<td>The Mughal Empire and Suris</td>
</tr>
<tr>
<td>AD 1738</td>
<td>Defeat of Mughals by Nadir Shah</td>
</tr>
<tr>
<td>AD 1738-1814</td>
<td>Durrani Kings</td>
</tr>
<tr>
<td>AD 1814-1848</td>
<td>Sikh Rule</td>
</tr>
<tr>
<td>AD 1848-1947</td>
<td>Partition; British Removal, founding of India and Pakistan</td>
</tr>
</tbody>
</table>
The Ghaznavid Empire, ruled out of Ghazni in present day Afghanistan, controlled the Peshawar Valley from the 10th through 12th centuries (Table 4.4). The post-Ghaznavid rule in the region varied from the rule of Afghan slave kings to a number of Sultanate dynasties. In the 13th and 14th centuries both Genghis Khan and Timurlane passed through the Peshawar Valley, causing economic turmoil and residential instability. By the beginning of the 16th century, the Afghan tribe the Yusufzais controlled the Peshawar region, lower Swat, Buner, and Chamla. In larger South Asian historiographies this period is called the Delhi Sultanate period, referring to the many Muslim dynasties that ruled in northern South Asia from AD 1206 to 1526 as described above (Richards 2000:2).

In AD 1504 the first Mughal Emperor, Babur (reign AD 1526-30), occupied Kabul. He moved into South Asia the following year from this base. He was assisted by Afghan tribes who aimed to regain the valley for themselves (Military Report and Gazetteer on the Peshawar District 1939:6). Babur was an absentee ruler, ruling largely from Kabul, as was his son Humayun (reign AD 1530-1556). Under Humayun much of the Mughal Empire in South Asia was taken over by Sher Shah Suri.

Sher Shah Suri (reign AD 1539-1545), a local ruler from Bihar, India, was able to push Humayun and his supporters back from Bengal to the edge of the Peshawar valley, and abruptly came to control a vast portion of the sub-continent. Sher Shah Suri has been credited with beginning the drive to provide travel amenities and Bulghar Khanas, kitchens for the needy, across northern South Asia (Taj Ali 2000:69; Asher 1992:xxv). Though his dynasty was short-lived, the impact of his rule is still felt in the region today; he is remembered as a great leader who facilitated the construction of travel facilities along the Grand Trunk Road. The Grand Trunk Road is the main route that crosses the northern sub-continent and has linked South Asia into trade and travel networks, including the Silk Route, for thousands of years (Deloche 1993). It is along this Grand Trunk Road and its less frequented branches that the majority of caravanserais were located. The identification of these historic caravanserais is being undertaken as a part of the Caravanserai Networks Project. This relocation will continue to refine our understanding of the historic placement of this route and its subsidiary branches.
The emphasis placed on the creation of serais by later Mughal rulers stems from the emphasis on these constructions begun during the Suri Dynasty (AD 1540-1554). Historic sources suggest that “S[h]er Sah would have constructed 1,700 shelters, separated by two kos, in which two horses were always ready to bear messages” (Deloche 1993:167). Deloche correctly points out that many of these ‘shelters’ were likely made of perishable materials and may have been small shelters intended more as stopping points for governmental relays or early post systems than actual serais (Deloche 1993:167-168). When the French traveller Jean-Baptist Tavernier came through the region in AD 1638-1668, he noted that along the road were a great number of small huts where couriers were located (Deloche 1993:167). Tavernier’s records lend further support to the interpretation that many of the travel facilities constructed during Suri rule were in fact small rest stations, and that the reports of his extensive construction of caravanserais are overinflated and have likely led to folkloric assignments of serai constructions to the Suri period of rule. The lasting impact of the short-lived Suri dynasty is more the idea of facilitating trade and travel than the physical remains of significant structures.

Sher Shah’s reign was brief, lasting only 5 years. He was killed in battle and succeeded by his son, Islam Shah Suri (reign AD 1545–1553). The entire rule of the Suri Dynasty was short-lived and violent with 6 rulers in 16 years. The sixth ruler, Sikandar Shah Suri, was defeated by Humayun in AD 1555 and Mughal rule of northern South Asia was restored.

Shortly after Humayun’s victory over the Suri armies, he was succeeded by Akbar (reign AD 1556-1605). With unrest throughout the Empire, Akbar moved through the Khyber Pass and into Peshawar where, after several years of fighting and repeated efforts to subdue the population, he gained control of the city and the region in AD 1587. The Pathans in the area relinquished control as Akbar built forts in the plains and kept the route to Kabul open. A Mughal-appointed governor was left to watch over the city of Peshawar and the surrounding region and little changed in the Mughal approach to the rule of Peshawar during the reigns of Jahangir (reign AD 1605-1627) and Shah Jahan (reign AD 1628-1658).

Many historians mark the decline of the Mughal Empire as beginning with the reign of Aurangzeb (AD 1658-1707) (Asher 1992). However, Mughal control of the North West Frontier and the city of Peshawar did not stabilize until AD 1676 under the rule of Aurangzeb who, not without significant bribery, was able to calm the Afghans along the borders (Nijjar 1972:183). It was under Aurangzeb’s successors that control of Peshawar was again lost. In AD 1737 Nadir
Shah (a Persian ruler) invaded from Kandahar and attacked Kabul, Ghazni, and Peshawar. Shortly thereafter the Mughal-appointed governor of Peshawar surrendered, leaving the city in Nadir Shah’s control. This marks the beginning of the so-called Durrani period in the Peshawar Valley. It was a period of absentee rule, as Nadir Shah was quickly distracted from his recently acquired lands by affairs in Khorasan. When he was assassinated in AD 1747, Nadir Shah was quickly replaced in the region by Ahmad Shah Durrani, founder of the Kingdom of Afghanistan. Ahmad Shah made a residence in the city of Peshawar within the Bala Hisar Fort (Jaffer 1945:101). However, there is no description of how this residence appeared or what alterations Ahmad Shah ordered to the already existing fort or to the region. During the Durrani period in the Peshawar Valley, the remainder of the northwestern sub-continent was invaded several times, by various groups and as a result the Durrani kings were involved in constant warfare in an attempt to both maintain and expand their kingdom. After Ahmad Shah’s death, control of Peshawar traded hands several times and though the Durrani period lasted roughly 80 years there were few periods of sustained occupation of the city by any one ruler during this time. The Durrani period has remained archaeologically and architecturally elusive, and this seems to have much to do with the expansionist nature of the kingdom and the shifting territorial seats of the period’s rulers.

In AD 1814, the Sikh ruler Ranjit Singh, expanded west from the Punjab and seized control of Attock, the fort-town that marks the eastern edge of the North West Frontier Province and overlooks the confluence of the Kabul and Indus Rivers. By AD 1818 Ranjit Singh had control of the Peshawar valley, initiating a period referred to as “the Sikh period”. A yearly tribute was extracted from residents of the region but the city of Peshawar was not occupied by a Sikh governor until AD 1835 when Hari Singh was appointed to the post. Singh lasted in this post till AD 1837 when he was killed in battle against Afghan Durranis. He was succeeded in his post by Taj Singh who passed the position on to General Avitabile, an Italian mercenary, in AD 1838. Avitabile’s occupation of the place Gor Khuttree and the alterations he made there are expanded on in the section on Gor Khuttree’s history that follows. Avitabile left this post at the end of AD 1842.

The official British presence in Peshawar began with the first Anglo-Afghan war in AD 1839. This war was one of the first major conflicts of what was to become known as “The Great Game,” referring to the fight for control over Afghanistan between Great Britain and Russia.
From the British perspective, this initial series of conflicts was a failure and is known as “Auckland’s Folly” after Lord Auckland, who had argued that the battle for Afghanistan was necessary to ensure that the victors, Afghans under the control of the British, would act as a British-controlled buffer along the western edge of India. Following this loss, the British sent Major Lawrence to Peshawar as a “friendly” British advisor to the Sikh officials. The Anglo-Sikh wars (AD 1845-1849) were largely fought in the Punjab and came to an end with the annexation of Sikh territory, including the Peshawar Valley, by Great Britain. Lawrence, who had been held by the Sikhs during the conflict, was made the first Deputy Commissioner of Peshawar in AD 1849. The British held control of Peshawar through the several mutinies and rebellions that followed. On July 18th, AD 1947, the British Parliament passed the Indian Independence Act, finalizing the Partition agreement and establishing Pakistan as an independent country. For further discussion of the late British periods and the details of Partition see Jasbir (2007), Khan (2004), and Zamindar (2007).

Following this general overview of the history of occupation known for the valley of Peshawar, I now outline the specific occupation periods known for the site Gor Khuttree. I relate each occupation back to the regional history outlined above.

4.3.2 Gor Khuttree

The serai at Gor Khuttree was built in the Mughal period and was occupied and altered in each of the subsequent periods. The transformation of the architectural fabric of the Mughal Imperial Caravanserai can be traced throughout its history of use. This includes changes related to its occupation during the Mughal, Durrani, Sikh, British, and Pakistani periods. The outline of known occupations that follows is necessary to situate the architectural survey and data analysis presented in chapter seven and the examination in chapter eight of why this place is reoccupied, reused, and reinterpreted in the periods since its creation.

4.3.2.1 Archaeological Excavations

In AD 1992-93 archaeological excavation began at the site of Gor Khuttree. The excavations were undertaken by a team of researchers from the University of Peshawar headed by Dr. Farzand Ali Durrani and assisted by the Federal Department of Archaeology, Pakistan. The project continued over several field seasons (1995-96, 1997-98, 2000-2001) and aimed to document the cultural profile of the city of Peshawar (Durrani et al. 1997). The site of Gor
Khuttree was chosen for excavation for a number of reasons. The site sits on one of two high points of land in Peshawar; the height of these locations is the result of years of cultural depositions followed by periods of rebuilding. At densely occupied urban sites these deposits rapidly develop into mounds, elevated above the surrounding topography. As the site of Gor Khuttree had a relatively open courtyard, it was an ideal place to begin an excavation into the mound since encroachment from more recent structures was relatively limited.

The first excavation begun at the site, headed by Dr. Durrani (Durrani et al. 1997:191) in 1992-93, proved too small to allow safe excavation beyond a depth of 48 feet 6 inches (Figure 4.4). When it was deemed that the excavation could not continue, the excavation trench was back-filled both to protect the deposits as well as to avoid accidents involving the local children who play in this area. The excavation report reveals that they believed their excavations had reached deposits dating to the late fourth and early third centuries BC. (Durrani et al. 1997:191), pushing the archaeologically confirmed occupation of the city of Peshawar to the Achaemenian and Mauryan periods.
In their limited description of the stratigraphy uncovered during this first field season, Durrani et al. (1997:191) assign the uppermost two excavation layers to the British and Sikh periods as determined by the presence of “rudimentary mud structures” as well as some ceramics, coins, and British-period soakage rings associated with historic latrines (Figure 3.4). They assign layers three through six to the “Muslim period”, a term used to refer to the late Mughal occupation. These layers contained copper coins from various Muslim rulers as well as glazed and unglazed ceramics known from other Muslim sites in Pakistan and elsewhere (Table 4.5) (Durrani et al. 1997:191). The authors do not venture beyond this list of artifacts and these rough period assignments. As is often the case in archaeological excavation in South Asia, the more recent historic periods have not been afforded the same degree of interpretation and analysis as earlier periods. Since the goal of this excavation was to determine a cultural profile, materials from layers relating to more recent and better documented periods of history were
collected for future analysis. However, we do not yet know what specific periods these artifacts/levels belong to or whether they pre- or post-date the Mughal serai’s creation. It is also important to note that most of the dates and periods assigned in Durrani et al.'s (1997) analysis come from the identification and dating of coins and limited and unique pottery associated with specific excavation layers. Using coins or ceramics alone to date stratigraphy can be problematic. Coins and ceramics can easily be deposited out of temporal sequence, especially in complex urban deposits of this sort, so reliance on them to date archaeological stratum can lead to a false assurance of occupation dates. As is common in many parts of the world, the practice continues to be necessarily relied upon at the Gor Khuttree excavations to some extent, though increasing use of developed pottery sequences in the future should strengthen the assigned dates.

Table 4.5 Durrani excavation layers and associated periods from the AD 1992-93 excavations of their western trench (compiled from Durrani et al. 1997).

<table>
<thead>
<tr>
<th>Layer Number</th>
<th>Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-3</td>
<td>British/Sikh</td>
</tr>
<tr>
<td>3-5</td>
<td>Mughal</td>
</tr>
<tr>
<td>6-8</td>
<td>Hindu Shahi</td>
</tr>
<tr>
<td>9-13</td>
<td>Kushan</td>
</tr>
<tr>
<td>14-17</td>
<td>Scytho-Parthian/Indo-Greek</td>
</tr>
<tr>
<td>18-20</td>
<td>Mauryan/Achaemenian</td>
</tr>
</tbody>
</table>

Layers six through eight of the Durrani et al. (AD 1992-93) excavations are marked by the presence of a number of poorly preserved Hindu Shahi period coins and more glazed pottery. Durrani et al. (1997:191) note that in these layers the diversity of ceramic vessel forms increases and a number of “elegant jars” were found; what these forms or “elegant jars” are is not elaborated on in this preliminary report.

The material from layers nine through 13 are assigned to the Kushan or Gandharan (Buddhist) period. They are comprised of fragments of Gandharan sculptures along with coins from each of the Kushan kings. The excavators’ note that this comes as little surprise since the city of Peshawar was an important center of Gandhara both in the religious realm as well as a center of power and trade (Durrani et al. 1997:192). This is attested to by the recovery of Buddhist-period artifacts from sites throughout the Peshawar Valley including the relic casket.
found at Shah Ji Ki Dheri. The city is also mentioned in the records of a 5\textsuperscript{th} century AD pilgrim, Hiuen-Tsang (Durrani \textit{et al.} 1997:192).

Layers 14 to 18 are assigned to the Scytho-Parthian and Indo-Greek periods, again based on numismatic and ceramic evidence. Layers 18-20 are the lower-most layers excavated in this field season and are described as having “yielded artefacts and ceramic traditions known from the Mauryan and the last phase of the Achaemenian period” (Durrani \textit{et al.} 1997:192). From the preliminary nature of this statement it is very difficult to evaluate what was uncovered or review the basis on which these dates were assigned.

\begin{center}
\textbf{Table 4.6 Durrani excavation layers and associated periods from the AD 1995-97 excavations of their eastern trench (compiled from Durrani \textit{et al.} 1997).}
\end{center}

\begin{tabular}{|c|c|}
\hline
Layer Number & Period \\
\hline
1 & British \\
2 & British/Sikh/Durrani \\
3 & Late Mughal \\
4 & Mughal \\
5 & Mughal (serai construction) \\
6 & Early Mughal \\
7 & Suri \\
8-11 & Unassigned \\
12 & Ghaznavid \\
13 & Unassigned \\
\hline
\end{tabular}

Durrani returned to the site in AD 1995-97. His field report offers a summary of the cultural layers revealed (summarized in Table 4.6). In this stage of research 15 excavation trenches were opened in new locations at the site (Figure 4.4), so that a larger area could be examined and deeper cultural deposits exposed (Durrani \textit{et al.} 1997:193). A complex of British-period structures were exposed that range in suggested date from the early 19\textsuperscript{th} century to just prior to Partition (AD 1947). The top-most layers had foundations of British-period houses, soakage pits, kitchens, and elaborate drainage systems believed to date to the 1930s and 1940s. Below these structures, additional foundations were uncovered that were built with impressed bricks showing dates of AD 1919, 1921, and 1922. Within the buildings themselves, coins
dating from AD 1919 to the 1940s were uncovered. The earliest British-period structures are made of both British-period bricks and reused Mughal-period bricks, likely scavenged from the serai, and are associated with coins belonging to George V (dated AD 1834) and Queen Victoria/East India Company (dated AD 1848) (Durrani et al 1997:194). All of these British-period structures were destroyed through excavation and it has not been possible to examine the original excavation reports, maps, drawings, or photographs.

Durrani et al. (1997) describe layer two as a thin layer with a mix of British, Sikh, and Durrani period artifacts. Coins from the Sikh period were also found. At the bottom of layer two several coins featuring Durrani (Afghan) kings were found (Durrani et al. 1997:194). Layer three was also thin and produced several coins ascribed to late Mughal Emperors, with coins from Aurangzeb’s reign being the oldest (Durrani et al. 1997:195).

Layer four had remnants of structures made of both mud and baked brick, with British-period foundations intruding into the layer from above. Several hearths with associated unidentified animal bones were found inside of a large rectangular structure that had rammed earth floors. The foundations of the eastern serai gate were also exposed in this layer and are interpreted as connecting to the later baked brick British structure that intrudes from the later layers (Durrani et al. 1997:195). This may be evidence for the alteration of the Mughal-period serai during occupation under British rule (see section 4.3.2.6). Coins from Mughal Emperor Shah Jahan and later Sikh coins were also found in layer four.

Layer five contains a water pond oriented parallel to the interior facade of the eastern gateway and stratigraphically in the layer below the gate’s foundation layer. The pond was shallow, had inlet and outlet channels for water, and the floor of the pond was plastered with lime. It is the excavators’ interpretation that this pond was used to prepare lime plaster during the Mughal-period construction of the caravanserai (Durrani et al. 1997:195).

Layer six contained several hearths and an Akbar period coin. Layer seven again had several hearths all located on top of a paved floor and associated with mammal and bird bones. Several Sher Shah Suri and Islam Shah Suri coins were also recovered along with the complete skeleton of a cow found under a collapsed wall. Layer eight features a Mughal drain that intruded from layers four and five. The drain is constructed of Mughal brick with lime plaster and takes the form of a corbelled arch. Layers 9-13 all contain various ruins of wall structures as
well as terracotta vessels and figurines. All yielded varying collections of coins. The earliest coin is from layer 12 and is of Masud I. It dates to AD 1030-1041 during the early Ghaznavid period (Durrani et al. 1997:196-99). By the close of the 1995-97 seasons a much larger area of excavation had been opened; however, this larger area had not been brought down to the same levels as was achieved in the smaller excavations in 1992-93.

Unfortunately with a lack of funding and the passing of Dr. Durrani, excavations were suspended for several years. However excavation was resumed in 2003 by the Directorate of Archaeology and Museums, Government of NWFP, under the direction of Dr. Ihsan Ali, in order to complete the profile begun by Dr. Durrani (Ali et al. 2005). The site has also served as a field school for students from the University of Peshawar. The excavations under Dr. Ali have extended the excavation area laid out by Durrani near to the East Gate of the Mughal serai (Figure 4.5), exposing a greater area of the site as well as continuing to deepen the excavation in search of the first occupation layer.
Published reports about the excavations carried out at the site under Dr. Ali (Ali et al. 2005) describe the work completed in the 2003 and 2004 field seasons. Work continued after this date but publications are not yet available. The 2003-04 seasons resulted in the excavation of 14 layers (Table 4.7), which roughly correspond with the layers identified during Durrani’s excavations (Table 4.5 and Table 4.6).
Table 4.7 Excavation layers, assigned periods, and average depths from the AD 2003-04 excavations at Gor Khuttree (after Ali et al. 2005).

<table>
<thead>
<tr>
<th>Layer Number</th>
<th>Period</th>
<th>Ave. Depth Layer (cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>Post-Independence</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>British</td>
<td>28</td>
</tr>
<tr>
<td>4</td>
<td>Sikh</td>
<td>22</td>
</tr>
<tr>
<td>5</td>
<td>Durrani / Late Mughal</td>
<td>15</td>
</tr>
<tr>
<td>6</td>
<td>Mughal (ca. AD 1640)</td>
<td>20</td>
</tr>
<tr>
<td>7</td>
<td>Early Mughal (Kings)</td>
<td>25</td>
</tr>
<tr>
<td>8</td>
<td>Suri Dynasty</td>
<td>25</td>
</tr>
<tr>
<td>9</td>
<td>Sultanate</td>
<td>50</td>
</tr>
<tr>
<td>10</td>
<td>Sultanate</td>
<td>35</td>
</tr>
<tr>
<td>11</td>
<td>Ghaznavid</td>
<td>20</td>
</tr>
<tr>
<td>12</td>
<td>Ghaznavid</td>
<td>20</td>
</tr>
<tr>
<td>13</td>
<td>Ghaznavid</td>
<td>20</td>
</tr>
<tr>
<td>14</td>
<td>Hindu Shahi</td>
<td>unfinished</td>
</tr>
</tbody>
</table>

Layer one was comprised of modern materials and included exposed portions of the walls of Mughal-period serai cells, British-period bathroom slabs, and square bathroom structures. Layer two exposed the continuation of the Mughal wall remains uncovered in layer one, as well as the presence of an early British-period bathroom located under the more recent bathroom exposed in layer one.

Ali et al. (2005:231) attribute layer three to the British period and identify within this layer three phases of British-period construction. The first period of construction from the top of layer three involves a bathing platform, perhaps from a bath house used by the police or British
troops stationed at the site. The floor of this structure is comprised of bricks impressed with the date AD 1920, with an attached drain made of broken bricks aligned in two rows. Beneath this bathing platform are the remains of a drain made of U-shaped bricks, and coated in a thin layer of cement. The third and earliest phase of British-period construction is the wide drain running east to west and comprised of bricks laid in mud mortar (Ali et al. 2005:231).

Layer four is assigned to the Sikh period and has portions of ruined walls made of re-used Mughal brick set with a mud mortar to form a large semi-circular walled section. Ali et al. (2005:232) believe that this section of the serai corresponds with alterations made at the site during the use of the serai by General Avitabile, a point I will revisit in my discussion of the Sikh occupation of the site. These walls associated with the Sikh period are separated from the layers below by a 4.5 cm thick line of ash, which Ali et al. (2005) interpret as evidence of a significant burn episode that corresponds with the takeover of Gor Khuttree by the Sikhs, though there is no support for this interpretation in the historic documents from the transition period in question.

Layer five has a large collection of peeled portions of fragmented stucco plasters; these have painted designs and may come from more than one area of the site or from more than one stucco painting episode. Ali et al. (2005:233) suggest that these fragmentary stucco plasters date to the occupation of the site by the Afghan Durranis. They do not explain their reasons for this interpretation. The layers of painted plaster may be associated with the reuse of the site during the Durrani period, but could also be from activities at the site during the Sikh period that immediately followed it.

Layer six corresponds with Durrani’s layer five, as it contains a portion of the water pond used to prepare lime mortar. Ali et al.’s (2005:233) excavations revealed further evidence of the lime mortar production area, including four querns and two pestles covered in lime and lying near to the tub-shaped area of bricks where the lime mortar would have been prepared. These querns and pestles are argued to have been used to grind “husks” and other ingredients to mix with the lime and make the mortar stronger and more adhesive (Ali et al. 2005:233). The Mughal drain was also exposed in this layer and seen to intrude into the Sultanate and Ghaznavid layers below (Ali et al. 2005:233).
Layers seven through 14 all contain ceramics, figurines, and coins that correspond with the sequence of occupation at the site established by Durrani et al. (1997). Significant to this study of the Mughal-period serai built on this site is that the foundations associated with the serai cells extend over 340 cm below datum and enter into Layer 12, a Ghaznavid layer (Ali et al. 2005:237). While this is not entirely surprising, it is of interest to note how deeply the foundations were placed as it reveals information about the methods of serai construction and the degree of architectural planning involved in erecting such an elaborate foundation structure.

The archaeological excavations at Gor Khuttree have highlighted the site’s continuous occupation. This history of site specific occupation corresponds with the history of occupation known for the larger region. The excavations this far have revealed little about the nature of the site’s early layers. They have simply been too small to draw any conclusions beyond the periods during which the site was occupied and some of the activities that took place in the area. Additional chronological and site specific use information will be forthcoming as the excavations and the materials analyses continue. The current goal of the excavations remains to establish a chronology of site occupation, and though current excavations have reached the early centuries BC/AD (Kushan period and earlier), virgin soil has not yet been uncovered. A further understanding of what occurred at this location just prior to the construction of the serai in AD 1640 can be considered by reviewing the historic record. Historic references to the place Gor Khuttree are described in the sections that follow.

4.3.2.2 Pre-AD 1640 Site Occupation

Peshawar was an important city in the kingdom of Gandhara and the regions surrounding it were populated by Buddhist buildings and religious centers (Jaffer 1945:74-76). However, even in the years in which Buddhism was still practiced in the valley and East Asian converts visited the Buddhist historic heartland, we have records of the presence of Hindu temples within the city. Hiuen Tsang, a Chinese pilgrim who visited the city in AD 630, noted the existence of at least one hundred “Brahmanical” temples in the city (Jaffer 1945:75). If the descriptions of the city of Peshawar given by Mughal Emperors Babur and Akbar are to be trusted then the site of Gor Khuttree was once a Hindu holy center. The earliest definitive mention of Gor Khuttree is in the Tuzk-i-babari, the official history of the life of Emperor Babur (Jaffer 1945:76). In his memoirs (as first translated to English by Erskine and Leyden 1921[1826]) Babur records:
I had heard of the fame of Gurh-Khatari, which is one of the holy places of the Jogis of the Hindus, who came from great distances to cut off their hair and shave their beards at this Gurh-Khatari. As soon as I reached Jam (Jamrud) I immediately rode out to visit Bekram [Peshawar]. I saw its stupendous tree and surveyed the country. Our guide was Malik Bu Said Kamari. Although we asked particularly about the Gurh-Khatari he did not show us where it was, but just as we had returned, and were close upon the camp, he said to Khwajah Muhammad Amin that Gurh-Khatari was close upon Bekram, but that he did not mention it for fear of being obliged to go among its narrow caverns and dangerous recesses (Erskine and Leyden 1921[1826]:254); [my inserts].

The following year (AD 1519) Emperor Babur returned to Peshawar and was able to visit Gor Khuttree. He wrote:

There are no-where in the whole world such narrow and dark hermits’ cells as at this place. After entering the doorways and descending one or two stairs, you must lie down and proceed crawling along, stretched at full length. You cannot enter without a light. The quantities of hair, both of the head and beard, that are lying scattered roundabout and in the vicinity of this cave are immense. On all sides of this Gurh-Khatari there are numerous cells like those of a college or monastery. The number of apartments is very great (Erskine and Leyden 1921[1826]:111-12).

This observation of Gor Khuttree is confirmed by the visits made to the site by Emperor Akbar. Abul Fazl who visited the site with Akbar writes, “[h]ere is a temple called Gor Khatri, a place of religious resort, particularity for the Jogis” (Blochmann 1927[1873]:165). Further descriptions from Akbar’s memoirs confirm the information presented by Babur (Blochmann 1927[1873]:528, 856). A final reference to the site being a center of Hindu worship is recorded in the memoirs of Emperor Jahangir, who was much less impressed with the site and the persons occupying it:

I arrived at the garden of Sardar Khan, near Peshawar. Ghor Khatri, a famous place of worship amongst the Jogis is in this neighborhood and I went to see it in the possible chance of seeing some Fakir, from whose society I might derive advantage; but such a man is as rare as the philosopher’s stone or ‘Anka’ and all that I saw was a small fraternity without any knowledge of God, the sight of whom filled my heart with nothing but regret (Dowson 1966[1867]:314).

These collaborative accounts seem to confirm that at the very least there was a Hindu temple of some form at the site of Gor Khuttree at which Jogis who were followers of Gorakh Nath and worshipers of Shiva worshiped, apparently including underground cells where hair was deposited as part of a religious offering or ritual. Jaffer (1945:80) believes that in the time between Akbar’s and Jahangir’s visits the site had changed considerably, and that by the time
the serai was constructed here during the reign of Shah Jahan, his daughter Jahan Ara Begum
would have found no evidence of the temple at this location. This belief by Jaffer is, of course,
pure speculation as we have no direct reference from Shah Jahan or his daughter discussing the
site prior to construction. The remains of Hindu structures are not evident at the site today and
have not been confirmed by excavations. If the remains lie under the present Hindu temple to
Gorakhnath at the site then it is unlikely that this story will ever be confirmed through
archaeological means.

4.3.2.3 Mughal Serai Construction

Despite references to the city of Peshawar and the place Gor Khuttree in the official
histories of Emperors Babur, Akbar, and Jahangir, the site is not mentioned again in relation to
any imperial visits, although succeeding emperors passed through the region (Ali 2000:74).
There is further textual information about the serai constructed at the site, including what the
original Mughal complex looked like and what amenities it offered to patrons.

Gor Khuttree Serai was built in AD 1640 (1049 A.H.) during the reign of Shah Jahan
(AD 1628-1658) by the Emperor’s daughter, Princess Jahan Ara Begum, and was originally
known as Serai Jahanabad (Jaffer 1945:103-104). The orders for the construction of the serai are
recorded in a Mughal royal farman (royal decree) and two Mughal sanads (certificates) which,
though now inaccessible, were reviewed by Jaffer (1945:104). Based on the existing
architectural remains, the original serai was a rectangular complex measuring 193 m by 164 m
(Ali et al. 2005: 228). It was constructed with Mughal (waziri) brick and lime mortar. The
central courtyard was enclosed by a single story wall with equally sized cells along each wall.
The cells were used to house serai patrons. The serai was entered via two gates, one in the center
of the east wall and another in the center of the west. The south wall had a false gate that served
as an expanded cell and was likely mirrored for symmetry in the north wall, now destroyed. The
corners of the serai were marked with octagonal turrets/bastions though only the footprint of the
northeast bastion can be seen today. Detailed analysis of the Mughal period remains found at the
site today is presented in chapter six as part of the architectural survey conducted at the site.

According to Jaffer’s (1945) accounts of the information provided by the farman and
sanads, the site was bounded on the north by a property attributed to Sayyed Abdul Karim, on
the south by crown land, on the east by a large bazaar, and on the west by another bazaar. It is
important to note that at the time of construction and in the initial periods of use, both gates of
the serai could only be reached by procession through a bazaar. As patrons of the serai arrived at the site they would have been surrounded with provisions and wares as well as the hustle and bustle of a city center. According to these historic sources, the original serai construction had within its courtyard a mosque, *hammam* (bath), and two wells (Ali *et al.* 2005:228; Jaffer 1945:103). The *Jami Masjid* (congregational mosque or Friday mosque, where worshippers gather for Friday services) built inside the serai was also commissioned by Jahan Ara Begum for use by the devoted (Jaffer 1945:103). Though mentioned in the Mughal documents ordering the serai’s construction (Jaffer 1945:103), no description of this mosque has yet been found. Assuming that it was built, it would have been an imperially commissioned structure and likely an impressive religious building. No remains attributable to the original Mughal mosque stand within the serai today.

Jahan Ara Begum also created a large *waqf* (endowment) for the upkeep and maintenance of the *Jami Masjid*. This *waqf* included an allowance for the servants and religious persons of the mosque. The endowment consisted of the revenue from the crown land adjoining the serai as well as from the two bazaars flanking each of the serai’s entrance gates (Jaffer 1945:106). The *farman/sanads* (which specifically is not clear from Jaffer (1945:106)), record that Mullah Muhammad Sadiq was entrusted with managing the endowment. He was expected to both collect and dispense the supporting funds. The *farman* reviewed by Jaffer (1945:107) also records that necessary repairs were to be made to both the serai and the mosque from imperial funds drawn from the public treasury in Peshawar. The fact that the Mughals kept such a public treasury open in Peshawar emphasizes the role that the city played in what was then the province of Kabul (Jaffer 1945:107).

The *hammam* associated with the original Mughal-period construction also does not remain at the site today. Discussion of the possible location of this *hammam* is found in section 7.1.9.5. The records state that two wells were located within the courtyard of the serai; however, these are also difficult to definitively locate. One well might be identified as the well that is located next to the current Hindu temple (Figure 4.5); however, no indication can be found of the other well (Jaffer 1945:108). The next closest well to the serai was, in the early 20th century, located outside of the eastern gate (Jaffer 1945:108).

4.3.2.4 *Durrani Control*
Little is known about the Durrani period in Peshawar and if and how it affected the Mughal serai at Gor Khuttree. The Durranis centered their rule out of a state residence at Bala Hisar, formerly the site of an early Mughal fort (Gazetteer of the Peshawar District 1989[1897-98]:362). Raverty (1852:23) writes that after the Mughals lost control of the city, the people of Peshawar began to scavenge brick from the Mughal Serai. According to Raverty (1852:23), they stopped brick scavenging only when the Durrani rulers came and took up residence at the serai and ordered that it be repaired. The Durrani rulers named the serai Gor Khuttree after the name used for the mound on which it was located. Raverty did not record the source of this information in his report, though it is repeated in later reports as well (Gazetteer of the Peshawar District 1989[1897-98]:362).

4.3.2.5 Sikh Control, General Avitabile

During the period of Sikh rule, control of Peshawar came to General Avitabile. Avitable was an Italian soldier of fortune in the service of the Sikh leader Ranjit Singh (Jaffer 1945:103). Avitabile served as Governor of Peshawar from AD 1838 to 1842. General Avitabile chose to alter a portion of the existing city-center serai to make a residence for himself and his family. According to Jaffer (1945:103), this decision likely spared the serai from the destruction afforded other Muslim structures by the Sikhs in Peshawar.

The alterations to the serai included the expansion and addition of a second floor above the West Gate. This floor housed the General’s offices and family residence and is said, according to historic documents, to have been constructed in “Hindu style” (Ali 2000:91). “It is ornamented, both inside and out, with grotesque figures, painted in the most brilliant colours, in a similar manner to the embellishments of most Hindu temples” (Raverty 1852:22). As little evidence remains of this decorative elaboration, we can only see this as a possible interpretation of the form of these paintings, which now are likely hidden under layers of plaster and paint (see section 7.1.5.2). We also need to assess the claims of Jaffer (1945) about the destruction of Muslim monuments by the Sikhs; we know that Avitabile, at least, was seen as being indifferent to, if not tolerant of, all the religions found in the city of Peshawar. There are no supporting records to indicate that he actively engaged in or ordered the destruction of specific religious edifices (Grey 1982). The potential for the introduction of personal bias into the historic record is common in the descriptions of places that are essentially palimpsests of religious structures and activities (e.g. Shaw’s (2000) work on Ayodhya that is further discussed in chapter eight).
In addition to the changes to the West Gate, the mosque that was apparently located in the southwest corner of the serai was removed during the Sikh period of occupation and a Shiva temple was built in its place, presumably for men in service of General Avitabile (Jaffer 1945:103; Durrani et al. 1997:189). This temple still stands on the site today (Figure 3.5). Gopal Das (1874:153 quoted in Jaffer 1945:103) commented that “during the reign of Avitabile, the mosque gradually decayed owing to the weakness of Islam and the house of Gorakh Nath appeared there”. The Shiva complex is comprised of two small temples attached to each other by a covered walkway. They are located near the West Gate of the serai in the southwest quadrant of the courtyard and are further described in section 7.1.9.4. The Shiva temple housed a lingam of red marble, no longer present today, that was fixed to the center of the floor with “idols and deities” fixed in niches along the interior walls (Jaffer 1945:82). As well, Jaffer (1945:82) notes that the interior temple walls are painted with “idols and deities”. The remains of these paintings can still be seen in this temple today and despite the noted absence of the lingam a drainage channel runs through the exterior wall and into the well outside. This drain is presumed to have been put in place to collect and remove liquids used in religious practices. The well associated with these structures is located to the north of the temple and in the mid 20th century had, “on its upper edge two tiny foot-prints of white marble. These foot-prints are popularly believed to be those of Guru Gorakhnath” (Jaffer 1945:82). No sign of these footprints remain at the site today.

Sikh-period material remains were uncovered during excavation, though details of the occupation are distorted by its brevity and the mingling of remains with the periods stratigraphically above (British) and below (Durrani) (Ali et al. 2005; Durrani et al. 1997:195). Rev. Allen (1843:362) notes during his AD 1842 visit to the site that there was a dining room in the courtyard that was one hundred and twenty feet long and “decorated in native style”. This dining area has not been relocated.

There is no evidence of Sikh-period alteration to the East Gate; however, it is known from historic documents to have housed Sikh and visiting British officers prior to the takeover of the serai by the British (Grey 1982:131-137). The excavations in the interior courtyard of the serai to the north of the East Gate have uncovered some structures attributed to the Sikh occupation. It is the belief of Ali et al. (2005) that these walls were once part Avitabile’s compound. Presently, there is not enough archaeological material associated with the walls to
interpret them or assign use beyond their relation to the Sikh occupation layer. The walls themselves are constructed from Mughal-style brick with mud plaster (as opposed to the lime mortar used in the original Mughal-period construction), suggesting a reuse of Mughal waziri bricks by post-Mughal inhabitants (Ali et al. 2005:232). Why these structures are assigned to the Sikh occupation period and not the Durrani is not addressed in the excavation report. As both occupations post-date the Mughal use of the structure, we must remain open to the possibility that any structures that cannot be definitively assigned to the Sikh alterations of the site are potentially the product of the Durrani, or even later, periods. Further consideration of the assignment of these walls to the Sikh period needs to consider the historical accounts of how the site looked during Avitabile’s occupation.

The occupation of the serai structure provided Avitabile a central position within the city of Peshawar from which to govern. The visits of many European travelers to the serai during Sikh rule are summarized by Grey (1982:131-137). All of these travelers mention the control that Avitabile was able to exert over the citizens of Peshawar from this central position.

Avitabile is an interesting character in the history of occupation and use of the serai Gor Khuttree. I now summarize the historic information known about his appointment as governor of Peshawar. I do so in order to highlight Avitabile’s occupation of the serai but also to develop an understanding of his character and rule, both of which left powerful legacies within Peshawar. These legacies shape the interpretations drawn about the site’s reuse in chapter eight.

To this day Avitabile is remembered for being able to take control over the supposedly uncontrollable Pathans of Peshawar; he is also remembered as a ruthless leader, quick to distribute punishment and make horrific public displays of those being punished. Historic records indicate that those who knew him personally remembered him as being mild, frank and good humored (Grey 1982:118). Grey (1982:119) notes when listing the historic opinions of Avitabile, “it is a formidable and contradictory list, yet strangely enough there is justification for every item of praise or censure”.

Avitabile was assigned the post in Peshawar against his will and it was with reluctance that he left his previous post in Waziribad. Peshawar and the surrounding district were barely under Sikh control. The province was not producing the required amount of revenue and “anarchy, murder and assassination everywhere ran rampant” (Grey 1982:129). Avitabile was
given a free hand to deal with the gravity of the situation. He described his approach to his post in Peshawar:

When I marched into Peshawar I sent on in advance a number of wooden posts, which my men erected around the walls of the city. The men scoffed at them, and laughed at the madness of the Feringhi, and louder still when my men came in and laid coils of rope at the foot of the posts. Guns and swords, said they, were the arms to rule the city, and not sticks and ropes. However, when my preparations were completed, they found one fine morning dangling from these posts, fifty of the worst characters in Peshawar, and I repeated the exhibition every day till I had made a scarcity of brigands and murderers (Avitabile quoted in Cotton 1906:533)

Avitabile established both his home and offices within Gor Khuttree Serai and from this location he accommodated visitors and also undertook the day-to-day requirements of governor (Havelock in Marshman 1861:195-97). Many of the punishments recorded as having transpired at the seat of Avitabile’s power are thus likely to have occurred within the structure at Gor Khuttree Serai, though contradictions in some historical reports also suggest the Peshawar mosque or Waziribad as the locations for some of these events (Grey 1982). One such punishment involves the throwing of a man off of the roof of Avitabile’s offices. “The wretch was so hurled, but half way over, caught hold of a projecting cornice, and thence screamed aloud to Avitabile to have mercy for the love of God. Avitabile, unmoved, replied, ‘God may have mercy on you if he likes, but I will have none. Throw him off the ledge!’” (Edwardes and Merivale 1873:294). The most likely place for this event was off the roof of the West Gate of Gor Khuttree Serai. Likewise, in descriptions of hangings ordered by Avitabile from his seat of power, it is recounted “one tree was specifically reserved for the display of these human fragments …” (Cotton 1906:540). Could this tree be one of those found at the serai today (Figure 4.6)?
Figure 4.6 Several of the trees growing in the courtyard of Gor Khuttree Serai, as seen from the roof of the West Gate, looking southeast and offering an overview of the Shiva temple.

The most detailed account of the use of the serai during the Sikh occupation comes from the journal of William Barr (1889) who was stationed in Peshawar under the command of Lieut-Colonel Wade in AD 1839. Barr (1889:143) comments on the residence of General Avitabile and notes that the Governor’s house was located at the center of one wall of an ancient caravanserai, occupying the area above the gate. He recalled that the Governor had made repairs to the outer walls of this structure and that should it become necessary General Avitabile could station himself inside the serai and wait for help to arrive from the Punjab. In addition to being strengthened, the exterior walls of the serai had also been outfitted with positions for musketry and cannons, and served as a proper line of defense. There were go-downs and store houses located in the interior of the serai where Avitabile stored ammunition and provisions. This is the nearest to an explanation of why Avitabile choose to occupy Gor Khuttree Serai as his residence.
as has yet been found in the historic documents. The more obvious choice for his residence and offices would have been in Bala Hisar Fort. However, I believe that several sources point to why the fort was not chosen and the serai was. First, the serai was located within the heart of the Old City and we know that Avitabile reinforced a strong defensive wall around the city, suggesting that this was then the most defensible position (Figure 2.6) (Grey 1982:139; Gazetteer of the Peshawar District 1989[1897-98]:362). We also know from Wilton (1948:367), another British officer and guest of Avitabile, that the site appeared to function as a fort with fortifications around its edge. Rev. Issac Allen (1843:362), who visited the site at the same time as Wilton, also described the serai as having “an embattled wall with ramparts, having bastions at the corners, and a few brass guns”. In addition, we know that the fort previously used by the Durranis was reportedly demolished in the initial years of Sikh occupation. It was still undergoing repairs (Raverty 1852:25) in AD 1836 when Hari Singh ordered his residence to be constructed on top of the old Bala Hisar Fort (Gazetteer of the Peshawar District 1982[1897-98]:72). Finally, the advantages to Avitabile to be in the heart of the city engaging with the people and displaying the ‘effects’ of his system of justice are revealed in the historic accounts that follow.

Barr (1889:143) goes on to describe the Governor’s Mansion house, as the West Gate is called, as being three stories high and having commanding views of the entire city from the roof, which is described as flat. The serai courtyard was used by Avitabile as well. One half of the area had been converted into a flower garden and the other half was being used for military parades, guard mountings, and other military functions. Canons and ammunition wagons were also apparently stored in this area. An avenue of trees stretched from the Mansion (the West Gate) to the gateway (the East Gate). In the East Gate were additional offices and apartments of the governor but in an unfinished state. Both gates were painted and described as being of ‘native style’. The ceiling beams of the Mansion house are described as constructed of Lebanon cedar that when exposed to moving air perfumed the associated rooms.

At Avitabile’s residence, in an upper apartment of the West Gate, visitors were attended to by Nautch (dancing) girls, their chaperons, and musicians. Here Avitabile also stored his collection of rifles and sabres (Barr 1889:142-143). Avitabile was considered an excellent host, “and keeps an establishment of no less than eight cooks” (Havelock’s observation in Grey 1982:136). In the administrative portions of the serai, Avitabile maintained jail cells where
people could be immediately imprisoned when waiting for either judgment or punishment (Grey 1982:141).

Avitabile’s occupation of Gor Khuttree Serai was marked by his extreme and often cruel treatment of wrongdoers. Avitabile’s reputation is founded in his cruelty and yet conflicted by the memory of his just approach to punishment. In the courtyard of the serai he had people hanged and in lesser cases their limbs removed. Tongues of liars were split, stumps dipped in scalding oil. Some persons were stripped and exposed to the elements, while others were sewn inside animal carcasses to suffocate and die. Still others were confined in groups in brick structures where those able to survive were forced to hold up the bodies of those who had not (Grey 1982). The punishments, and only limited ones have been presented here, explain why Avitabile was feared. However, in opposition to this cruelty, we have the picture of Avitabile as a conscientious host and administrator of equitable and just governance. “The Peshawurees say he was a just man, and that instead of entrusting its administration [the city’s] to overbearing Hindustanies, he administered justice himself, heard every complaint, and was accessible at all times to the meanest person” (Raverty 1852:15). Colin Mackenzie observed in May of AD 1841 one means by which Avitabile justly served the local people.

Breakfasting with the General one morning, I observed that a large box secured by a padlock was let down outside the window of a much frequented through-fare. This was to receive all petitions, none of which could be intercepted en route as the General kept the only keys! (Mackenzie 1841 quoted in Greg 1989:137).

Though Avitabile was in the service of the Sikhs, his position as governor of Peshawar came to be supported by the British who benefited from his control of the region and his hospitality towards British officers (Grey 1982:135). “British officers knew how useful the presence of Avitabile at Peshawar was to the British, and that the dread in which Sikh and Afghan alike held him was all that prevented the two from uniting against the British troops at Peshawar and cutting off all access to or exit from the Khyber” (Grey 1982:138). Many British sources mention the need to keep Avitabile in Peshawar; his removal was thought to be a certain end to the stability of the region (quotes from Havelock and Mackenzie in Grey 1982:135-136). Additional discussion of the legacy of Avitabile’s rules forms part of the interpretations drawn in chapter seven.
In the months preceding Avitabile’s replacement in Peshawar, unrest grew amongst his Sikh troops and eventually broke out into a mutiny. During this mutiny Avitabile was protected and assisted by local Afghan guards, showing the respect that they held for his position and the manner by which he had ruled. “His personal guard at Peshawar was composed of men whose relatives he had tortured and hanged by the score, or hundred, and when his Sikh soldiers mutinied, the tribesmen, whose sons, brothers and fathers adorned the gallows of Peshawar, swarmed to his aid” (Grey 1982:122).

The variable reports of Avitabile’s behavior and his approach to the governorship of the Peshawar region must be considered in relation to the sources from which they are taken. All the historic documents referring to Avitabile are from British observers or from Avitabile himself. There is within these documents an implied hierarchy among those who Avitabile ruled and those he treated more as authority-holding equals. The Pathans, Afghans, and Sikh soldiers are all presented as persons who need to be ruled and who respond best to harsh and direct forms of punishment. Avitabile and his British guests are presented as collegial, almost allies, in their efforts to not only control the region but in their mutual appreciation of the hardships of being stationed in a foreign land. As such, the incidents reported in these documents must be considered within a hegemonic power system.

Avitabile left his post in April of AD 1843 and went to Lahore to close out his accounts and make preparations to return to Italy. There is scant evidence of what happened to his servants and entourage left behind in Peshawar. Lawrence relates that in preparation for his departure he made arrangements for his illegitimate daughter (born of a local Pathani woman) to be married to one of his cooks so that he was not burdened with having to take her with him (Grey 1982:144-45).

4.3.2.6 British Control

As seen in the previous discussion, the records of British visitors begin in the Sikh period and extend into the periods which follow. This section will review British documents relating to the site, focusing on those written after the British took control of the district. This information comes largely from the District Gazetteers for the region.

The British took official control of Peshawar in AD 1848 (Gill 1986:250) and immediately began to strengthen the city by reinforcing its fortification walls and sixteen gates. They also built the cantonment area where British citizens resided, as well as administrative
centers, government buildings, hospitals, and churches. The British realized the strategic importance of Peshawar and invested in its infrastructure. “[They] used Peshawar as a headquarters from where all the information on the Central Asian affairs could be gathered. It was used to watch the activities of Russia, their sole contender…” (Gill 1986:254).

The British took over and altered portions of Gor Khuttree to become headquarters for their police and fire brigades. These were founded in AD 1912, as is inscribed above the Fire Brigade garages that are found at the site today (Figure 4.7) (Durrani et al. 1997:190). Two antique Merryweather fire trucks are still housed on site in garages made by modifying the Mughal serai cell structures. At various points during British rule, soldiers stayed at the serai as a modified garrison (Gazetteer of the Peshawar District 1989[1897-98]:116). Once a center of economic and administrative control and having served as a thoroughfare for international travelers in several periods, the serai now became a center of British law enforcement and administration in the city.

![Figure 4.7 Sign marking the portion of Gor Khuttree Serai altered to house the British-period Fire Brigade, East Wall facing east, Gor Khuttree complex.](image)

The 1897-98 Gazetteer of the Peshawar District (1989[1897-98]:363) describes how portions of the West Gate were used as a tehsil office while the East Gate was used as a government rest house for native gentlemen and the northeast corner was occupied by the house.
belonging to missionaries. In this same gazetteer a passage from Colonel McGregor lists Gor Khuttree as the principal serai in the city, acknowledging that there were several others (Figure 4.8). This passage suggests that in some capacity the serai at Gor Khuttree was still functioning as was originally intended (The Gazetteer of the Peshawar District 1989[1897-98]:364). This is supported by Hunter who compiled the Imperial Gazetteer of India (1881:364) and records that the “Ghor Khatri” is used as a serai and “tahsili”.

Raverty records the presence of a hammam at Gor Khuttree that was open to both men and women but at different times of day (1852:20). This is unlikely to be the original hammam from the Mughal period as it is not mentioned as having survived into the preceding Sikh period. More likely this was a recent bath house and may correspond with the public baths.
found at the site prior to the excavation undertaken by Durrani (Figure 4.4) (Durrani et. al 1997).

Many of the British structures that once stood in the courtyard of the serai are known only from excavation. Durrani et al. (1997:194) identified British-period houses, soakage pits, a kitchen, and an elaborate drainage system.

The Church Missionary Society of the Church of England began its mission to the Afghans of Peshawar in AD 1853-5 with the encouragement of Sir Herbert Edwardes who had been appointed Commissioner and Agent of the Governor General on the Frontier (Gazetteer of the Peshawar District 1989[1897-98]:115; Clark 1885:161). This was considered a dangerous and difficult post as the city was seen as a stronghold for believers in Islam. Several of the initial missionaries to the city suffered from extreme sickness and died.

The city mission house was constructed inside the serai at Gor Khuttree, occupying in varying accounts the northeast (Gazetteer of the Peshawar District 1989:116 [1897-98]) and northwest (Ross 1970[1883]:83) corners of the site (Figure 4.9). The reasons for occupying the city serai are clear as from this location the missionaries could easily engage the people of Peshawar (Clark 1885:167).

In addition to being the possible location of the mission house, the northeast portion of the serai was briefly associated with a zenana women’s hospital (Lothian ed. 1955[1859]:508; Gazetteer of the Peshawar District 1989[1897-98]:116; Ross 1970[1883]:83). It is possible that this women’s hospital used portions of the serai that had been repurposed and altered by the missionary use of the site, as the zenana hospital was a missionary endeavor. The city mission house at Gor Khuttree later became the residence of the female missionaries working with the Church of England Zenana Missionary society, whose objectives were to offer medical treatments as well as religious education (Gazetteer of the Peshawar District 1989[1897-98]:116). Amir Sher Ali Khan, the King of Afghanistan, stayed at the mission house in Gor Khuttree during his visit to Peshawar in March of AD 1869 (Gazetteer of the Peshawar District 1989[1897-98]:116). It is unclear exactly when the mission house in Gor Khuttree stopped being used by the missionaries, although review of historic documents suggests the site was vacated after the All Saints Memorial Church was constructed near the Edwardes Gate in AD 1883 and the mission reestablished its base in the British cantonment area (Hughes 1885).
Dr. Lankester operated a medical mission out of Gor Khuttree from AD 1898 to 1904. In AD 1904 this medical facility moved to a larger site outside the walled city. It is said that this medical mission was inspired by the plight of a man who arrived at the serai after walking over 200 miles in search of medical assistance. Gertrude Bell, an archaeologist who visited Gor Khuttree in AD 1903, recorded in her meeting with Dr. Lankester in her journal and describes how his makeshift mission hospital appeared.

We went onto the roof and I saw the mud and filth of the great caravanserais washed up against the walls of the tidy hospital courts. He said the city was indescribably wicked. One is given pause at these things for after all in what
other faith do you find men of this kind? The fairy story is a necessity I believe. The hospital admirable, like a clean caravanserai; they don't try to make it too European. The people come in whole families at a time and are lodged in separate rooms. Some women even. They come from the depths of Afghanistan. The Hindus feed themselves (Gertrude Bell January 26th, 1903).

When it became clear that Partition would mark the removal of the British from South Asia, the tehsil offices, Fire Brigade, and Police Brigade within the Gor Khuttree complex were left to the new government of Pakistan’s North West Frontier Province.

4.3.2.7 Post-Independence, Pakistani Control

After the removal of the British, the partitioning of South Asia, and the founding of Pakistan in AD 1947, the Gor Khuttree complex continued in use as the reserve Police and Fire Brigade headquarters. It also housed the revenue records office (Durrani et al. 1997:188) until AD 2002 when these offices were removed along with the more recent courtyard structures (Ali et al. 2005:228-229). During this time, AD 1947-2002, the unused portions of the Mughal Serai continued to fall into disrepair eventually becoming a safe haven for the poor, drug addicts, and petty thieves of the city center. This was not unique to Peshawar as all over Pakistan public structures suffered, “first at the hands of careless renovation, addition and alteration, and then from neglect, misuse and disuse: many of them fell apart, perished or disappeared…secular buildings underwent changes and alterations sometimes beyond the scope and original layout” (Khan 1981:133). For several decades the nation was occupied in establishing itself through the founding of a new capital in Islamabad, quelling the growing unrest along the Indo-Pakistan border, and more recently accommodating the influx of Afghan refugees fleeing the Soviet military presence in Afghanistan. Archaeology and architectural research during these periods was often directed toward Buddhist centers and the Indus civilization, while interest in Mughal architecture centered on palaces, mosques, and tombs (Asher 1993; Hosagrahar 2002).

Beginning with the excavations undertaken by Durrani et al. (1997), both the NWFP Provincial Directorate and the Federal Department of Archaeology and Museums have become interested in Gor Khuttree’s preservation and have begun to conserve the structures found therein. The Federal Department has focused on the repair of the gates while the NWFP Directorate has focused on the surviving cell structures and on repairing the remaining Fire Brigade offices to house a new city museum (Ali et al. 2005:229). Peshawar’s municipal authorities and a local conservation group have begun further site maintenance, including the creation of gardens. This upkeep ensures that the garden within the serai is well used by locals.
and kept free of vagrants and squatters. The decision to maintain the site and preserve the surviving structures is an important one. The conservation of the site ensures that future generations will have access to this historic structure. The establishment of a city museum allows visitors access to the archaeological remains uncovered at the site and realization of the temporal depth of the city’s occupation, specifically the continuous occupation of the place Gor Khuttree.

Under the current plans, the majority of the serai will maintain or be returned to a Mughal appearance. As of 2007, the East Gate was being restored by the Federal Department of Archaeology and Museums, Government of Pakistan. This has mostly involved repairing the structure and resurfacing much of the gate with recent brick that has been made to the Mughal brick specifications. This approach differs from the North West Frontier Province Department of Archaeology and Museum’s restoration work being carried out on the surviving cell structures. Authentic Mughal bricks are being reused in the restoration of these cells and it is difficult or impossible in some areas to distinguish the original Mughal-period construction from the repair and restoration. Using new copies of old brick forms is preferred as it allows future researchers to discern the repairs and restorations from the remaining original wall sections. Further discussion of the current uses of the site and their meanings can be found in chapter eight.
Chapter 5 Analytical Methods

Architectural survey involves recording building components, outlining or suggesting the period of construction, and some interpretive consideration of the intended purpose of the structure. Unlike archaeological surveys that are often developed to gather some statistical representation of sites or find spots, architectural surveys usually deal with known sites and provide an overview of the structures found therein.

Nath (1989) offers the most complete summary of the medieval architectural survey literature for South Asia. He also outlines an architectural survey methodology that other medieval architectural research in South Asia has largely followed. For earlier examinations of architecture in India, see Meister and Thiagarajan 2003, Meister, Lawrence, and Joshi 2002, and Meister and Coomaraswamy 1995, 1992. Dar (1994) offered a specific recording strategy for caravanserais. I begin this chapter by commenting on the approach outlined by Nath (1989) and reviewing the strategy advocated by Dar (1994). I then present some of the non-South Asian approaches to architectural survey that have been helpful in my development of a rigorous and systematic survey strategy for standing architecture within South Asia. The resulting survey system is then presented. It is formatted as a manual and its apparently prescriptive language is intentional to allow for its extraction, reproduction, and use by field-researchers. I complete this chapter by introducing the methods employed in my research to analyze the arrangement, use, and reuse of specific spaces/places through time, including the creation of three-dimensional models from the survey data and the application of access and functional analysis to the bounded spaces within caravanserais.

5.1 South Asian Architectural Surveys

The primary approach to architectural research in South Asia has entailed gaining first-hand knowledge of structures, ideally based on multiple trips to the structures. Nath (1989:27) has proposed that “one has to go to the site over and over again, each time with a specific point of view and look at the building as inquisitively as a child looks at the camel”. Nath (1989:27) outlined the sequences and goals of these repeated visits to any structures, which I summarize in Table 5.1. In an ideal field environment this would be the example to follow, where repeated
visits to the structure result in a detailed knowledge and understanding of its elements and structural organization. However, this ideal strategy of architectural survey has increasingly become unfeasible in parts of modern Pakistan.

**Table 5.1 Summary of Nath’s (1989:27-28) goals for architectural survey.**

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1</td>
<td>Preliminary acquaintance with the building</td>
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<tr>
<td>2</td>
<td>Survey with architectural notes (surroundings, environment, and layout)</td>
</tr>
<tr>
<td>3</td>
<td>Photography</td>
</tr>
<tr>
<td>4</td>
<td>Survey and measurements (making of plans, sections, and elevations)</td>
</tr>
<tr>
<td>5</td>
<td>Study of style: structure</td>
</tr>
<tr>
<td>6</td>
<td>Study of style: ornament</td>
</tr>
<tr>
<td>7</td>
<td>Study of the total form and aesthetics</td>
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<tr>
<td>8</td>
<td>Study of the idea</td>
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<tr>
<td>9</td>
<td>Assessment of the spirit of the building and the style</td>
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<tr>
<td>10</td>
<td>Final authentication of the date</td>
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</tbody>
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In addition to the steps outlined in Table 5.1, Nath (1989:28) calls for the use of traditional or vernacular terms to describe all aspects of the architecture of South Asia. He notes that the English equivalents do not convey the same meaning as the original terms and in some instances there is no appropriate equivalent in English. It is ideal to understand the vernacular terms used by the people who constructed, used, and reused any structure; however, it is necessary as well to conduct research that is comparable among regions and cultures. Comparison of regional studies is of particular importance when we are interested in addressing questions about pan-regional style adoption, trade networks, and the transmission of architectural style and ideas. Within the sub-continent, varying architectural terms dependent on the language of the region under study are used to describe aspects of similar structures. In these multi-lingual environments, how can we decide which single phrase in any ‘native’ language is the most applicable to describe an aspect of architecture? The need for mutual understandability (Kostof 1985) requires terms that are broadly understood architecturally and when in doubt we need to offer detailed explanations along with visual documentation of the terms implemented. Misuse of terminology, indigenous or otherwise, leads to widespread confusion. It is important
to explain our terminology and use an architectural vocabulary that is comparable between regions. This is the approach I have followed.

Dar’s (1999) approach to the study of caravanserai architecture is particularly relevant to my work. Dar (1999, 1994) advocates the careful study and recording of caravanserai architecture along with additional vernacular forms associated with the trade and travel networks that crossed South Asia. Dar’s approach is to record basic survey information for any travel structure and to consult the historic record for information about the structure’s period of creation and who was in charge of its construction and upkeep (Table 5.2). The recording of such information was crucial to my research and comprises the basic information deemed essential within this research project and within continued research on South Asian trade and travel amenities. The recording of this information moves us toward the creation of a travel amenity database that combines historic and archaeological evidence. It also aids in the study of the life history of recorded structures. Dar’s (1999) and Nath’s (1989) approaches to architectural survey represent the most common survey methods used to record standing architecture within South Asia. In the section that follows, I present additional approaches to architectural survey that in combination with the approaches of Dar and Nath informed the survey methodology I develop in this research.
### Table 5.2 Information to be recorded from Caravanserai survey as outlined by Dar (1999:112-113).

<table>
<thead>
<tr>
<th>Kinds of Caravanserais</th>
<th>Items to record</th>
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<tbody>
<tr>
<td>Town/City</td>
<td>Location</td>
</tr>
<tr>
<td>Way-side</td>
<td>Terrain</td>
</tr>
<tr>
<td>Custom-clearing</td>
<td>Shape/Size</td>
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<tr>
<td>Mausoleum</td>
<td>Disposition of cells</td>
</tr>
<tr>
<td>Fort-cum-serai</td>
<td>Storage and penning locations</td>
</tr>
<tr>
<td>Royal halting places</td>
<td>Number and position of gates</td>
</tr>
<tr>
<td>Dak Posts</td>
<td>Additional interior features (mosques, wells, bazaar, hammam)</td>
</tr>
<tr>
<td></td>
<td>Exterior features (mosques, wells, bazaar, hammam, ancient roads)</td>
</tr>
<tr>
<td></td>
<td>Special, expanded VIP rooms</td>
</tr>
<tr>
<td></td>
<td>Military characteristics (fortification walls, bastions, parapets)</td>
</tr>
<tr>
<td></td>
<td>Construction material</td>
</tr>
<tr>
<td></td>
<td>Inscriptions</td>
</tr>
</tbody>
</table>

#### 5.2 Additional Approaches to Architectural Survey

The system of two-dimensional architectural documentation used in this project is modeled on that set forth by Burnskill (1975, 2000) and Ferris (1989) and implemented by Giles (2000). It attempts in all cases to record at minimum the information outlined by Dar (1999, 1994) in his call for continued work on caravanserai recording. The need to adjust the approach outlined by Dar (1999) and Nath (1989) comes from the increasing need for expedient field recording that allows significant data recovery while not requiring extensive on-the-ground site visits. The goal of my on-the-ground visits was to record as much information as possible, as quickly as possible. The impetus for this is that many architectural sites are in poor states of repair and it is very possible that in the time between field visits significant destruction or
adaptation might take place. These structures, as Dar (1999) correctly notes, are in danger of disappearing and must be recorded if we are to have any lasting understanding of how they were distributed on the landscape and incorporated into the local nodes and networks of interaction. In some regions, such as the area of Pakistan where I conducted my research, extended field trips greatly increase the visibility of the researchers and results in increased security risks.

The larger goal of the Caravanserai Networks Project is to record historic trade and travel facilities to create a more comprehensive understanding of individual structures and the larger corpus to which they belong. Within this project, my research has aimed at developing optimum approaches to architectural survey and distilling from them a system of recording that allows maximum recovery in minimal time. This approach to survey begins in the field and involves amplification of the recorded data in the laboratory.

The work of Burnskill (2000, 1975) exemplifies the basic approach implemented by researchers of standing historic architecture in Europe and in some colonial studies in North America. Similar approaches can be seen in McDowall’s (1980) work on cultural heritage and preservation of historic structures. I have adapted Burnskill’s (2000, 1975) approach and have adjusted it for research on serais in South Asia. Thus, my recording system reflects South Asian building techniques and the variable forms of architecture found in this region of the world. This procedure of recording is flexible and ever-changing. I hope that the recording procedure developed for this research will be adopted in South Asia as a valuable means of quickly and effectively recording standing architecture for historic preservation work by governmental and non-governmental organizations as well as for archaeological and architectural research. In combination with the ongoing creation of caravanserai typologies, this system provides a means of assessing architecture and placing it into a chronological framework.

The process of recording standing architecture is similar to the process of recording information from archaeological excavations. Burnskill (1975) identifies several key aspects necessary to record any structure, including establishing the size and general type of structure, recording map reference data (which in this project involves GPS information), establishing the orientation of the structure, recording the principal walling material, noting any affiliated dates and the nature of the affiliation, recording the principal external characteristics via a coding system and associated questionnaire, amplifying data using photos, sketches, maps and field notes, noting the initials of the surveyor, and recording the date of the survey (Figure 5.1).
The guidelines established by Burnskill (2000, 1975) were for the study of houses in Britain where the goal of the survey was to date the construction and record any possible locations of alteration to the initial design. The approach is useful when information about the architectural style is well-documented and the sequence of architectural developments and adaptations well understood. In cases where architectural developments are less well understood or in studies where a priori assumptions can not be drawn, this system is less helpful as it is based on the assignment of preconceived and documented architectural developments. The need remains for a survey procedure that can record in detail as many aspects of a structure as possible while reserving interpretive comment until more research has been carried out and avenues of analysis considered. In addition, with advances in field equipment it is now possible to record what is on the ground more accurately and with less user bias than with the interpretive descriptions and time-consuming field drawings of the past.

Figure 5.1 Top section shows an example of the recording form proposed by Burnskill (1975). The bottom shows the code sheets that allow for coded information to be recorded for the various components of the structure. The highlighted example shows the coded elements recorded for the windows (after Burnskill 1975).
My approach to the recording of standing architecture also drew on the Harris matrix approach to recording complex stratigraphic information. The Harris matrix is based on discrete stratigraphic episodes and the analysis of their interfaces (Harris 1979). It is designed to deal with the complex stratigraphic remains that often come from collapse, intrusive repair, or construction events that occurred on archaeological sites (Harris 1979). The limits of direct application of a Harris matrix approach to above-ground architecture are that the appearances of repairs, alterations, and adaptations are often difficult to separate from the structural whole which they alter or replace. In light of this, I first recorded standing architecture as a whole, followed by detailed analyses of evidence for changes and alterations. Only after survey is the essential ‘stratigraphy’ of a structure recreated and periods of use assigned. We replace land-use diagrams with architectural use/function diagrams and apply a suite of period-based spatial analysis and three-dimensional reconstructions. For further discussion of function diagrams see Ferris (1989) as well as section 5.5.

In addition to the standard recording of information noted above, photos and detailed personal notes involving some interpretation are necessary so that the context of the recorded material can be understood. These notes and images relate architectural elements to their context of appearance and are referenced when examining how specific elements fit into the development of a building (Ferris 1989:15). Through careful recording, changes in the architectural details of multi-period structures can be teased from the structural whole.

5.3 The Campbell approach for rapid architectural field survey

The system of survey and architectural documentation used in this research is outlined in the sections that follow. I hope that this system will be useful for and adopted by researchers of the built environment and may become the foundation of a comparable body of architectural information and documentary evidence.

5.3.1 Items Needed for Survey

My approach to survey does not depend on a three-dimensional laser scanner, as until quite recently these have been cost-prohibitive. In addition, the reverse-engineered three-dimensional models derived from my survey data can serve as structural representations for
multiple periods of site use, whereas most three-dimensionally scanned models represent only what was present at the time of scanning. Unrelated forms, temporary furnishings, and adornments can be worked around during survey and recorded as necessary. Should a three-dimensional laser scanner be available I would advocate its use as an additional method of recording, supplemental to those presented here, and not as a complete replacement for detailed survey and measurement.

The outlined survey procedure uses a Leica Disto laser distance meter (A8) or an equivalent laser measuring device (see http://www.leica-geosystems.com/en/index.htm for further product information). These devices are extremely useful when rapidly surveying a structure; they are capable of triangulating vertical and horizontal measurements without the need for tying the device into a datum or external grid. Most often used in construction, this device allows the user to calculate dimensions of structural components without using a ladder or a measuring tape. It adds to the speed of survey without compromising the quality or quantity of the data collected. (Note that the less expensive sonar-type measurement-devices, sound-based rather than light-based, are considerably less accurate at present.) Although all researchers have their own preferences for field equipment and variable access to sophisticated recording devices, the items outlined in Table 5.3 are essential for the standardized recording of any structure using the system presented here.
<table>
<thead>
<tr>
<th>Item</th>
<th>Comment/Alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field note book</td>
<td></td>
</tr>
<tr>
<td>Sketch pad/unlined paper</td>
<td>preferably a large spiral-bound artist’s sketch pad</td>
</tr>
<tr>
<td>Pencils</td>
<td></td>
</tr>
<tr>
<td>Geometry Set</td>
<td></td>
</tr>
<tr>
<td>Digital Camera</td>
<td></td>
</tr>
<tr>
<td>Large-capacity memory card(s)</td>
<td>or external storage device for clearing cards</td>
</tr>
<tr>
<td>Batteries</td>
<td>for all devices</td>
</tr>
<tr>
<td>Photo Scales</td>
<td></td>
</tr>
<tr>
<td>Slate or letter board with chalk/letters</td>
<td></td>
</tr>
<tr>
<td>Lecia Disto laser distance meter</td>
<td>or equivalent laser measuring device</td>
</tr>
<tr>
<td>Soft tape measure</td>
<td>at least one, 30m minimum</td>
</tr>
<tr>
<td>Hand held tape measure</td>
<td>small</td>
</tr>
<tr>
<td>GPS (Global Positioning System)</td>
<td></td>
</tr>
<tr>
<td>Permanent markers</td>
<td></td>
</tr>
<tr>
<td>Red laser glasses</td>
<td></td>
</tr>
<tr>
<td>Metal tape</td>
<td>or reflective metallic surface for targeting long-distance measurements with the laser distance meter</td>
</tr>
</tbody>
</table>

5.3.2 Survey Sketches and Notes

Before outlining the specifics of the survey procedure for standing architecture, I first review some of the fundamentals of field sketches, field notes, and the different kinds of photography that are required in the survey.

5.3.2.1 Survey Field Sketches

It is vital that all photographs can be related back to the portion of the structure that they represent. This is accomplished by placing a slate tablet or photo board in the (lower left-hand) corner of the photo. This board notes the portion of the structure being recorded. In addition, a database or filing system is valuable to track the photographs, so that they can be easily found when required for analysis. Survey sketches should be made as large as possible and the measurements recorded on the sketch must clearly correspond to the physical section measured. Measurements have no value if they cannot be associated with specific portions of the structure.
or if their units of measurement are not recorded. Most measurements are taken in centimeters and are recorded as such. If large measurements are recorded in meters then they must have their appropriate unit of measure noted after them. Before drawing and measuring in detail any complex feature, surveyors should consider whether the element is so complex that recording it will take time away from producing other drawings or accurately representing the overall appearance of the structure. When time is limited, as in a rapid survey, choices must be made about the level of detail recorded. The best approach in this situation is to take many photos of the elements and ensure that the overall structure has been adequately represented. If there is time at the end of a survey, surveyors can return to interesting aspects and document them in more detail.

When sketching and measuring portions of a structure that are symmetrical and when time is limited, survey teams can measure one-half of the structure and these measurements will stand as proxy measurements for their symmetrical counterparts. While the sketch of the structure should include both portions, measurements are recorded only on the side that was actually measured. Survey notes should reflect the rational for the selective measurements. In addition, the entire sketched portion should be photographed. This option is best implemented only under extreme time constraints as full measurements to verify symmetry are preferred.

As a final note, field sketches are intended to show structures without plantings, shadows, glass, utility cables, screens, etc. Specific window or decorative screens or interesting glass should be drawn and recorded separately as detailed sketches where time allows. Decorative and structural elements in façade drawings, such as finials or column capitals, although appearing curvilinear in perspective are in fact linear in elevation and are drawn as such.

5.3.2.2 Survey Field Notes

Note taking is an important addition to every survey. Notes serve two purposes. Their first purpose is description. Notes are made to describe what is seen and recorded. Information about recording choices is included in this description section. The second purpose of field notes is interpretation. This is where surveyors can suggest functions or note possible reasons for a structure appearing as it does. It is also the place where interpretive ideas and experiential or emotive responses are recorded. Interpretation can be limited, but complete description is mandatory.
On both the sketch plans and in the field notes, areas of the structure forming discrete spatial units or perceived as doing so are given sequential numbers for representation. These numbers are used to keep track of the data gathered and ensure correlation between sketches, photos, and note books. These numbers are arbitrary and serve only to demarcate the space for accurate and efficient survey; they are akin to catalogue numbers.

5.3.3 Survey Photographs

Survey photographs serve as durable visual representations of the structure. These images are referred to time and again for clarification about fine architectural details such as how walls join or how construction styles differ among areas. For these reasons, the field photography is extensive. It is better to have too many photos of a structure than too few. To this end, digital cameras have drastically changed the means of conducting architectural surveys. It is anticipated that a single room in any structure will generate between twenty and fifty images; where architectural details abound, this number increases rapidly. This further highlights the need for a database system to catalogue the images accurately and to make them easily accessible once analysis begins. Different photographic styles are needed to record different sets of architectural information. These different styles are outlined in the section that follows.

5.3.3.1 Photo Styles

Photos for context: these are usually landscape-scale photos that show the relation of structural elements and provide an overall view of the structure. Examples of this kind of photograph include an overview shot of an entire site, or a photo showing the entire façade of a structure. These photos show the viewer how recorded items relate to each other and give an overall impression of the space. Due to the large scale of these images a slate or photo board is not necessarily included in the image, although one should be included if possible or if it will be useful for orienting the image. These images are also tracked in the field notes.

Photos to show content: content photos record all aspects of architectural components. These photos are taken in series, and when arranged can show entire wall facades, floors, or ceilings that might otherwise not fit into a single exposure. This kind of photography allows details of construction to be extracted from the survey later. These photos are taken from left to right or from top to bottom so that when combined they show an entire section that would not fit
into a single photograph (Figure 5.2). Images should overlap slightly on all sides to ensure alignment and complete coverage.

Figure 5.2 Schematic of the procedure for taking content photographs of an interior wall, ceiling, floor, or façade; here photos taken in order 1-6.

Photos to show detail: these photos record small details of the structure and its component elements. They are usually taken at close range or with a zoom lens. Examples include brick details, close shots of mortar, details of painting or decoration on a structure, and so forth. It is important to record the context and location of such detail photos or to include a photo with a larger field of view that shows their context (Figure 5.3).

The production of content and detail photos requires a number of steps, outlined below.
Figure 5.3 Schematic of the procedure for taking detail photographs of an architecturally significant portion of a structure; here photos taken in order 1-7 and showing overlap between photos in gradients of blue.

5.3.3.2 Content and Detailed Photographs

When beginning a new series of content or detail pictures, I first took an image of the entire area to be recorded and included in the photo a slate that recorded the following information: the name of the structure/site, the date, and the name or number assigned to the portion of the structure being recorded. For example, if it is a discrete spatial area previously recorded as space number 5, this reference number is included on the slate or photo board. When the photographs of this area of the structure are complete, it is useful to take another picture of this slate/photo board. This serves to demarcate the images on the digital camera, especially after they have been downloaded and are waiting to be catalogued. All related images are essentially book-ended between two images of the slate/photo board describing the section being recorded. A meter stick should always be included in the content photographs to provide scale and, if possible, a small photo scale should be included in the detail photographs.

Photos of any interior rooms or passages should be taken in the sequential order outlined below (Figure 5.4).
First, the left hand wall is photographed in a series of content shots. These shots cover the entire wall surface and overlap in such a way that they can be placed together after the survey (Figure 5.2). Once the pictures for any wall are completed any related detail shots are taken, along with a context shot to show their location on the wall or other surface (Figure 5.3). Next, the wall opposite the entrance is photographed in the same fashion as the left wall (Figures 5.2-5.3). Following this, the right hand wall is photographed in the same fashion as the left wall was recorded (Figures 5.2-5.3). Then the entrance wall is photographed, again following the same approach (Figures 5.2-5.3). Second to last, the ceiling is photographed in a series of images that can be combined post-collection and the entire view of the ceiling observed. Finally, the floor is photographed, again in a series of photos such that the flooring is appropriately represented.
All portions of the structure that are roughly sketched and measured should be broken into discrete units and photo-documented following the procedure outlined above. Exterior walls when photographed should be treated the same as a single interior wall.

5.3.4 Architectural Field Survey: Methods and Time Management

The number of discrete units identified in a survey and the detail of the architectural elements within them will determine how much recording is necessary and the amount of time required for any survey. Some structures can be surveyed in a few hours; others can take days, some weeks. In situations where survey time is limited, ways of reducing time expenditures should be considered. One means of saving time is to allow data from one spatial unit to stand as proxy data for a similar unit. This should be done only where the layouts are extremely similar. It is also necessary that associated notes explain the decision made and detail any differences between the spaces that will have only proxy measurement data. It is best, when time permits, to take as many photographs as possible of the spaces for which there will be no measurement or sketch data. Where time does not permit, often the result of an unexpected site location or an unexpectedly rich architectural body, surveyors must ensure that a site has at least its plan sketched and rough information recorded about its size and arrangement.

Upon completion of the outlined architectural survey (sections 5.3.4.1-.2), the survey data can be analyzed in a number of ways to generate a more complete architectural understanding. In my architectural analysis for the Caravanserai Networks Project, the object was to use the field survey data to create a series of three-dimensional models related to the various phases of occupation at the site and then, through analysis of these models, offer discussion of the changing role of architecture in the economic, political, and social identities of a site. The survey sketches and preliminary measurements produced as part of my survey of Gor Khuttree Serai can be seen in Appendix A.

To complete a rapid architectural survey of a structure or complex of structures the following procedure should be followed. The examples found below were developed specifically for caravanserai complexes, but these general guide lines can be adapted for any other structures or complexes for which an architectural survey is desired.
5.3.4.1 Rough Sketch Phase

The first phase of any architectural survey is to establish a rough plan of the structure as the remains appear on the ground today. This involves drawing a quick sketch of the structure as it would appear if viewed from above. This plan drawing outlines the architectural remains as well as any internal components visible from above. This plan does not need to be drawn to scale, but it should reflect how the site would look from a bird’s eye view (Figure 5.5).

Once this plan is drawn, general measurements should be filled in to give the basic dimensions of the structure (Figure 5.5). GPS readings should also be taken and recorded both on the sketch plan and in the related field notes. Depending on the size of the structure to be measured this may require one or multiple measurements. Large structures benefit from having several such measurements taken at different locations. Once the plan has been drawn and the rough measurement data and GPS points recorded, the surveyors determine the areas or discrete spaces that will be the focus of more intensive recording. The unique spatial numbers are recorded on the plan sketch, as previously described in section 5.3.3.2.
5.3.4.2 Recording of the Structural Elements

Before moving into interior or enclosed spaces, surveyors should consider the exterior façade to determine what aspects might need to be recorded in detail. If exterior components are identified for recording, a sketch is made of these elements and appropriate width and height measurements are taken and recorded (Figure 5.6). Next, context, content, and detail photographs of this façade are taken. Finally, related field notes are completed. Depending on the structure, multiple façade faces may need to be recorded in this manner. Following this, surveyors should move into the first of the discrete spaces (interior rooms, enclosed spaces) identified and noted earlier in the rough sketch plan phase (5.3.4.1). A sketch plan is then drawn for a given space as well as a facade view for each of the walls to be recorded (Figure 5.7).
Next, the necessary measurements are taken using the laser distance meter or measuring tape where appropriate (Figure 5.8). Survey proceeds methodologically to record the discrete space. First, surveyors complete the context, content, and detail photographs. Next, they complete the related field notes. They continue photographing and recording in this fashion until each space in the structure has been recorded.

At the end of a structural survey, the roof of the structure (if still in place) should be sketched and appropriate measurements taken. Also, a series of photos should be made of the roof. The same should then be done for the floor. At the conclusion of the physical survey, any portion of the structure that is inaccessible should have sketches, measurements, and photographs taken as effectively as possible. Notes should outline the reasons for the omission of any information. If time permits, areas of special interest can be returned to at the conclusion of the survey to record further detailed sketches, measurements, photographs, and notes.

Figure 5.6 Schematic of a Caravanserai façade sketch showing the associated vertical and horizontal measurements.
Figure 5.7 Schematic showing the general layout and arrangement of sketches required to describe a discrete space within a structure. This example is from an interior room.

Figure 5.8 (A) Schematic of a plan diagram showing required measurements; (B) a corresponding interior wall view, showing the recorded measurements for this structural component.
5.4 Three-Dimensional Modeling

The creation of three-dimensional models in archaeology was once the domain of a computer savvy few, but advances in technology and in software availability has opened this growing field of data analysis to more researchers.

Prior use of computer modeling in spatial archaeology centered on agent-based modeling and predicative modeling, often integrating the use of Geographic Information Systems (GIS) (Allen, Green and Zubrow 1990; Conolly and Lake 2006; Wheatly and Gillings 2002). By the start of the 1990’s researchers were becoming increasingly interested in the use of three-dimensional architectural modeling as a means of better understanding structures in the past and also as an effective means of asking questions about how and why structures were built, altered, and reused (Reilly and Rahtz 1992; Reindel and Wagner 2009; Barcelo, Forte and Sanders 2000). Although impressive models were achieved, this modeling movement was initially dependent on high-cost three-dimensional techniques and difficult user interfaces that had a steep learning curve. Initial modeling projects did not always produce models capable of addressing the archaeological questions asked. Three-dimensional models of archaeological materials and sites are often seen in museums and public presentations, but new technological developments increasingly allow researchers to use these sophisticated models to address archaeological research questions and explore complex phenomena from the past (e.g., Boland and Johnston 1996; Levy and Dawson 2006; Lock 2003).

Like all methodologies, the kinds of questions we can ask of our data depend on the quality and quantity of the data recovered. The interplay of realism and reality is also brought to the fore in research using virtual models (Kantner 2000). We must remain cognizant of the data that drives model creation, the questions these models are intended to address, and the audience which will view and interpret them. Kantner (2000) acknowledges several audiences for three-dimensional models, including the researcher, the educational audience, and the public.

All models must take into consideration two main factors: the quality and depth of the architectural/archaeological information recovered from a site; and the technological capabilities available for analysis. The latter includes both the capabilities of the software and hardware components used to model and also the capabilities of the person creating the model. In the past, financial constraints played a significant role in choosing the software used to model and the technician or specialist to work on a model; however, with advancements in technology we are
now in a position where almost anyone can use modeling software and put together a workable model capable of addressing archaeological research questions.

One of the most promising avenues of analysis using three-dimensional modeling is the ability to record a structure rapidly in the field and then to reproduce that structure in the laboratory where it can be further analyzed and virtually revisited. Cultural resource management and historical conservation organizations have already begun to record structures in this way, and it is of vital importance that researchers continue to do so, as complete protection/preservation of all structures of interest is out of the question. The creation of models in association with the collection of survey metadata allows model creation and amplification. In regions of the world such as Pakistan this rapid recording strategy is vital to effective survey completion. The rapid construction of housing and other economic developments occurring globally are leading to destruction of vital historic structures, particularly in areas experiencing increased urban sprawl and loss of rural spaces. Although not ideal, the creation of three-dimensional models of threatened buildings offers a means of preserving them not just in appearance but in a model that can be refined, queried, and tested.

As Lawrence and Low (1990:459) predicted, the use of three-dimensional models greatly enhances our ability to understand and order space. Three-dimensional models further the interpretation of spatial organization and arrangement, as the impacts of access and layout changes are more apparent through the observation of an experiential model. The cultural information to be read from architecture necessitates consideration of the emotive and experiential aspects of space use and arrangement; modeling offers a sophisticated tool for dealing with these complex cultural and archaeological questions. Levy and Dawson’s (2006, 2005) work on laser-based three-dimensional modeling of Thule whale-bone-dwellings in the Canadian Arctic has shown that model presentation has interpretive value beyond two-dimensional spatial analyses as the ‘experience’ of these houses leads to new and unexpected interpretations and research directions.

The modeling completed on caravanserais from Pakistan has served as a test case within which to integrate three-dimensional architectural modeling software with access and planning analysis. My goal is the development of an archaeological methodology that is theory-driven, and that both develops and answers questions derived from a combination of data sources and analysis.
I used ArchiCAD, an architectural drafting suite, to model standing and ruined caravanserai structures. Using ArchiCAD, I generate all the related design sheets and documentation for a surveyed structure, including two-dimensional plan drawings of each section of the structure along with section and elevation illustrations and axonometric projections. Axonometric projections include any combination of trimetric, diametric, and isometric views, which are viewpoint used to represent three-dimensional objects in a two-dimensional environment. Prior to the creation of software programs for virtual modeling, any two-dimensional representation of a three-dimensional structure would have relied on one of these perspectives. In elevation views we see a plane of projection that is parallel to the principle face; such views are called orthographic and show one principle face at a time. In contrast, with axonometric views we see three principle faces at the same time (Figure 5.9). All axonometric perspectives rely on the visual foreshortening of one or more of their axes (x, y, or z). In trimetric there are three different foreshortenings, in diametric there are two, and in isometric there is one foreshortening applied equally to all axes (Figure 5.9).

**Figure 5.9 Schematics of axonometric perspectives; (A) trimetric; (B) diametric; and (C) isometric.**

The study of standing architecture necessitates the generation of plans, including layouts and elevations. The three-dimensional modeling component of ArchiCAD moves beyond the renderings generated in traditional architectural AutoCAD. The use of ArchiCAD for the modeling of historic structures allows archaeologists to create three-dimensional models of buildings and then track the effects of structural and potential use changes within and outside these structures. The three-dimensional models recreate form. Alterations to the three-
dimensional base can then be implemented and the effects of these alterations to form observed through the model. To use the concept of place(s) to frame this analysis, the place as formed includes the model’s physical components that make up all aspects of the structure, while the place in practice includes the activities that occur within the place as formed and are evaluated based on the combination of the analytical principles of access and planning analysis (discussed later in section 5.5). Thus, the evaluation of a space’s ability to house specific practices/functions moves from more objective to more subjective analysis.

5.5 Space-syntax, Access, and Planning Analysis

In their work, *The Social Logic of Space* (1984), Hillier and Hanson establish a series of interpretive methods for assessing the spatial configuration of the built environment. Their methods help in addressing “the social content of spatial patterning and the spatial content of social patterning” (Hillier and Hanson 1984:x-xi). Their approach is similar to the theoretical approach laid out by Giddens and others, where spaces structure human action and represent the organizing principles of societies. Their decision to discuss the social logic of space through a series of spatial syntaxes or rules of spatial use/engagement clearly builds on the framework of syntactical rules of speech and language that led Levi-Strauss’s initial forays into structuralist theory. Hillier and Hanson convert connected spaces into discrete units, and in so doing assign interpretative meaning to spatial arrangements based on the organizing principles of space. If space organization is patterned, then these patterns can be related back to the social structures that generated them. Hillier and Hanson address spatial syntaxes at two levels of analysis, alpha and gamma levels, where alpha levels represent syntactical properties on the scale of the settlement and gamma levels on the scale of the individual structure. For this research, I use gamma level access analysis, also known as convex spatial analysis. Gamma analysis is essentially alpha analysis interpreted through spatial permeability (Hillier and Hanson 1984:147), where permeability is the extent to which people can move in different directions within a spatial layout.

Access analysis reduces complex architecture to a topological graph that only shows the interrelationships of spaces. Through this process it reveals the routes through a structure and shows which spaces, if any, control access to other spaces. In serai studies, access analysis, particularly of gates, highlights the division of space and identifies locations where private
actions are likely to have taken place and those where public display of cultural/economic power and identity were concentrated.

Access analysis looks at how space frames and determines access to specific locations. This approach has been criticized as being overly dependent on our own modern experiences of architecture and how we culturally conceive of access (Giles 2000:7). The strongest critic of this approach is Leach (1978), who argued that the social component of Hillier and Hanson’s analysis draws too heavily on basic Durkheimian assumptions. Durkheim (1997[1893]) focused on the distinction between organic and mechanical solidarity in the development of societies. For Durkheim, organic solidarity is seen in society’s interdependence as the modes of production become increasingly specialized and individuals rely on the products of others’ labor. Organic solidarity is used to describe the interdependence of the component parts, like the organs of the body; this form of society relies on the contributions of various constituent parts for the success of the whole. Mechanical solidarity, in contrast, exists in societies where people engage in similar means of production and their sense of societal connection is founded in their shared abilities, beliefs, and experiences. Considering spatial arrangements through a Durkheimian lens, Hillier and Hanson (1984:18-20) consider organic solidarity to involve building production within industrialized or modern societies with specialization of labor, while mechanical solidarity produces buildings within small-scale societies with homogeneity of individuals and tasks. With simplistic Durkheimian assignments, settlements that control access and have fewer paths of movement relate to strict organic social solidarity. Settlements that exercise less control of spaces and have more paths of movement are related to more mechanic forms of solidarity, with labor being divided such that there is overlap in social functions between occupants and groups. Essentially space is used in industrialized societies to define access and control, while space in small scale societies is more likely to be equally accessible and shared. As Stockett (2005:390) has summarized, “such a formulation enforces a very rigid binary model of socio-spatial interpretation that ignores several highly relevant variables”.

The limitations of this implied binary model are overcome by researchers using techniques rooted in the syntactical consideration of spaces by acknowledging that architecture affects and shapes users, but is itself constructed and shaped by the people who use and build it. In application this means that analyses of spatial arrangements create binary or numerical reductions of the relationships between discrete spaces; however, these analytic properties must
be considered relative to the cultural context and functional uses of the analyzed spaces (Cutting 2006, 2003; Dawson 2002, 2001; Foster 1989; Van Dyke 1999). Architecture is not a pre-existing determinate of human cultural behavior, but rather the reflexive product of human culture as it acts back on the system (culture) that created it. It is impossible in most cases to determine at what point architecture reflects the culture of creation and at what point it begins to act back on and facilitate alterations to the culture that made it. Only through the interpretation and use of architecture is its cultural influence felt; if the constructed form is not used it can have little effect on a cultural system. That is, the power of a structure to alter culture is determined by the context and duration of its use. Certain places and spaces, through their reuse and reinterpretation over time, become transitive spaces that allow the bridging of cultural systems and legitimization of new power structures and economies. My research demonstrates that Gor Khuttree Serai transcended its original function as a caravanserai, becoming a means for incoming groups to occupy, alter, and associate a specific place that had existing value in the historic landscape of the city of Peshawar. I use access analysis to consider physical alterations to the caravanserai spaces, and the cultural and functional components of space use are seen to intersect in the reuse and reinterpretation of the structure.

Space-syntax-directed analyses are also faulted for being based on an un-theorized Western-informed notion of public and private, and for relating these to concepts of who occupies specific spaces and what sorts of power these persons should hold based largely on the ease with which their spatial locations can be accessed (Parker-Pearson and Richards 1994). However, I believe we can contextualize our analysis and mitigate the influence of Western ideals. The organization of any structure represents the beliefs and cultural principles central to its builders and thus the repetition of these spatial principles should still be discernable in the analysis of built form. Most important is the need to inform our analysis with cultural information; the data cannot be taken at face value until rigorous testing has been accomplished. The best means of doing this is through controlled studies, such as the ones completed on Gor Khuttree Serai in this research. Here, knowledge about the use and arrangement of space within the gate systems is informed through the architectural, archaeological, and historical records resulting in a test case for the application of space-syntax principles to the analysis of space within Mughal-period serais.
Leach (1978:338) has suggested that in order to make sense of a space-syntax-derived analysis one has to already understand the space. This is not necessarily the case, especially in situations where we can use certain test cases as a means of establishing reference analysis within cultural systems in regards to their use and arrangement of spaces. This point is supported by Dawson (2001:473) when he states that “through the use of direct historic analogy and ethno archaeology [sic], archaeologists can analyze the spatial configurations of historic or contemporary groups and then look for evidence of similar syntactic principles in the archaeological record”. In other words, like most archaeological analyses, access analysis relies on the appropriate use of analogy. Access analysis is a method of quantifying the integrative qualities of spaces; it should not be conflated with theory. “In jettisoning its associated theoretical perspectives, archaeologists may then use the access diagram as a simple means of representing space and identifying subtle patterns within it. Or, to rephrase, the access diagram comes to serve as a tool, not a theory” (Stockett 2005:386). This research uses access analysis as a means of cataloguing the arrangement of spaces. What the resulting analysis suggests about the people who used the structure and any changes made to the structure over time falls under previously discussed theoretical umbrellas (chapter two).

The use of space-syntax principles to analyze architecture depends on the ability of the user to properly interpret the graphs generated and place them in the correct social and functional context. This has been exemplified in the research of Van Dyke (1999), whose study of a Chacoan great house demonstrated that without cultural and functional knowledge access analysis seemed to produce contradictory results, defining spatial relations as it does based on “spatial rather than social relationships” (Van Dyke 1999:461-2). My caravanserai research serves as an assessment of the value of access analysis in the interpretation of the archaeological remains of architecture, as it will be used on a structure that has considerable historical data detailing the uses and the arrangements of its spaces over time.

In order to include functional consideration within space-syntax-guided access analysis, archaeologists have begun to incorporate planning analysis within their spatial analyses (Gilchrist 1994; Fairclough 1992; Giles 2000). Planning analysis (Faulkner 1958) looks at access as it is experienced by people familiar with a structure, as is further discussed in section 5.5.3. It graphs spatial relationships based on intended use of space (the task-oriented functions of spaces, e.g., kitchens vs. dining areas) and not solely on the physical location of that space.
within the structure, as in access analysis. Planning analysis involves applying functional associations to certain bounded spaces; where these associations are not apparent or clear, we can use planning analysis as a means of analyzing proposed space uses relative to artifact frequencies to look for patterns in functional-space relationships. Planning analysis investigates how spatial organization and architecture frame relationships between people within bounded spaces (Giles 2000:7). It emphasizes the ways social status and knowledge affect the use of architectural space, giving “priority to internal relationships rather than to external form or design” (Fairclough 1992:359). Thus, it is uniquely suited to address the use, organization, and actualization of space within Mughal caravanserais as it can move beyond a simply typological stylistic analysis. Grube (1978:10) notes that “one of the most striking features of all Islamic architectural monuments is their focus on the enclosed space, on the inside as opposed to the outside, the façade or the general exterior articulation of a building”. Planning analysis will help to document internal spatial organization as a subset of the exterior appearance of the structures. The use of access analysis and planning analysis in my interpretation of caravanserais exposes how the form of the caravanserai relates to function, and how alterations to that form can reflect the incorporation of new cultural functions (see sections 5.5.1-.3).

5.5.1 Access Analysis: The key concepts for graphing space

The first step in any application of access analysis is to determine how to delineate the spaces that will form the basis of the study, as well as to determine the access of each space to all others. In archaeological applications, this primary delineation can be affected by insufficient remains from which to make determinations; entire walls might be missing, information about doorways and their placement may be absent, or entire floors of the structure may have vanished. In these situations it is necessary to make decisions about how to analyze the space. Once discrete spaces are defined, the definition parameters must be supported with additional sources of evidence. Where the formation of discrete spaces is difficult to define or defend, researchers conduct analysis of multiple hypothetical representations of how the space may have been divided and then consider the results as they affect the interpretation of a structure. How discrete spaces are assigned will influence the results of the syntactical analysis of access and will affect the resultant consideration of how such spaces control interactions between inhabitants and visitors (Dawson 2001:471). This being true, interpretation of the interaction of
spaces, and by extension of inhabitants, can be greatly affected by hypothesized and unverified assignments of discrete spaces.

Grahame (2000:30-32) has argued that bounded spaces do not always accurately represent the spatial configuration as experienced by building patrons. Within my research of the caravanserai form, if I conceive of the open rooftop as a continuous and bounded space the resultant access analysis will downplay the physical size of the area that this rooftop enclosed and the effects the size of this space had on people’s use of and access through it. Hillier and Hanson (1984:90) suggest dealing with similar situations by the application of alpha analysis, usually used for settlement analysis. With alpha analysis, any space is divided into the fewest convex spaces, which are as large as possible, such that a straight line drawn between any two points along the boundary of a convex space does not pass through that boundary. Grahame suggests that this application should be further refined by checking to see if the spaces are defined by the exterior or interior of a boundary or in part by both (Fisher 2007:97-98). When adjoining convex spaces are defined by interior boundaries it makes sense to combine these component spaces into a single space. When adjoining convex spaces are defined by exterior boundaries they require the application of the rule of convexity. Finally, in ambiguous cases we can apply the concept of co-presence: “could a person or persons be in one convex space and reasonably be unaware of the presence of others in the adjoining convex space?” (Fisher 2007:98). If the answer is yes, then the two spaces should be treated as discrete spaces; if no, than the spaces should be treated as one (Fisher 2007:98).

Ephemeral spaces or boundaries offer an even more confusing situation. Again, the hypothetical placement of ephemeral spatial divisions can be taken into account in the formation of bounded spaces for analysis. In some cases it will be impossible to portray accurately all the ephemeral features that once divided a discrete space; as a result, there will be an over-simplification of the spatial system. It is necessary to assess the effects that such ephemeral structures might have had on any completed access analysis on a case-by-case basis. In this research, access analysis is used to identify changes made to the spatial structure over time, especially as applied to the gate systems of the serai at Gor Khuttree. Archaeologically elusive portions of the structure such as the demolished hammam or bath do not figure highly in this application. However, it is acknowledged that the absence of such information has discounted or underrepresented the role of these structures in the complete spatial system of the caravanserai.
The comparison of the Gor Khuttree Serai gates through time allows me to look at the most complex portion of the structure that were maintained through time, the spaces within which important persons were housed or administration carried out.

Once the bounded spaces have been identified, the construction of access graphs begins. Access graphs show the relation of one bounded space to those that communicate with it, relative to the depth of that space within the system. Depth is calculated relative to an arbitrarily assigned space, most often to a space outside of the building called carrier space, which is considered to be one space regardless of the number of entrances a structure has or how the exterior space is divided. The relationship of exterior spaces to each other and to discrete buildings is a component of settlement analysis, where spatial relations are considered at the scale of the entire settlement. Analysis at this level is outside the objectives of this research. Additionally, the number of entrances is irrelevant in access analysis as permeability is determined by access through spaces and not in relation to how many ways a given space can be accessed from another discrete space. Therefore, any number of doors linking two discrete spaces equates to one degree of spatial penetration. Spaces, both carrier and bounded space, are represented by circles while the direct access of any space to another space is represented by a line segment. Spaces are also assigned a number that labels the space but has no interpretive value. Justified graphs are created by aligning all spaces in horizontal rows that represent the relation of the space to the spaces it interacts with. The number of rows between any space and the bottom space, typically the carrier, shows how ‘deep’ in the system that space occurs. Depth considers how many spaces one has to pass through in order to reach the space in question. In Figure 5.10, multiple formations of bounded spaces and their related justified access graphs are shown. These will be discussed in more detail in the sections that follow on symmetry and distribution. However, they demonstrate the principles of justified graphing, in a formation with spaces A, B, C and D (Figure 5.10).

Once these justified access graphs are formed, we can analyze them to begin discussing how the spaces control access to each other and how they structure movement through the building. We do this by looking at the syntactic properties of each space using a series of formulas (Hillier and Hanson 1984). These formulas cover the production of several values: the control value (CV), the relative asymmetry value (RA), the mean depth value, as well as the real relative asymmetry value (RRA). These values are then used to discuss the syntactic properties
of each space. I address the meaning and formulation behind each value below, beginning with an introduction to the concepts of symmetry and distribution.

Figure 5.10 Justified graphs where C is the carrier space showing:

(i) A and B are in a symmetric and distributed relationship with respect C;
(ii) A and B are in a symmetric and non-distributed relationship with respect to C;
(iii) A and B are in an asymmetric and non-distributed relationship with each other with respect to C;
(iv) D is in a non-distributed and symmetric relation to A and B, which still remain symmetric to each other with respect to D or to C;
and (v) A and B are symmetric to each other with respect to C, but D is in an asymmetric relation to both with respect to C
5.5.2 Symmetry and Distribution

The concept of symmetry is used to describe the relationship between bounded spaces. If the relationship between two spaces with respect to a third space is direct and equivalent, then it is deemed symmetrical. If the relationship between two spaces is negotiated by a third controlling intermediary space, then it is deemed asymmetrical (Figure 5.10).

Distributedness is a measure of how many routes exist between spaces. Spaces that can be reached through more than one discrete route are distributed, while ones that are only reached through a single route are non-distributed (see Figure 5.10). Symmetry and distributedness are considered relative to one space.

The consideration of the relationship between a space and any other spaces with which it has a direct connection involves that space’s local relations. Consideration of the space relative to the overall organization of the system involves the space’s global relations (Hillier and Hanson 1984:152-154). Within this system, the control value (CV) of any space is a measure of the degree of control that the space exercises over its immediate neighbors; as a result, it is a local control value. To calculate the CV value for any space, all spaces in a building are assigned a value of 1. For each space this value is then divided out equally to the number of spaces it connects to. These fractional amounts are then totaled for any space to generate its control value (CV). For example, examining arrangement IV in Figure 5.10 to calculate the CV value for space D, the following computation is made. Spaces A, B, and C, each distribute their value of 1 to those spaces with which they connect. In this example they only connect with space D and thus space D has a CV value of 3, the sum of the contributing portions of the spaces over which it exercises control. Correspondingly, D connects with three discrete spaces (spaces A, B, and C) and thus distributes its value of 1 equally to each of these. Therefore, the CV values of spaces A, B, and C are equivalent to the sum of the control given to them by the spaces that connect with them. In this case each has a CV value given by space D only, which is 0.33.

The higher the CV amount, the more controlling that space is relative to its immediate neighbors (local relations). A space with a low CV may control access to a small number of spaces, or even to no spaces. However, the control value does not reflect the depth of any route(s) accessed through the space it describes. Fisher (2007:98) points out that this space may control access to a route that extends deeply into a structure. To address this issue, Fisher
created his Global Control Value, which is used to describe the number of depth levels to which a space controls access. This is calculated by summing the total number of depth levels through which a person can move from a given space, taking the most direct path to the deepest part of the accessible structure (Fisher 2007:99). This perspective on control assumes a movement from the exterior toward the deepest portion of any structure.

Relative asymmetry (RA) reflects how an individual space relates to the entire system; thus it can either be integrated or segregated. RA values deal with how deep or integrated a space is relative to the number of discrete spaces within the whole structure. Comparisons between systems with differing numbers of spaces require that we normalize these RA values so that they are not skewed by the number of spaces in the entire system. The normalized value is known as real relative asymmetry (RRA). The calculation of relative asymmetry requires a value for the mean depth (MD) of the space in question. Mean depth calculations involve summing the number of spaces at each depth from the space in question.

Mean Depth (MD) = \( \sum_{k-1}^{d_k} \) where \( \sum d_k \) is the sum of the depth values \( d \) for all of the \( k \) spaces.

Relative asymmetry values are calculated using the resulting MD value for a given space \( K \) which equals the number of spaces in the system. The RA is a standardized value between 1 and 0. Lower values indicate spaces that are more highly integrated and more accessible, and higher values indicate spaces that are more asymmetrical or segregated.

Relative Assymetry (RA) = \( \frac{2(MD - 1)}{K - 2} \)

The real relative asymmetry (RRA) equation is used to normalize the value of relative asymmetry, to account for differences in the total number of spaces, and to allow for its comparison with other values. In this transformative equation, the D-value is selected from a table of values that have been generated for spatial systems that have between 5 and 250 spaces (Hillier and Hanson 1984:112).

Real Relative Assymetry (RRA) = \( \frac{RA}{D_k} \) where \( D_k \) is the D-value for \( k \) spaces.

In the example that follows I show the calculation of the mean depth, relative asymmetry, and real relative asymmetry values for a given space (4) in a simplified justified access graph (Figure 5.11), justified from the carrier space.
Figure 5.11 Example of a spatial arrangement (left) and the resultant justified access graph (right).

From space 4 in Figure 5.11, the necessary calculations to generate the values for analysis of the syntactical properties of this space are shown in Table 5.4.

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Calculation</th>
<th>Resultant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Depth (from carrier)</td>
<td>$\frac{\sum d_k}{k - 1}$</td>
<td>1.33</td>
</tr>
<tr>
<td></td>
<td>$(0+1+1+2)/(4-1) = \frac{4}{3} = 1.33$</td>
<td></td>
</tr>
<tr>
<td>Relative Asymmetry (of space 4)</td>
<td>$\frac{2(MD - 1)}{K - 2}$</td>
<td>0.33</td>
</tr>
<tr>
<td></td>
<td>$\frac{2(1.33-1)}{(4-2)} = \frac{0.66}{2} = 0.33$</td>
<td></td>
</tr>
<tr>
<td>Real Relative Asymmetry (of space 4)</td>
<td>$\frac{RA}{D_k}$</td>
<td>0.33</td>
</tr>
<tr>
<td></td>
<td>$\frac{0.33}{1} = 0.33$</td>
<td></td>
</tr>
</tbody>
</table>

These values can be calculated using statistical computer software. I used a simple freeware program called JASS to generate my justified access graphs and to calculate the related values for each of the discrete spaces within them (Figure 5.12).
5.5.3 Planning Analysis

As discussed previously, planning analysis, also called functional analysis, was developed by Faulkner (1958, 1963). It can aid in our interpretation of access analysis results as it looks at spaces as they are organized by function as opposed to simply their location within a structure. Through its application and combination with access analysis, we can examine the functional uses of various spaces in relation to their measure of control and their symmetrical or distributed tendencies. This is a formalized way of comparing the known meanings of documented structures with the hypothesized meanings of other structures to see if spatial arrangements and their analyses can be expanded to predict the human actions those spaces once housed. Fairclough’s (1992:348) functional analysis “is concerned with spatial analysis as a means of exploring how architectural space has been consciously sub-divided and allocated in the past”. Access analysis looks at what Markus (1982) terms self-other relations, interpretations of structures based on conceptions of users who are familiar with the structures’ arrangement and plan (self) and those who are not (others). Planning analysis looks at self-self relations; in other words, how people familiar with a structure are affected by and reflected in a structure’s spatial arrangement in terms of the functional uses of specific spaces.
Planning diagrams arrange the order of rooms by known function (Figure 5.13). Faulkner’s (1963) diagrams highlight the value of relating rooms by function as they reveal areas where planning was influenced by the desire to align like-functioned spaces. For example, that the suites of rooms reserved for high ranking guests (A1 on the plan in Figure 5.13) is associated with the largest and grandest hall (A) and also shares access to this hall with private chambers of the castle’s owner’s (A2) is more clearly revealed from this level of presentation than from access graphs alone. Figure 5.13 shows the discrete spaces within Bolton Castle and the connections between these spaces in terms of access. Instead of arranging the graph by depth levels alone, as justified access graphs do, the graphical representation of space is arranged such that rooms with similar functions are located near to each other. The rooms are also scaled proportional to the area of physical space they enclose or define for use. Similar functional consideration has been made by Foster (1989), who applies functional zones to justified access graphs.

Figure 5.13 Planning diagram for Bolton Castle after Faulkner (1963:228). Each box represents a space within the structure and is approximately proportional to the floor area of that space within the building. The vertical scale reproduces the
relationship of the building’s floor levels, and the grouping of rooms by function shows the planning of space via intended function.

In their most simple application, planning diagrams and their analysis can be interpreted to represent a structure within its social context. They can also show how internal relationships of spatial functions are maintained in spite of changing architectural form and design. Fairclough (1992) shows the value of the combination of access and planning analysis in his study of Edlingham Castle, where several periods of occupation resulted in the alteration in the use and arrangement of space(s). Figure 5.14 presents Fairclough’s analysis of the period B use of this site through the comparison of access graphs and planning diagrams. It also includes Fairclough’s effort to combine access and planning diagrams to document the permeability of spaces within certain functional classes, i.e., to consider the syntactical properties of spatial arrangement through the lens of functional relationships. Similar work with permeability maps is presented by Campion (1996). The incorporation of planning analysis into access analysis is seen in this approach with the production of separate graphs as well as the combination of the two. In figure 5.14, (i) represents the justified access graph of the spaces identified within the castle, while (ii) shows the planning diagram for the same identified spaces with the presentation of spaces organized around similar functional uses and proportionally representing their physical areas. Finally, (iii) presents the combination of these two analytical approaches as a justified access graph that includes functional assignments and area representations for each of the discrete spaces identified, which would typically have been represented only by nodes in a conventional justified access graph.
5.6 Concluding Remarks

This chapter began by reviewing common approaches to architectural survey of standing medieval period structures within South Asia. These approaches were then used as the basis from which to explain the architectural survey strategy designed for and used in this research project. The Campbell approach for rapid architectural field survey allows expedient field recording that facilitates intensive analysis subsequent to data collection. Post-collection analysis may include typology formation, stylistic studies, spatial analyses, etc. In this research, this post-survey analysis has involved the production of three-dimensional models. These models are developed for the analysis of the arrangement of discrete spaces within a given structure over time. My study of caravanserais, specifically the analysis of the gate systems at Gor Khuttree Serai over time, uses access analysis expanded to include functional considerations to address how this serai’s spaces are reused in periods subsequent to their initial construction.
In chapter six I present an example of the architectural analysis of data gathered using the Campbell approach to rapid architectural field survey. This comparative analysis of the remaining portions of Pakka Khanpur Serai to those of Gor Khuttree Serai highlights the detail of work that can be achieved with the data collected from an expedited field survey. Following this, chapter seven presents the detailed analysis of the Gor Khuttree complex achieved with a detailed survey of the site. This detailed survey represents the expansion of the expedient survey techniques exampled in the analysis of Pakka Khanpur Serai combined with extensive laboratory analysis and historic documentation research.

In chapter seven, space-syntax principles are considered for varying periods of occupation of the Gor Khuttree complex to determine the effects of the reuse and renegotiation of spaces over time; for similar themed work see Fairclough (1992) and Banning and Byrd (1987). I generate graphs of spatial accessibility, combining planning and access graphs, and then compare the standard interpretation of symmetry/asymmetry and distributedness/non-distributedness with the interpretations generated from the historic records of site use and occupation. Using this spatial analysis I begin to validate and in some cases reformulate conceptions of the historic uses of the spaces within the gate systems of the Gor Khuttree complex. In chapter eight, I consider how these spatial arrangements and uses through time relate to the current uses of the site.
Chapter 6 Architectural Analysis of Pakka Khanpur Serai

Pakka Khanpur Serai (N 33°18.616’ E73°20.517’) (Figure 6.1) is located in the Punjab Province of Pakistan, near the modern cities of Rawalpindi and Islamabad. Pakka Khanpur Serai is located along the major Mughal trade route leading from Kabul across the Punjab and toward Lahore and Delhi (Begley 1983).

The expedient architectural survey of Pakka Khanpur Serai resulted in a robust body of data. This data informs the study of caravanserais types within the sub-continent and also serves as an example of the detailed information that can be extracted from data gathered expediently. Pakka Khanpur Serai is also an example of a rural caravanserai and its comparison with the urban-based Gor Khuttree Serai highlights some potential differences between imperial serais constructed in each of these settings. In addition to the comparisons made between these serais as products of their urban and rural serai settings, they are also two examples of how serais can be reused and reinterpreted differently dependent on the setting in which they were and are located, and how specifically these settings evolved over time. I begin with the analysis of Pakka Khanpur Serai as compared to Gor Khuttree Serai and conclude with a discussion of Pakka Khanpur relative to its setting and its reinterpretation today.

Much less is known about Pakka Khanpur Serai than Gor Khuttree Serai from the historic documents. Jahangir’s nama mentions Pakka Khanpur Serai, suggesting its date of creation was prior to Jahangir’s rule (AD 1605-1628) (Dar 1999:125 from his reading of the Tuzk-i-Jahangiri). The travel notes of William Finch (AD 1611) mention ‘Pakka’ as a place along the Lahore/Kabul route (as discussed in Ansari 1975:32 and Foster 1921:168). Martin Neill (1845:308) stopped at “Serai Pucka”, while on military tour sometime between AD 1839 and 1842. The Narrative of the Second Sikh War by Edward Thackwell (1970:136) records the arrival of the British army at “Serai Pucka” on the eighth of March AD 1848. A military notice from January 21st, AD 1852, also mentions “Pucka” Serai in Rawalpindi District (Allen’s Indian Mail 1852:158); this notice informed all European men serving in the British forces and alongside the Native Corps at “Pucka” Serai that they were required to grow their mustaches. In Hari Ram Gupta’s (1999:14) History of the Sikhs, “Serai Pakka” is the location from which Shah Zaman addressed a letter to Ranjit Singh in approximately AD 1796. Local residents
today are of two opinions. Some suggest the serai was built by the Mughal Emperor Jahangir in the early 1600’s, while others suggest the serai is a Sher Shah Suri period construction. At this time there is little artifactual reinforcement for this inherited knowledge. Archaeological research has not yet determined a date of construction, although the structure does not resemble other Suri period constructions.

Muhammad Ashraf Khan relocated this serai (Khan et al. 2009) and urged the Caravanserai Networks Project to visit and survey the location. Survey teams made two visits to Pakka Khanpur Serai in March 2007. The first team comprised colleagues from the University of Peshawar and Hazara University who completed an expedient survey of the site (over two days) as per the guidelines presented in chapter five, section 5.2. The Peshawar University team included of Dr. Taj Ali, an architecture specialist; Mr. Qazi Naeem, who offered valuable insight into the formation of the serai structure; Mr. Asad Ali, photographer; and Mr. M. Neem, surveyor and draftsperson. The Hazara University component included Mr. Abid ur-Rehman, surveyor and photographer; and Mr. Ashfaq Ahmad, surveyor and draftsperson. Using the Leica Disto Laser Distance Meter, this team recorded the overall appearance of the structure, making detailed sketches of the accessible portions of the North Gate system as well as of some sample cells. They also completed extensive photography of the site and surrounding village, and gathered local histories of the site by the village occupants.

The second field visit to the site lasted several hours and involved in addition to the Hazara University component of the first survey team, Dr. Heather M.-L. Miller, University of Toronto, and Jennifer L. Campbell, architecture specialist, University of Toronto. This second survey involved additional photography and recording of architectural features noted in the first survey. The preliminary architectural analysis presented in this chapter has been published (Campbell 2010) and an additional joint publication by the above survey teams is forthcoming and will outline all aspects of the survey of this serai.
Figure 6.1 Location of Pakka Khanpur Serai and Gor Khuttree Serai, Pakistan. Compilation from Google Earth 2010.
6.1. Architectural Analysis

Pakka Khanpur Serai (Figure 6.2) was square in plan, measuring approximately 123 m north-south by 119 m east-west, with two gates and four bastions. Only a north gate survives today (Figure 6.6-A), along with portions of three bastions and several cells along each wall. The serai has an internal well and a mihrab in the west wall associated with the ruins of a mosque. Dar (1999: 113, 1994) reported that the serai once housed two mosques, one for men and one for women, and that the structure found along the west wall today corresponds with the remains of the women’s mosque from the time of original occupation. This is further supported in Dar’s (2000:170) survey of the site where he records that the west wall contained the women’s mosque while the men’s mosque was in the courtyard. According to Dar (2000:170), the men’s mosque was intact in AD 1968 but was rebuilt thereafter and replaced with the mosque found near to the center of the courtyard today. Unlike the urban Gor Khuttree Serai, Pakka Khanpur Serai was an isolated way station along a route between the major center of Lahore and Kabul. After the British took control of the Indian sub-continent, trade routes shifted and Pakka Khanpur was left off the main thoroughfare. This led to its abandonment as a functioning serai and its subsequent transformation into an enclosed village. People in the local area began to use the serai as a storage facility and eventually came to live within the structure itself. Today, the serai contains several houses built into its walls, a well, a free-standing mosque within the courtyard, a saint’s tomb incorporated into the northwest bastion (Figure 6.2), several small penning areas for animals also built into the serai walls, and limited open spaces (Figure 6.3). From the interior, it is difficult in places to distinguish the traces of the original caravanserai structure. However, looking from the outside one can clearly see the large and impressive serai structure that now contains the village. It is important to note that the land on which the serai sits is uneven. This is most noticeable when walking around the structure and noting the variation in the heights of the perimeter walls as viewed from the exterior, despite the regularity of their height when viewed from the interior.
Figure 6.2 ArchiCAD simplified plan of Pakka Khanpur Serai.

Figure 6.3 Goats and cattle occupy the interior space of Pakka Khanpur Serai, 2007, facing northwest. Several converted cells are seen along the northern wall and the saint’s tomb is the white structure with the green roof located behind the trees.
6.1.1 Cells

The cells at Pakka Khanpur (Figure 6.2) are similar in size and arrangement to those at Gor Khuttree, discussed in section 7.1.1. The front sections of the cells (a total of 4 cells were recorded) at Pakka Khanpur on average measure 3.30 m X 3.30 m while the rear section measures 2.65 m X 3.30 m. Differences between the two serais’ cells include the style of the doorway used to enter the rear section of the cells and the methods of construction of the ceilings. The front sections of the cells at Pakka Khanpur communicate with the rear sections via a rectangular doorway with gently rounded upper corners, while those at Gor Khuttree generally communicate with the rear section via an arched doorway (Figure 6.4 as compared with Figure 7.3).

Figure 6.4 North wall cell, Pakka Khanpur Serai 2007, facing north, niches indicated.
At Pakka Khanpur Serai these doorways are much narrower than their counterparts at Gor Khuttree and significantly decrease the amount of light that can reach the rear chamber. A careful study of the construction of these doorways suggests that they are original to the structure as they fluidly integrated with the surrounding brickwork. They are also proportionally situated in relation to the wall niches that flank them on either side. The ceilings of the verandahs and of the rear chambers at Pakka Khanpur Serai have different styles and therefore methods of construction than those at Gor Khuttree (section 7.1.1). The verandah ceilings at Pakka Khanpur Serai are composed of brick laid in an inverted chevron pattern which culminates at the apex of the arch in a diamond pattern of edge-laid bricks (Figure 6.5-A). The rear sections of these cells have domed ceilings made by coiling edge-laid bricks in an ever constricting circular pattern (Figure 6.5-B). The dome is on squinches that articulate with the rounded top edge of the surrounding walls.

![Figure 6.5 Pakka Khanpur Serai north wall cell ceilings; (A) the ceiling of the cell verandah; (B) the domed ceiling of the rear section of the cell.](image)

### 6.1.2 Gate

The existing serai gates at Pakka Khanpur and Gor Khuttree show two variants of gate arrangement. Parihar (2008:82) has also discussed the presence of these two gate arrangements in the Indian Punjab. The Pakka Khanpur North Gate is rectangular while the polygonal gate at Gor Khuttree has side wings off the central passageway as seen from the exterior façade (Figures 6.6 and 6.7).
Figure 6.6 (A) Pakka Khanpur Serai North Gate, facing southwest; (B) Gor Khuttree Serai East Gate, facing west, 2007.

Figure 6.7 Comparison of gate plan shapes, ground floor plans of Pakka Khanpur Serai, North Gate (top) and Gor Khuttree Serai, East Gate (bottom).

However, the gates at both serais have similar spatial arrangements making them functionally more similar than different. The gates (Figure 6.7) at Gor Khuttree Serai are larger
in size and this corresponds to the enormity of the structure and also the role it would have played as the central imperial serai of Peshawar. Both gates have a central passage that has arched entrances surrounding a domed central chamber. These chambers have rooms on either side of their main passages, including two on their ground floors that could be used for administrative purposes as well as two rooms on their upper floors overlooking the main passage. The ground floor rooms likely served administrators who interacted with persons arriving at or leaving the serai (Dar 1994: 27). From the first floor rooms at both serais the interior courtyard and the land exterior to the structures can be viewed, offering a position from which arrival and departures could be watched and the internal courtyard activities monitored.

The stylistic differences observed between the gates at Gor Khuttree Serai and Pakka Khanpur Serai are outlined in the sections that follow, with Gor Khuttree Serai informing the analysis of the remains at Pakka Khanpur. The exterior façade of the Mughal-period gate at Gor Khuttree has angled and recessing walls on either side of the main entrance passage, giving the gate a polygonal as opposed to rectangular footprint (see Figure 6.7 and section 7.14). These angled sections contain the upper-floor balconies that communicate with the first floor interior rooms. Angling these sections provides the structure with further visual interest and a greater view-shed, although an additional ground floor room is lost that is available in the Pakka Khanpur arrangement. The balcony section at Gor Khuttree Serai is separated from the associated first floor room by a small angled passage that assures the interior room cannot be viewed from outside the serai. This could be a safety or privacy precaution.

The exterior façade of Pakka Khanpur Serai is comprised of a rectangular face that frames the arched central passageway (Figure 6.6). This passageway is flanked on either side with a rectangular recessed panel that frames an upper arched balcony as well as a shallow recessed arch at ground level (Figure 6.6, detail not shown in Figure 6.7). The upper arched balconies on either side of the entrance passage have been filled with unmortared brick laid in irregular courses. The recessed arches below do not seem deep enough to have had a functional purpose and rather appear to be decorative elements intended to balance the balconies above.

The interior façade of the Gor Khuttree East Gate is very similar in arrangement and structural execution to the North Gate at Pakka Khanpur. However, the gate at Pakka Khanpur was flanked on either side by stairways that led to the roofs of the adjacent cells and allowed access to the first floor gate rooms. These stairways at Pakka Khanpur were not structurally part
of the gate system, although they were necessary for accessing the upper floor (Figure 6.7). Presently the west-side stairway does not exist and the east-side stairway is contained inside a private dwelling and, although local home owners attest to its presence, it was not observed by either of the survey teams. At Gor Khuttree, the East Gate’s central passage is also flanked by two stairways that articulate with the interior of the serai. These stairways are, however, part of the gate system. They have been afforded their own ventilation via a small arched window. They are covered by a barrel-vaulted ceiling (see section 7.1.4.1). At the top of each of these stairs at Gor Khuttree is a landing that communicates on the gate-passage-side with the first floor rooms located there. On the opposite side it communicates with the rooftops of the cells that abut the gate. Once on the roof of these cells at Gor Khuttree, the central gate’s rooftop can be accessed via an additional set of stairs. The roof of the gate’s central passage offers a vantage point from which to survey not only those within the serai but those approaching from impressive distances. As yet, there is no evidence for a stairway that led to the roof of the gate at Pakka Khanpur Serai (Figure 6.8). It remains possible that this stairway has been removed or that access to the roof of the gate was never possible via a permanent stairway system, although it is likely that some access existed to such a useful vantage point, especially in this isolated roadside serai.

Figure 6.8 Southeast side of Pakka Khanpur Serai, North Gate, facing west and showing no evidence of stairway to gate roof, 2007.
6.1.3 Decoration

It is generally said that the gates of Mughal-period serais were heavily adorned with decorations (Dar 1994: 27). Parihar (1985:18), comparing Persian serais with Mughal-style serais in South Asia states:

[t]he Persian prototypes occasionally have their portals magnificently designed and ornamented. In the case of the sarais in the Punjab and Haryana, it is the architectural and decorative treatment of their gateways where the architects exhibited their utmost expertise and imagination, so much so that these became the keynote of the style.

However, decoration is currently absent at Pakka Khanpur Serai. There is clear evidence that the serai at Pakka Khanpur was once covered in plaster. Portions of this plaster work remain evident throughout the structure. However, there is no remaining indication of any decorative element or technique having been applied to the gate other than plaster. Similarly, there is little evidence of Mughal-period gate decoration on Gor Khuttree’s East Gate though it too retains some plaster as well as limited painted elements. In short, I cannot determine the original form of decoration for any of these gates. What I can hypothesize is that the gates, if decorated, were not decorated in a structurally elaborate manner (Figure 6.9). Evidence does not exist for either gate having been tiled. It seems that if they were decorated, the most likely form of decoration would have been painting or molded plaster work.

Pakka Khanpur Serai does have evidence of having had an inscribed dedication above the main passage of the surviving North Gate. There are recessed panels in the brick-work above the arched entrances to the gate, both on the interior and exterior facades (Figure 6.9). These indentations likely each once held an inscribed panel. Based on other Mughal examples, this panel likely contained a verse that gave the date of the serai’s construction and the name of the person who endowed it (Begley 1983). It seems likely that the panel was removed many years ago, as the villagers at Pakka Khanpur do not mention this inscription and seem unaware of its ever having existed. Neither gate at Gor Khuttree has such a characteristic inscription-panel-indent. It remains possible that a dedication-panel-indent could have been covered by the plaster work applied to the West Gate at Gor Khuttree in periods following its creation or removed in renovations to both the East and West Gates.
6.4 Perimeter Wall

The exterior of a serai’s perimeter walls can reveal important information about the method and process of construction. They are often one of the last elements of the structure to remain standing, as they and their associated cells so easily lend themselves to being reused and reworked. The exterior walls of Pakka Khanpur and Gor Khuttree Serais are very similar. Both display the application of a parapet wall, are unbroken by windows (although windows were added to the exterior walls of cells in later periods at Gor Khuttree Serai), and have a brick drainage system with refuse water being channeled down the side of the exterior wall via a plaster gutter system (Figure 6.10). These drainage systems articulated with the roof structure over the cells and are strong evidence for the lack of a first story at either of these serais, other than in the gate systems. The culmination of the drainage system indicates that the roof was open to the elements and therefore required drainage. Supporting this is the evidence of the incorporation of a lotus-leaf coping or parapet wall along the upper edge of the exterior wall. This parapet would not have been applied to finish this edge if another story had been present.
6.1.5 False Gates

As a reflection of the symmetrical nature of Mughal architecture and the application of the Persian four-iwan plan, it was common for “false gate” structures to be used in non-gated walls to maintain symmetry either bilaterally between two walls or between all four (Khan 1985: 67; Petersen 1996: 200). Such false gates were often the locus of larger or more elaborate cell structures used for important guests or special functions. There is a complete false gate preserved along the south wall of Gor Khuttree Serai (section 7.1.2). At this time, there is insufficient evidence to indicate the presence or absence of false gates at Pakka Khanpur Serai as the portions of the serai where they would have been located are no longer present. However, as mentioned previously, at Pakka Khanpur Serai there are the remains of a mosque system in the west wall at the same location where I would anticipate finding evidence of a false gate (Figure 6.11). This mosque was built into the serai wall and the mihrab can be seen as a protrusion from the perimeter wall. This indicates its probable incorporation in the initial design and construction of the structure. Given the symmetrical design of Mughal and Islamic
architecture I speculate that there might have been some equally sized corresponding structure in the east wall, although any evidence of this has been obliterated by village encroachment and brick scavenging. This structure might have been a false gate, an additional mosque, or a *hammam*.

![Diagram of a mosque and a false gate](image)

**Figure 6.11** Comparison of the Mosque placement in the west wall at Pakka Khanpur Serai (top) and the False Gate placement in the south wall at Gor Khuttree Serai (bottom), showing idealized ArchiCAD reconstructions of original plans of both serais.

### 6.1.6 Bastions

The bastions of serais functioned as lookout towers and contained expanded rooms that could have been used to house important guests or, as Iqtidar Alam Khan (1990:133) has suggested, to store goods or livestock. Additionally, at some serais a bastion is incorporated into a *hammam*, as at Doraha Serai (Khan 1990:131). Both Pakka Khanpur Serai and Gor Khuttree Serai had octagonal bastions located at the corners of their exterior walls (Figure 6.12). The serai at Gor Khuttree has ruins remaining from its southwest and northeast bastions, as discussed in section 7.1.3. The southwest corner has the remains of the cells that once
articulated with the bastion, although the actual bastion itself has been destroyed. In the northeast corner, the cells that articulated with the bastion are absent but the footprint of the bastion itself remains. From these ruins it is discernable that the bastion was octagonal in form and had a hollow center that likely contained an octagonal room.

**Figure 6.12 Pakka Khanpur Serai Bastions; (A) northeast bastion looking southeast; (B) southwest bastion looking northeast; and (C) northwest bastion looking southwest, 2007.**

At Pakka Khanpur Serai portions of three of the original four bastions remain (Figure 6.12). The northeast bastion is complete; it is octagonal with an internal room that communicates with the cells around it via an expanded cell. An associated staircase outside the bastion itself flanks the adjoining cell along the north wall of the serai (Figure 6.13-A). This staircase offers access to the cell’s roof and to the top of the bastion. The bastion has parapets along its upper edges and serves as a vantage point from which to survey the surrounding area (Figures 6.12-A, 6.13-B). Roof drains pierce each of the four exterior sides of the bastion (Figure 6.13-B). The remains of the exterior plaster gutters are visible on the exterior façades of the corresponding bastion walls (Figure 6.12-A). The southwest corner of Pakka Khanpur Serai has the remains of another octagonal bastion (Figure 6.12-B). This bastion also has an internal octagonal room although the upper portion of the bastion is in ruins and its parapets are missing. The roofs of the serai cells are once again accessible via an exterior staircase adjacent to the bastion. The northwest corner bastion remains in octagonal footprint alone (Figure 6.12-C). This section of the serai has been modified and now houses a Saint’s tomb. The tomb can be accessed
from the interior of the serai. The bastion footprint has been incorporated into a recent stairway used to access the tomb area from the lower lands surrounding this corner of the serai.

Figure 6.13 The northeast corner bastion at Pakka Khanpur Serai; (A) showing the staircase articulation with the roof in the north wall of the serai looking west along wall towards the North Gate; and (B) showing the octagonal bastion with parapet wall and drains, 2007.

6.1.7 Materials

At Pakka Khanpur Serai a variety of materials were used in the construction of the bases of the three surviving bastions. All three are made of a combination of roughly shaped natural stone cobbles and Mughal-style *waziri* brick. The stones have been used throughout the serai to form the structure’s exterior wall foundation, while the North gate, the interior cells, and the mosque were all made of baked brick. The extent of the stone foundation varies throughout the serai. In some sections of the exterior wall, only the lowest portions are made of stone, while in others almost the entire exterior wall is comprised of mortared stone. There are several possible explanations for this variation in construction materials. First, it is possible that the serai was originally made of stone and was later repaired with brick. Second, the serai may have been begun in stone and finished in brick, perhaps because of changing availability of building materials. Third, it is possible that the serai was begun in stone in order to lay a foundation on what was evidently uneven land, as noted previously, and then continued in stone so long as there was sufficient raw material. A fourth possibility is that the serai was begun in stone to
even out the foundation and then the preferred brick was used as soon as a stable foundation was created. If the first is true, then a large portion of the serai was rebuilt and the portions made of *waziri* brick may not reflect the original design and layout of the serai. If the second is true, then the serai serves as an example of two equally well understood construction practices (stone masonry and brick construction) being used in conjunction. It is also possible that at some point in the serai’s construction, work was halted and then restarted under the direction of a new group of builders who chose to continue its construction in a different material. If the second, third, or fourth suggestions are true and stone was being used to create an even and solid foundation on uneven land, then the stages of construction used at this serai can be determined by examining the material used in each phase of sequential construction. This suggests that the exterior walls were built first to a level height and then the interior ground was leveled and the internal components built. This would account for the perimeter walls having stone in their construction while the interior components are entirely of brick. The foundation work on the southwest bastion at Pakka Khanpur Serai supports this assessed use of stone as a leveling device, as the octagonal bastion has been reinforced at the foundation with an expanded base that is round in shape. It is comprised of stone and only superficially treated with brick (Figure 6.12-B). I believe the most likely reason for the expanded formation of this bastion base is that the persons constructing the serai adapted this structural component (the bastion) to suit or make use of the surrounding environment. The area around this bastion was unstable and given the uneven ground surface the bastion foundation was modified and built in the most appropriate way for the existing topography.

There is evidence of mixed building materials at other structures in Mughal and pre-Mughal South Asia. This suggests that the use of mixed materials at Pakka Khanpur Serai is far from unique. For example, the Mughal sections of the fort at Attock are built of a mixture of shaly rock in lime mortar, string courses of *lakhauri* brick, and sandstone facing (Dani 1995: 233). As well, several Mughal garden constructions show mixtures of stone and brick construction materials (Moynihan 1996:108).

At this point no one explanation seems most likely. What can be said with certainty is that the two construction materials were incorporated into each other. This is evidenced by the seamless melding of materials and the presence of plaster coatings that cover both brick and stone in the same fashion. This plaster would have obscured any visual difference between the
two materials so the visual experience of the place would not have highlighted the use of either material. This suggests that the material used was not a means of expressing permanence or ability to access or control raw materials.

In contrast, the material elements original to the time of construction of Gor Khuttree Serai present an example of cohesive building materials used in construction. While the serai at Gor Khuttree has undergone significant alteration since its creation, the portions of the structure that reflect the Mughal building phase show a smooth and refined execution of its architecture. The Mughal serai at Gor Khuttree was entirely constructed of *waziri*-brick. Pakka Khanpur Serai should not be considered of lesser consequence for its mixed construction of stone and brick, as this shows how its builders were able to integrate two building materials masterfully; at the construction level, there is no weakness at the interface between material types. However, the combination of materials adds an inherent roughness to the structure that is absent at Gor Khuttree, although a more refined exterior appearance would have been afforded at both sites by the now-absent plaster coatings. It is possible that the architectural cohesion of Gor Khuttree reflects not only its subsequent upkeep (Raverty 1852: 23), but also the fact that this was an imperially-commissioned serai endowed by the daughter of Shah Jahan and therefore likely executed to exacting standards by well-trained craftsmen and builders with access to a deep pool of resources (section 4.3.2.3, for discussion of the funds to both construct and maintain this serai). Gor Khuttree was also the most important serai in the city of Peshawar as is seen in the discussion of Peshawar’s serais by Colonel McGregor, “There are 132 serais and market-places in the city. The principal serai is the Gor Khatri, which is a square enclosure of about 170 yards…” (Gazetteer of the Peshawar District 1989[1987-98]:364).

6.1.8 Discussion

The descriptive comparison of the two serais, Pakka Khanpur and Gor Khuttree, illustrates the value of the intensive study of the built form of individual structures. By developing architectural survey procedures for serai structures in this way, future work will draw on an increasing body of reference from which interpretations about structural arrangements and meanings for different serais can be taken. The ability to survey a structure rapidly and to generate plans (Figure 6.2), and potentially models, from this survey only increases the comparative value of the gathered information. To open the analyses of serais to
each other creates a comparative body that allows researchers to address more complicated questions about the trade and travel amenities and networks provided across the Islamic world.

As a rural serai in a relatively remote setting, Pakka Khanpur would have been an impressive feature of the surrounding landscape. This serai reveals how such structures might be reused and reinterpreted in the periods since their initial creation. It offers insights into what we might expect other rural serais to look like today. As a stop on the Mughal route from Kabul to Lahore, this structure would have been a place towards which (and away from) travelers moved; a destination segmenting a journey. As the Mughal Empire declined and control of the Punjab switched to the Sikh Kingdom and then the British Empire this location assumed a new role in the landscape. It served for a time as a military post and shelter. As the main transit route, the Grand Trunk Road, gradually moved east of Pakka Khanpur, the site became less important as a way-station. Eventually, it lost its importance as an imperial serai and the surviving portions of the structure were reused to house villagers and their animals. This utilitarian reuse of the structure resulted in little maintenance of the site as a place with a past imperial identity. There is little linking the Mughal association of the site to its current village formation. The people occupying the site today are aware that their village exists within a Mughal serai, but they are not actively fostering associations with this history. This is a very different approach to reuse than at the urban imperial serai Gor Khuttree (chapter eight). What these differences in reuse highlight is that the setting of a structure and the impacts of historic landscape transformation have much to do with why certain places are reformed and reused to serve new practices; why some places foster memory associations that echo and emphasize historic linkages. These differences in remembrance and reuse between Pakka Khanpur and Gor Khuttree Serais are returned to in chapter eight and considered in light of the historicity of a place and the active associations with the past sought by its users in the present.
Chapter 7 Architectural Analysis of Gor Khuttree

This chapter presents the architectural analysis of Gor Khuttree Serai and further illuminates the value of intensively surveying caravanserai structures when complex questions about occupation sequences are a part of the research objective. The general procedure for the architectural documentation of the Gor Khuttree complex followed the survey method discussed in chapter five. The architectural sketch plans produced during the field survey are reproduced in Appendix A. In the sections that follow I present the pertinent aspects of this detailed survey. I discuss the appearance of the serai in general, give representative examples of the recording of the structure, and draw attention to areas that specifically inform the creation of the ArchiCAD models as well as the access and planning analysis. Once this general review of the architectural survey is complete, I present the results of the ArchiCAD modeling as well as the access and planning analysis results. These models and the results of these analyses are separated into sections defined by occupation phases at the site; this allows the consideration of the site’s occupation over time and the resultant changes in the site’s architecture and the site’s uses.

7.1 Architectural Survey of Surviving Structures

A professional engineering survey team mapped the site of Gor Khuttree Serai in 2004 as part of the development project of the Government of the NWFP. An adaptation of the planning map (Figure 7.1) was kindly provided by the Department of Archaeology, NWFP and shows the arrangement of the site and its architectural features. My detailed architectural survey at the site involved the full recording of the original (Mughal) and adapted serai features as well as the photographic recording of the additions made for the British-period fire station, the Shiva temple structures, and their associated buildings. The portions of the remaining Mughal serai that were documented are seen in Figures 7.1 and 7.2. I arbitrarily assigned the surviving cells numbers beginning with the first cell on the south wall. I approached the survey of the gates and the rooms within them by breaking them into smaller sections that were then the subject of systematic and detailed recording.
Figure 7.1 Site Plan of Gor Khuttree complex (After Ali et al. 2007). Note north is down.

7.1.1 Cells

The cells are listed as barracks in Figure 7.1. In Figure 7.2 the surviving cells are presented in association with my identifying numbers and are presented overlaying the map of the site shown in Figure 7.1. Table 7.1 shows the survey results from specific cells for the various features described in this section.
Figure 7.2 Structures on which architectural survey was focused as overlain on site map.
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Table 7.1 Presence/absence table for features associated with the cells of the Gor Khuttree complex.
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Figure 7.3 Generalized Caravanserai Cell Structure at Gor Khuttree Serai; (A) the front-section of the cell shown both in plan and in section; (B) the rear section of the cell shown both in plan and in section; (C) the cell façade; (D) an example of a niche placed on the interior left wall of the front-section; (E) an arched passageway between the front-section of two adjacent cells, later closed with brickwork; (F) the front-section ceiling; (G) the addition of a window to the rear section back wall, closed with recent brick; (H) the rear section ceiling.
As discussed in chapter six (section 6.1.1), the cells generally consist of two parts, a front and a rear chamber. The front section is composed of an arched vestibule open to the courtyard on one side and with an arched entrance to its rear component (Figure 7.3 A-B). The left and right walls of the front section typically have shallow niches that likely held small lamps and are in most cases original to the Mughal period, as indicated by the brick-work and their integration in the wall structure (Figure 7.3-D). An alternative arrangement exists for cells that have been expanded to allow the creation of a double-sized accommodation. In these examples, the front section of the cell as well as the rear section articulates with the adjoining cell to the left or right via two arched entrance passages (Figure 7.3-E). In some cells, these additional openings appear to be original features, while in others, there is architectural evidence that passages were created or at least renovated in later periods. In other cells, these open passages have been closed: being bricked up to further divide the spaces. In some cells, the absence of evidence for a double passage does not mean there was not one in the past; in cases where the walls have been covered in concrete or plaster it is not possible to assess the state of the structural brick-work and any alterations to the original structure are obscured by this covering material. These double rooms may have accommodated individuals of higher status or perhaps housed families or groups of merchants who were travelling together. In later periods, these cells may have been used as expanded offices or barracks for higher-ranking officers (see Table 7.1 for the survey details of specific cells).

In several of the serai cells (Table 7.1), the entrance to the rear section was reduced sometime after the Mughal period. Entrance reductions take the form of reduced arches that have essentially been bricked into rectangular doorways. These doorway reductions meant that access to these spaces could be more controlled than was possible in the earlier Mughal-period arrangement. These doorways, once reduced, may have had doors hung in them, making the room defined by the rear section of the cell more controlled.

The front-sections of the cells are covered or roofed by a vault (Figure 7.3). Thus, the ceiling of these front-sections is comprised of edge-laid bricks to form an arch. The rear section ceilings are domed. These domes are made by laying bricks on edge in concentric and constricting rectangles, thus creating an imperfectly domed ceiling resting on the arched walls that define the rear chamber (Figure 7.3-H). This concentric rectangular ringing is a variant on the circular ringing of most imperfect domes (Figure 7.4). In small sample of the cells (cells 10,
11, and 31) at Gor Khuttree the dome is pierced to create a ventilation hole. This is not something I associate with the initial serai construction as the bricks are roughly chipped out and the resultant hole is not incorporated into the surrounding brick-work. These holes are likely later adaptations that allowed smoke to exit these interior spaces. Some of the holes show charred residue and smoke staining.

Figure 7.4 How an imperfect dome is used to surmount a square footprint where the walls on which it rests become arched in shape.

In many of the cells at Gor Khuttree, window additions from post-Mughal periods can be detected, especially in the rear wall of the cell structures (Figure 7.3-G, Figure 7.5). These windows may relate to the British occupation as they are fitted with British-period bricks. Some also have metal bars within them serving as some security from exterior penetration; however, the placement of such windows is incongruous with the use of the serai as an impenetrable fort or center of protection. It is apparent from the condition and haphazard incorporation of these windows that they represent a late addition to the structure, one that post-dates the concentrated use of the serai as a fortified space in the Mughal, Sikh, and early British period occupations. In some cases, the placement and incorporation of the window casing is difficult or impossible to identify through non-destructive survey as the walls are thickly plastered and the incorporation of the window casings into the surrounding brick-work is impossible to examine (Figure 7.5).
Within Gor Khuttree, packed earth has raised the general courtyard floor level and has in many cases filled in and obscured the original height of the cell floors. In general, the current cell floors are made of compacted earth; however, this earth can be seen to overlay brick in some of the cell structures. I believe that at the time of Mughal construction these cells had brick floors that were raised above the interior courtyard level, an arrangement common in Islamic serais. Figure 7.6 shows an unidentified camel caravanserai within the city of Peshawar. This image reveals details of how the cell floors at the Gor Khuttree complex likely appeared at the time of construction. As they were raised above the interior courtyard they allowed easy access to goods carried on camel and also physically separated the covered living and storage spaces from the general courtyard level on which animals would be tethered.

Evidence for this floor placement can be seen in some of the surviving cell structures, in the cells revealed through excavation, as well as in the organization and arrangement of the gate-room courtyard entrances. Cell 40 is seen in Figure 7.7-A. These images show the association of the cell with the western gate and also the presence of a brick floor, as indicated with an arrow. Figure 7.7-B shows a closer view of cell 40 (looking west), highlighting the portion of the floor brickwork that was excavated during repairs to the cell. It also shows the height at which the Mughal gate staircase is placed, as seen in the extreme right of the image. This staircase begins at the same level as the original Mughal-cell-floors. Further evidence to
support the original placement of the brick floors can be seen from the excavations carried out on site. Images 7.7-C and 7.7-D show the excavated remains of two cell structures located along the eastern wall to the north of the eastern gate and beyond cell 48 as shown in Figure 7.2. In each image the presence of a brick floor foundation can be identified. These images suggest that the interior floors of the cells may have been rubble-filled only and perhaps capped with brick, something supported by the exposed floor surface from image 7.7-A, in which the cell floor appears to rest on a base of rubble and compacted earth. Finally, Figure 7.7-E shows the recent removal of compacted earth from the south interior courtyard at the serai in front of cells 2-25 in advance of repairs to the cells. This removal had exposed the old Mughal-period dado line that is also believed to be the level of the arch sills and the height of the associated cell floors. The dado line in Islamic construction is the horizontal line above which decorative elaboration, floor features, or doorways begin. During construction, the placement of these features was determined relative to the height of this dado line.
Figure 7.6 Unidentified Camel Caravanserai within the city of Peshawar, showing the raised cell floors (reproduced with permission of the British Library).
Figure 7.7 Images suggesting the level of the Mughal cell floors at the Gor Khuttree complex; (A-B) show the exposed floor level of cell 40; (C-D) show the exposed floor level for excavated cells from the northern part of the east wall; and (E) shows the *dado* level revealed through clean up in advance of restoration work on the south side.
Awning scars are also a common feature of the cells within the Gor Khuttree complex. These are areas on the front façade of a cell that show the removal of bricks in order to anchor a pair of posts to support an awning. These scars can be seen in Figure 7.7-E and a similar arrangement can be seen in the upper-story rooms of the unidentified serai in Figure 7.6, where the awning posts are in place, although they lack any coverings. These scars are interpreted as originating in the Mughal period use of the serai and likely continued to be used and reused in the periods that followed.

As previously discussed in chapter six, section 6.1.4, the cells at Gor Khuttree show no signs of having had an upper story. This is confirmed both in the historical documents referring to the serai as well as in the architecture that remains at the site today (Figure 7.8). If there had been an upper story associated with the serai we would expect to see some trace of it in the architecture of the site; instead, what we see is that the single-story cells are topped by a roof area that has a lotus-leaf parapet wall along its exterior edge and a lower undecorated wall along the inner edge (Figure 7.8-B, C). The presence of a finished parapet wall strongly indicates that this was the finished level of the serai and no additional floor was present. This area was open to the elements as indicated by the presence of roof-top drainage that directs the flow of accumulated water down the exterior wall at regular intervals and channeled by plaster troughs (Figure 7.8-A).
Figure 7.8 Architectural elements showing the presence of a single story of cells at the Gor Khuttree complex; (A) shows one of the drains associated with the roof system; (B) shows the interior and exterior edge walls; and (C) shows the exterior lotus parapet wall and its associated drainage holes.

The roof-top area is delineated by bounding walls and was likely used as a functional space. The roof-tops of the serai cells along with the gate and bastion rooves would have provided an extensive area from which the city around the serai could have been observed, the site itself defended, activities carried out, and items potentially stored or traded. This space is an interesting component of the site as little is known about how it functioned and little remains to be uncovered archaeologically. The roof-tops show little build-up of cultural material and were likely frequently cleaned throughout the site’s occupation, use, and reuse. As a result, these are functionally ephemeral spaces about which little can definitively be said. However, this absence of data about the specific uses of the roof areas does not negate their functional value within the structure. The use of roof-top spaces has been a common practice in South Asia both in the past and in the present (Figure 7.9).
7.1.2 False Gate

At the center of the south wall is an expanded cell that serves as a false gate within the structure (number eight in Figure 7.2). False gates allow structures to conform to axial symmetry and the four-iwan plan (see section 3.1). There is no evidence to show what was located opposite this gate in the corresponding section of the now absent north wall. Whatever structural feature was in this position in the past was likely symmetric in placement to this known false gate.

The false gate is structurally different than its surrounding cells (Figure 7.10). Cell eight is wider than the surrounding cells and, by making the front-section shallower than the front-sections of the regular cells around it, has a correspondingly deeper rear section. Cell eight also has higher ceilings, employing variants of the roof styles seen in the other cells. The front chamber is entered via a pointed arch that provides the front chamber’s ceiling. In contrast to the rounded rear openings on most cells (Figure 7.3-D), the rear chamber is entered via an additional pointed arch that has a thick border accent (Figure 7.10-A). The rear section is covered with a domed roof that is constructed on pendentives (a pendentive is an elaboration of the squinch as a means of placing a dome over a square opening, see Jones and Michell (1972) for elaboration on these structural principles). Cell eight is easily identified from the exterior of the complex as it breaks the plane of the exterior wall and projects outward from the
surrounding structure (Figure 7.10-B). It is also marked by a lotus-leafed parapet wall atop the roof. Its dome breaks the roof surface and is constructed of circular concentric brick courses covered by a veneer of stucco plaster (Figure 7.10-C).

Figure 7.10 False Gate details from the Gor Khuttree complex, 2006; (A) the exterior façade as seen from the serai interior courtyard; (B) the false gate portion of the complex’s exterior wall; (C) the dome of the rear section and exterior wall parapets as seen from the roof; and (D) a rear pendentive.

7.1.3 Bastions

The Gor Khuttree complex has only scant portions of one octagonal bastion remaining in the northeast corner of the site as indicated on site map Figure 7.2 and shown in Figure 7.11. The southwest corner of the complex has surviving portions of the cells that once articulated with the bastion located there, but these were in ruins and were not yet cleared for restoration during my field work in 2006 and 2007. In the northwest corner there remains no evidence of the original bastion; the same is true for the southeast corner. Thus, the information known
about the bastion systems from this complex is limited. The southwest and the northeast corners inform the overall interpretation of the bastion systems. This interpretation is also strengthened by looking at a comparable bastion system from another Mughal-period serai, Nur Mahal Serai, discussed below.

Nur Mahal Serai (Nurmahal, Jalandar District, Punjab, India) is used as a comparison serai throughout this research. Nur Jahan, Emperor Jahangir’s wife, endowed the site in AD 1618 (Begley 1983:168). Twenty-two years later, in AD 1640, Jahan Ara Begum commissioned Gor Khuttree Serai, which has some similar architectural arrangements. Alexander Cunningham (1970 [1878-79]:62-65) surveyed Nur Mahal Serai and Begley (1983) and Parihar (1985) have also studied this serai’s architecture. The serai has two gates, one in the east and one in the west walls. The West Gate has remained in excellent repair, has three stories, and is highly decorated with scroll work on a veneer of red sandstone. There is a mosque and a well in the interior courtyard. On each wall of the serai are 32 cells with expanded corner bastion spaces. In the middle of the south wall is a three story apartment where Jahangir stayed on his two recorded visits to the serai (Parihar 1985).

I have chosen this serai as a comparative source for Gor Khuttree Serai for a number of reasons. First, it shares structural similarities with the ruined or missing elements of Gor Khuttree Serai. Second, it was built twenty years before Gor Khuttree and thus may contain temporal similarities. Third, much of the site has survived to exist in the present. Fourth, and perhaps most importantly, Nur Mahal Serai has been visited by a number of architectural scholars and extensive detailed plans exist of the structure. Should additional and apt comparison serais become available in the future, they will also be used as points of reference for the interpretation of ruined and absent elements at Gor Khuttree Serai.
It is clear that the Gor Khuttree bastions were octagonal brick structures that communicated via an expanded system of rooms with the exterior walls of the serai at the corners. In the northeast corner some information from the footprint of the bastion rooms can be garnered from the areas exposed by excavation. These excavated remains reveal only the footprint of these rooms and do not elaborate on how the superstructure may have appeared (see Figure 7.12 for the plan of these ruined wall elements). At this time, no direct evidence supports the presence of a staircase within these bastion systems. It is possible, however, that such access did exist and that architectural evidence for this simply does not survive. In the southwest corner of Gor Khuttree Serai the bastion does not survive but the cells that adjoined the bastion system exist in ruins. From these southwest corner cells we can determine that the bastion articulated with these cells via a shared wall which had a raised door sill. The front sections of the bastion complexes were similar in arrangement to the cells along the serai walls, although they had an expanded rear chamber that articulated with the room inside the octagonal bastion itself. The front-sections of the bastion complexes were flanked on either side by a small rectangular chamber. It is unknown how these chambers articulated with the central chamber. These
chambers may have been storage rooms or could have controlled access to the roof, although no direct evidence of this has been uncovered at the site. Figure 7.12-A shows the layout of the bastion at Serai Nur Mahal. It has some similarities with the layout for the bastions at the Gor Khuttree complex as reconstructed (Figure 7.12-B) from the ruins revealed by excavation.

![Figure 7.12 Nur Mahal Serai, Nurmahal, Jalandar District, Punjab, India; (A) bastion detail after Cunningham 1882 plate XXI; and (B) the identifiable portions of the bastion system from Gor Khuttree complex combining information from the north east and south west corners.](image)

### 7.1.4 The East Gate

The East Gate of the Gor Khuttree complex has been used throughout the history of the site yet it appears to have few lasting alterations (Figure 7.13). This gate also underwent restoration prior to my architectural survey of the site though original Mughal-period features are still easily identifiable and the restoration works seems to have mostly involved brick repair, arch and ceiling reinforcement, and plaster removal. Located in the center of the east wall (Figure 7.2) this gate was used as administrative offices and guest housing during the control of the site by General Avitabile and the British (Barr 1889[1839-1842]:144; Raverty 1852:22). The study of the East Gate through the survey of its elements provides the basis for understanding the alterations made to the West Gate. The West Gate has at its core a mirrored version of the East Gate and it is expected that during the use of the site as a caravanserai the two gates were essentially identical given the desire for axial symmetry and the application of a *four-ian* plan. The description of the East Gate that follows anchors the consideration of the alterations made to the site’s gates over time. I present the details of the survey work completed as a part of my
dissertation. Within this presentation, consideration is given to the changes to the site over time, the minor alterations apparent in this portion of the structure, and the historic information that describes the site and its uses. Supplementary information about Mughal caravanserai use and construction is also gathered from additional archaeological sources. I begin this summary of the surviving East Gate by first presenting the appearance of the gate from its exterior and then presenting the aspects of its interior organization and plan.

Figure 7.13 shows the appearance of the gate from the exterior and from the interior courtyard. The gate features pishtaq panels in both its interior and exterior facades. These panels, common in Anatolian, Iranian, and Indian architecture, are comprised of a high central arch often set within a rectangular frame. The frame itself can be bounded with tile work, inscriptions, and decorations of all sorts (Petersen 1996:234). On the East Gate, the frame is a plain recessed rectangle with smaller rectangles framing arches and passageways around it. It is possible that at various stages in the use of this gate, the panels were surrounded by decorative elements. However, as none of these have survived or are mentioned in the written records relating to the site, we can only guess as to their possible appearance and form.
It is also important to note that the footprint of the East Gate is not rectangular but rather a polygon with chamfered corners on the external façade. Chamfered corners occur when the corner intersections of a regular polygon are joined by a wall that is at a 45 degree articulation with the primary perpendicular walls. As can be seen in Figures 7.13 and 7.15, the exterior façade of the gate is comprised of a central pishtaq panel that is flanked on each side by a panel that retreats from the façade plane at a 45 degree angle. This is a variant seen on rectangular gate systems in South Asia and may prove in the future to be of typological importance (see section 6.1.2).
In order to organize the recording and discussion of the components of the East Gate, I have assigned letter labels to the features being discussed and will present them along with the associated plan diagram for each of the floors of the structure. I begin on the ground floor or, as is commonly termed in the analysis of structures within South Asia, the mezzanine level (Figure 7.14). As the gate is symmetrical along its central east-west axis, I will describe the south half of the gate except in instances where the symmetry is broken and unique attributes warrant exploration.

![Figure 7.14 East Gate of the Gor Khuttree complex, Ground Floor Plan. Pink fill indicates area assumed to be solid brick wall construction. Note north is to the right.](image)

**7.1.4.1 Stairway A**

This stairway has been recently restored, but portions of the original brickwork are still observable. This stairway and its symmetrical partner (see Figures 7.13-B and 7.14) are the means of accessing the first floor of the East Gate. The stairs are very steep and at the top there is a small landing (Figure 7.20-A). From this landing, access is gained to the first floor gate-room (Figure 7.20-F) as well as to the roof of the cells that abut the gate (Figure 7.20-H). The east wall of the stair landing has a recessed arch shaped into the wall; this is not a passageway but rather a decorative element. There is a small arched window in the interior gate façade that allows light to enter the stairs (Figure 7.13-B). The steps are brick, as is the floor of the landing.
The ceiling of the stairs is a barrel vault that appears original to the structure. The ceiling of the landing is an extension of the barrel vault over the stairway.

**7.1.4.2 Room B/Cell 50 and Space C**

Within the gate system this room is labeled B, while as a component to the greater serai it was assigned a cell number of 50. The room is entered from the interior of the serai via an arched passageway that is recessed inside of an arched front porch (Figures 7.13-B and 7.14). This arched entrance is very thick in cross section and reveals the width of the exterior walls of the gate, although the internal construction of these walls remains unknown (solid core, rubble filled etc.). The interior chamber is an open space. The south wall has a small archway that leads into a tiny room (C) under the south stairs, essentially a storage cupboard of some sort. This space C mirrors the width of the staircase above it and is covered in a barrel vault. There is an arched niche in the south wall of space C, opposite the entrance from B, which may have served as a place to rest a lamp. Within room B the east wall has no decoration or structural elements. The north wall has a shortened archway that opens to the interior thoroughfare or central passage of the gate (Figure 7.14-D). The walls and ceiling of B and C are constructed of Mughal brick. The ceiling of B is an interesting teardrop pattern of Mughal brick, pointing to the north, which meets the walls in a gentle curve (Figure 7.15-B). The corners of the room appear as modified squinches (Figure 7.15-A), although the ceiling itself is not domed but flat. The current floor is mostly covered in rubble and compacted earth.

![Figure 7.15 Ceiling details of Room B in the East Gate of the Gor Khuttree complex, 2006; (A) shows the ceiling/wall corner (facing southwest); and (B) the teardrop ceiling pattern pointing west.](image-url)
7.1.4.3 Space D, The Central Passage

The space denoted by D in Figure 7.14 is the main functional passageway through the gate that allows people to pass into the serai. The exterior entrance to this passageway is formed by a large arch within a *pishtaq* panel (Figure 7.13-A). The gateway is wide and would allow for the easy passage of camels as well as elephants. The brick steps that are found to either side of the exterior and interior entrances to this passageway are likely steps for mounting and dismounting from either elephants or more commonly camels, a common feature in gate systems throughout the Mughal realm (Figure 7.16-A). The exterior entrance to the passage has two large wooden doors that are hung on the original hinge system (Figure 7.16 B-C). Whether these gates are original to the serai cannot be determined at this time.
Figure 7.16 East Gate wooden gates, Gor Khufftree complex, 2007; (A) the gate from the exterior of the serai facing west; (B) the wooden gates from the interior of the East Gate’s central passage; and (C) a detail image of the upper hinge system for the wooden gates, compare to top right of B.
When passing from the exterior to the interior of the serai along space D, one passes through a central domed chamber. This chamber comprises the main component of D and is where the passage connects to the rooms on the ground floor of the gate system. These rooms include room B and its symmetrical mirror; they are also recorded as cells 50 and 49. On the north side of the gate within passage D is the arched entrance into cell 49 (Figure 7.17) and above this the window into the first floor room (the symmetrical correspondence to room F in Figure 7.20). The south side of this gateway passage chamber has the arched entrance into cell 50/room B, and above this is the window that overlooks the East Gate central passage from room F. This center chamber of passage D forms a square space two stories in height and surmounted with a dome that rests on pendentives (Figure 7.17 and 7.18). These pendentives transform the upper edges of the square space into a drum-less dome. The resulting archways frame the passage through the space as well as the lower and upper story room openings that
overlook the central passage. These archways have painted designs on their plastered interior surfaces as well as on the plastered pendentives themselves (Figure 7.18).

Figure 7.18 East Gate details of painted decorations, facing northwest, 2007; (A) the pendentive at the corner of the north and west walls; (B) the painted floral decoration on this pendentive; (C) the floral decoration along the interior of the west side arch entrance; and (D) the floral decoration along the interior of the north and south side arched panels (context not shown in this image).

At the time the site was surveyed, the dome was undergoing repair and was supported by metal girders. There was much floor disruption inside the gate and the ground was covered in construction debris, collapsed bricks, and compacted earth as a result little can be said about the original flooring.

7.1.4.4 Space E

The final ground floor space within the East Gate of the Gor Khutttree complex is labeled E. This space is actually a small alcove in the exterior façade of the gate (Figures 7.14 and 7.19). There are two of these alcoves, one in each of the retreating planes of the exterior gate façade (Figure 7.14). The purpose of these spaces is not documented; however, they would have appealed to those wishing to confront the persons arriving at the serai and might have been a
prized location for merchants. We know from the historic records that bazaars marked both of the entrances into the serai (Jaffer 1945:105); however, the details of the articulation of these bazaars with the gates are not recorded and have left no physical remains. It is also possible that these exterior spaces were intended to house late arrivals, perhaps they served as overflow for persons who could not be accommodated within the serai itself, or they may have served some other purpose entirely.

Figure 7.19 East Gate the mirrors to Space E below and Space G above, from serai exterior looking southwest, 2007.

The first floor of the East Gate has several components that likely served as administrative spaces during the serai’s use and reuse. The components of the first floor are seen in Figure 7.20.
Figure 7.20 East Gate of the Gor Khuttree complex, First Floor Plan. Pink fill indicates area assumed to be solid brick wall construction. Note north is to the right.

7.1.4.5 *Room F and Space G*

Room F is located to the north of the landing at the top of the southern gate stairs, stairway A (Figure 7.20). This room is mirrored by a room on the other side of the gateway, a symmetry seen in all of the East Gate features. Room F has an arched window which overlooks the central passage (Figures 7.17 and 7.20). The room also has an arched doorway in its west wall that leads to a small balcony that overlooks the interior of the serai. In the east wall there is a short linking corridor that terminates in a first story balcony that looks out from the exterior façade of the gate, noted as space G in Figure 7.20 (see the top balcony in Figure 7.19). All of these observational features suggest that this room was used for an administrative purpose. From this room and its symmetrical partner all activities within and outside the gate could be observed. Room F has a vaulted cove-ceiling that curves up from the side walls (Figure 7.21). A cove-ceiling is formed when the wall and ceiling are curved into each other, smoothing the transition between the two and removing any sharp corners. This is an elaboration of the style of ceiling found in the serai cells. No original interior plaster remains. The floor is Mughal brick.
7.1.4.6 Space H and Staircase I

The space H in Figure 7.20 indicates the roof-top access achieved from the landing of the gate staircase A. This is the roof surmounting the cells below and from this roof access can be gained to stairway I, which leads to the roof of the eastern gate. Again, these access points are symmetrical on both sides of the East Gate. Space H is essentially a flat roof area. Wall scars suggest that during the use of the structure the portion of this roof that articulates with the side wall of the gate may have had some additional elements that no longer remain at the site today, as shown in Figure 7.22.
Figure 7.22 Gate cell roof articulations; (A) standing on H above cell 49 and looking north to the southern wall of the first floor of the East Gate of Gor Khuttree complex, 2007, and showing I stairs to the gate roof on right; (B) the East Gate of Gor Khuttree complex late 1990’s-Early 2000’s (online image, Sarheed Conservation Network); and (C) the side wall of a Gate at Nur Mahal Serai 1870’s (reproduced with permission of the British Library).

The photo from 2007, Figure 7.22-A, shows the indentations in the brickwork on the exterior southern wall of the first floor of the East Gate. These indentations may indicate the location of a structure or awning that is no longer present. The photo (Figure 7.22-B) from the serai taken in the 1990’s to early 2000’s shows this roof space and shows traces of what appears to be a wooden staircase to the roof of the East Gate. This staircase may have been used as an alternative to staircase I that was recently restored and may not have been usable at the time when this image was taken. This stairway structure articulated with the south side wall of the East Gate; however, the indentations themselves remain visible suggesting the intended function of these proposed anchor points is not attributable to this wooden staircase.

The image from Nur Mahal Serai (Figure 7.22-C) offers some suggestion of what a side structure might have looked like if the structure anchored at these points was from the Mughal
phase of Gor Khuttree Serai and not a later addition. There is no indication of similar anchor points on the exterior of the northern side of the East Gate (see Figure 7.23-B), though it is possible that these have been removed in subsequent repairs to the structure. The indentations are in the form of scars in the surrounding brick-work made by the complete removal of bricks and the chipping away of those bricks that were not easily pried from the wall. Given that these indentations are not well incorporated into the surrounding brickwork, it seems likely that these indentations relate to a more ephemeral awning system or roof-top enclosure dating to a later period. We would expect aspects that date to the Mughal construction of the serai to be symmetrical in presentation and more cleanly integrated into the structure.

The approach to roof access and staircase articulations seen at Nur Mahal Serai (Figures 7.22-C, 7.23-A) is not the same as is interpreted from the architectural remains at the Gor Khutttree complex; however, some suggestive information can be gathered from this image. The staircase by which the roof of Nur Mahal’s gate is accessed shows that the exterior parapet wall rises as it articulates with the gate wall and offers some coverage of the staircase to the gate roof (Figure 7.23-A). This would be essential coverage in the event of an attack, as otherwise accessing the roof to gain a strategic defense position would bring unwanted exposure. When we look at the north side wall of the East Gate (Figure 7.23 B-C) we see that a portion of such a parapet wall remains. This is interpreted to indicate that during Mughal use of the site stairways to the gate roof (stair I and its mirrored stair on the north side of the East Gate) were protected from exterior view and made defensible by the presence of a parapet wall similar to the one seen to protect the staircase at Nur Mahal Serai.
Figure 7.23 Gate cell roof articulations; (A) the side wall of a gate at Nur Mahal Serai 1870’s showing the rising parapet wall protecting the staircase along the gate’s exterior wall (British Library Collection); (B) East Gate of Gor Khuttree complex showing the portion of the remaining parapet that once protected the stair to the gate roof on the north side of the East Gate, 2007; and (C) East Gate of Gor Khuttree complex showing the portion of the remaining parapet that once protected the stair to the gate roof on the north side of the East Gate, as well as the ruins of cell 48 that were undergoing restoration, 2007.

7.1.4.7 East Gate Roof Space J and K

As stated earlier roof-top space likely hosted a number of activities. The roof of the East Gate was likely used as a vantage point from which to view the surrounding city, to monitor the arrival of persons to the serai, and to oversee activities occurring within the structure. The East Gate roof is accessed via either one of two sets of stairs discussed in the previous section (staircase I and its mirror, Figures 7.20 and 7.24).
Figure 7.24 The Roof of the East Gate, Gor Khuttree complex.

The roof itself is comprised of two architectural elements, demarcated J and K. J comprises the actual roof surface, while K is the top of the dome that covers the main portion of the interior central passage (Figure 7.24 and 7.25). That the East Gate roof was open to the elements is indicated by the presence of original drains, which would have channeled collected rain water off the roof. The exterior and interior edge of the roof was likely finished in a way similar to that of the surrounding cell roofs, with lotus-leafed parapet walls that would serve both defensive and decorative purposes. At the time the site was surveyed in 2006-2007, the East Gate was undergoing significant repairs by the Pakistani Federal Department of Archaeology and Museums and the brick-work on the East Gate roof was being replaced and recovered with plaster. Details of construction otherwise inaccessible were thus observed, such as the low lying foundation walls as well as the central passage gateway details that were exposed for repair (Figure 7.25).
Figure 7.25 East Gate of Gor Khuttree complex roof repair 2007; (A) the exposed roof construction over the central passage facing east; and (B) the cap constructed over the central passage dome (facing south) and workers (on the left) repairing the section of the roof shown in image A.

Before beginning work on the roof of the East Gate, the federal employees gathered up all of the rubble that was on the roof. Included in this rubble was a small pile of pottery (Figure 7.26). Though there is no stratigraphic information related to this deposit, it is interesting to note the presence of a range of pottery on this surface indicative of activities taking place on the roof and perhaps rubble filling of construction elements.

Figure 7.26 Pottery gathered on the roof of the East Gate, Gor Khuttree complex, 2007; (A) the pile of gathered pottery; and (B) some pieces of this pottery that may prove temporally diagnostic.
7.1.5 The West Gate Ground Floor

The West Gate has undergone significant additions and renovations since it was first constructed as part of the Mughal caravanserai. Most of the alterations to the structure date to the occupation of the site by General Avitabile from AD 1838 to 1842, during the Sikh period. As discussed in chapter four, Avitabile altered this gate to make a residence and administrative office. In addition, the West Gate was used during the British occupation of the site as well as by the Pakistani government to be the district or tehsil office until 2002 (section 4.3.2.7).

Prior to the alterations and repairs to the West Gate, I have identified that at its core it is a Mughal-gate system symmetrical to the one seen in the East Gate (see Figures 7.27 and 7.28 as compared with Figures 7.13 and 7.14). Below, relevant portions of the West Gate will be described to compare them with the elements documented in the East Gate.
Figure 7.27 West Gate Gor Khuttree complex, 2007; top shows plan of West Gate showing the location of each of the images; (A) the interior façade of the West Gate facing west and showing the extension to the south side; (B) the interior façade of the center of the West Gate facing west; (C) the interior façade of the West Gate facing west and showing the extension to the north side; (D) the exterior façade of the West Gate facing south east; (E) the exterior façade of the center of the West Gate facing north; and (F) the exterior façade of the West Gate facing north east.

As for the East Gate, the components of the West Gate are discussed according to the analytical subsections that structure their documentation. These subsections were assigned letters, as was done with the presentation of the East Gate, to allow for ease of analysis and discussion. Presentation of the elements of the West Gate will begin with the mezzanine or ground floor level (Figure 7.28).
Figure 7.28 West Gate of the Gor Khuttree complex, Ground Floor Plan. Pink fill indicates area assumed to be solid brick wall construction. Note north is to the right.
7.1.5.1 Stairway A

This stair corresponds with stairway A in the East Gate and can be seen in Figures 7.27 and 7.28. It is symmetrically mirrored with the corresponding stairway on the north side of the West Gate’s central passage. The top of stairway A has been bricked closed with British period or post-British period bricks which likely date to the use of the first floor of the East Gate for storage sometime during the British period. The corresponding stairway in the West Gate is similarly closed by a wooden door. This door is at the top of the first flight and is seen as a means of controlling access to the first floor. The central difference between the stairways in the West Gate and those in the East Gate is that the West Gate stairway ceilings are cove-vaulted (Figure 7.29-B) and the landings are domed (Figure 7.29-A), while in the East Gate both the stairway and the associated landings are barrel-vaulted (Figure 7.29 C-D). The coveceilings over the stairs of the West Gate are constructed of Mughal brick and look to be contemporaneous with the Mughal construction of the structure. The domed ceiling over the West Gate landings is a drum-less dome on pendentives and is similar in construction to the large domes over the central passages in each of the gates. As discussed previously (section 7.1.4.1), the barrel-vaulted ceilings of the East Gate also appear to be original to the Mughal construction of the structure. The differences between the styles of the Mughal-period stairway ceilings of the East and West Gates may relate to some choice made during the original construction. This may have been the result of different crafts people working on separate sections of the serai. Another possibility is that an alteration was made to one of the gates after it was constructed, either in the Mughal period or after, where the alteration was made with Mughal-period bricks and integrated in such a way that it is difficult to differentiate the alteration from the original form. It is possible that when the second floor addition was made to the West Gate during the Sikh period, alterations were made to the ceilings of the first floor to accommodate and support the addition of the second floor, although I would expect some evidence of this alteration to be apparent in the brickwork.
Figure 7.29 Comparison stairway ceiling forms of the West and East Gates, 2007; (A) the dome ceiling over the landings of stairway A in the West Gate facing south east; (B) the coved ceiling over stairway A in the West Gate looking up the stairs and facing west; (C) the barrel-vaulted ceiling over the stairway A in the East Gate, facing south; and (D) the extension of the barrel vault stairway ceiling over the landing as seen in Stairway A of the East Gate.

In the West Gate, the landings of these staircases offer access to the first floor rooms and have recessed arched niches in their west walls. These landings are similar in arrangement and layout to the landings described in the East Gate. The arched entrance of the West Gate’s staircase A retains some plaster and has painted decoration on the interior surface of its arched entrance (Figure 7.30), which may date to the Mughal period or was inspired by Mughal-period designs (for further discussion of the possible period of these painting see section 7.1.5.2). The West Gate staircases also have light entering them via a small arched window in the first floor interior wall above their interior entrances; the same arrangement is seen in the East Gate (visible in Figure 7.27 A, B and C, and in Figure 7.37 and Figure 7.38).
7.1.5.2 Room B/Cell 41 and Space C

Within the West Gate system this room is labeled B (Figure 7.28), while as a component of the greater serai it was assigned a cell number of 41 (Figure 7.2). This room is symmetrically mirrored by a room on the north side of the West Gate’s central passage (cell 42). Both of these rooms have the same layout as the corresponding rooms in the East Gate (room B/cell 50 and cell 49) including the presence of a space C which likely served as a storage cupboard under the gate stairs. In room B of the West Gate, this cupboard has been closed with loosely mortared modern brick, something that was completed in the last several years. The corresponding storage area remains open in the room on the north side of the central passage (cell 42). Both of these rooms in the West Gate have had their interior façade entrances closed (Figure 7.27-B). In room B the door has been secured with a metal gate system possibly dating to the Sikh period, while on the opposite side, the door to cell 42 has been bricked closed, with bricks reaching as high as the base of the arch (Figure 7.31-A). This was likely completed as part of the Sikh modifications to the West Gate and used as a temporary lock up for prisoners. Avitabile is known to have used the gate for this purpose (Grey 1982:141) and this use carried forward into the British use of the structure. Room B and its mirror, cell 42, were described by local residents.
during the survey of the site to be the British prison cells. The metal gate system used to close the central entrance to room B from the interior central passage D can be seen in Figure 7.32-C and is discussed in 7.1.5.3. The ceiling of room B in the West Gate is similar to that seen in room B in the East Gate (Figure 7.15), and although it has been plastered over, it is still possible to identify the tear-drop pattern of edge-laid bricks. The entrance to this room from the interior courtyard is bricked closed; the same is true of its north side partner’s entrance. Where plaster remains on these closed entrances, painted designs can be identified (Figure 7.31). These designs are similar to those in Figure 7.30 from the interior of arched entrance to staircase A. Unlike the art work associated with the first floor of the West Gate (see section 7.1.7.2) that almost certainly dates to the Sikh period, these designs seem more refined. Stylistically, these applications may date to the Mughal period or perhaps more likely draw inspiration from Mughal floral designs. The painting on the interior façade entrance arch of cell 42 was revealed after the removal of several layers of painted plaster by the Federal Department employees involved in the West Gates reconstruction. This sequence of plaster removal supports the consideration of a Mughal period date for these designs. This implies that some of the paintings applied to the West Gate during the Sikh period may have been removed by present day restoration workers. In the future, it is hoped that analysis of all the painted designs uncovered at the site might be undertaken with the expertise of an art historian.
7.1.5.3 Space D, The Central Passage

The central passage of the West Gate clearly shows the underlying Mughal form as well as areas of alteration and adaptation. Again, this alteration is best understood when compared with the forms of the corresponding elements within the East Gate, as the interior of the West Gate is identical in arrangement and plan to the interior of the East Gate. The passage into and out of the serai is marked by high arches in *pishtaq* panels that lead into a central chamber that is surmounted with a drum-less dome on pendentives. This central chamber has arched openings to the east and west that lead into and out of the space from the interior and exterior of the serai (Figure 7.27 B and E, and 7.32 A). In the north and south walls, arched recesses frame the passageways into the ground floor rooms as well as the windows overlooking the central passage of the first floor rooms (7.32 B and C). The West Gate’s central passage features decorative plaster tracery that highlights the panels and recesses, and on the interior façade decorates the area around the main archway (Figure 7.32 B, C, D, and E). This work is believed to date to the Sikh occupation of the structure based on the relationships between the designs on the West Gate with those found on the Shiva Temple (see discussion below, 7.1.9.3). In
addition, the plaster work occurs in a layer of plaster that covers the additions to the West Gate and thus must at least post-date the additions made to the structure during Avitabile’s occupation of the Gor Khuttree complex. It remains possible that at least some of these additions and related plaster work date to the British occupations at the site, during which time the entire structure was likely plastered and painted, especially as no mention of paintings on the structure can be found in the records dated after Avitabile’s departure and to the subsequent reuse of the site by the British.

Figure 7.32 Details of the plaster work on the West Gate of Gor Khuttree complex, 2007; (A) the interior façade of the central passage facing west; (B) the south wall of the interior passage showing the first floor window to room G; (C) the south wall of the interior passage showing the entrance to room B/cell 41; (D) a close up of the tracery indicated in image A; and (E) a close-up of the tracery indicated in image C.
Along the south interior wall of the central chamber D is the entrance to Room B, cell 41 (Figure 7.32-C). Above this entrance is a window to the first floor room G (Figure 7.32-B). These two features are surrounded by a decorative arch that spans the two floors and a similar arrangement can be seen in the north wall that opposes this one, as well as in the East Gate (Figure 7.17). Cells 41 and 42 (room B and its counterpart) are those believed to have been used as jail cells during the Sikh and British occupations at the site. The filled and gated entrance to Room B/cell 41 can be seen in Figure 7.32-C. The reduction in the first floor window opening can also be seen in Figure 7.32-B. The floor of the interior of the central passage is covered by concrete slabs, likely dating to the recent occupation of the site and use of this room as a storage area during the renovations.

7.1.5.4 Space E

The two alcove spaces in the ground floor retreating façade walls of the West Gate’s exterior are identical to those found in the eastern gate, see section 7.1.4.4 for discussion (Figure 7.28).

7.1.5.5 Stairway F

This stairway and its partner flank the West Gate’s central passage and extend into the courtyard of the serai. They provide access to the additional rooms made on the first floor of the structure (Figures 7.27-A and C, 7.28, and 7.33). These staircases do not date to the original occupation at the site despite being made of Mughal brick. They are stylistically different from the Mughal brick-work at the site; they have similar coursings of bricks but are capped with a brick pattern that is not seen in other Mughal-period elements at the site nor at any Mughal sites observed in this research. They also block entrance into the Mughal-period cells (cells 39 and 44) located behind them and they provide access to upper level additions that post date the Mughal occupation of the site (Figure 7.33). Stairway F is used to access the first floor rooms above cells 36-39, shown in Figure 7.34. The brick-work of these stairs, likely associated with the Sikh occupation, remain covered in concrete and plaster in many places. There was once an arched passage under the upper section of the stair which has been filled with more recent British or post British-brick (Figure 7.33-B).
Figure 7.33 Stairway F of the West Gate of Gor Khuttree complex, 2007; (A) the style of the stair; and (B) the intersection with the cell behind (cell 39) whose entrance it blocks, as well as the filled arched passageway beneath the upper flight.

7.1.6 The West Gate First Floor

Moving on to the first floor of the West Gate, the Mughal-period gate core (as was exemplified in the East Gate) continues to be identifiable within in the West Gate structure. The incorporation of the West Gate’s Mughal base into the subsequent uses and alterations of this gate system can be identified in the additions and renovations made to the gate, likely beginning in the Sikh period of occupation. The alterations seen on the first floor were begun during Avitabile’s use of the site and, based on historic accounts and photos (section 5.3.2), it is clear that these spaces continued to be used in the subsequent British and Pakistani periods. Thus, alterations and additions on this and other floors of the West Gate complex must be considered with respect to the various uses of the site after its initial construction as a Mughal caravanserai. The sections of the first floor to be discussed are marked in Figure 7.34.
Figure 7.34 West Gate of the Gor Khuttree complex, First Floor Plan. Pink fill indicates area assumed to be solid brick wall construction. Note north is to the right.
7.1.6.1 Room G and Space H

This first floor room and its exterior balcony are identical in size and layout to Room F and Space G of the East Gate (Figure 7.20, section 7.1.4.5). However, this room retains some of the decorative plasterwork that once would have covered the brick-work. The cove-ceiling was once covered with plaster and decorative arches, features which may date to the original Mughal period and that were certainly present from the Sikh period on (Figure 7.35-A). The same is true of the balcony, Space H, where the plaster work remains and adds decoration to the structure in the form of a marqarnas or series of plastered projecting niches (Figure 7.35-C). Marqarnas are typical of the Mughal period, although this application may be from the Sikh period as a later reference to this common Mughal architectural decoration.

Figure 7.35 Details of plaster work Room G/Space H West Gate of Gor Khuttree complex, 2007; (A) the ceiling of Room G showing the plaster arches facing south east; (B) the ceiling of Space H showing the details of the marqarnas looking up; and (C) Space H looking east and showing the location of the plaster marqarnas.
7.1.6.2 Space I

In the East Gate, the West Gate’s space I (Figure 7.34) corresponds with the roof-top area (space H, Figure 7.20) above the cells that abut the gate. Due to the alterations and additions made to the West Gate, space I in the West Gate is a T-shaped corridor that leads to several additional spaces (Figure 7.34). Through the landing of stairway A space I can be accessed via a small series of steps. This corridor then leads directly to Rooms K and L and by extension room M. I also leads to staircase J which offers access to the second floor of the structure (Figure 7.41), as well as to roof-top section O which then accesses Stairway F. The connection to stairway J is open but the other spaces (K, L, and O), have doors that separate the rooms from corridor I. There is a window in the west wall of I overlooking the exterior of the serai and providing air and light to the space. The ceiling is made of matting and wooden beams (Figure 7.36), the walls are composed of Mughal and more recent brick, and the floor is made of post-Mughal brick. The walls are constructed of wooden studs filled with brick, which is then covered in plaster (Figure 7.36). All the doorways are timber framed and rectangular in shape. This form of construction differs from the Mughal brick-work seen elsewhere on the site and may relate to the construction and alteration of these spaces begun in the Sikh period and furthered in the periods that followed the Sikh occupation. This form of wall construction most likely dates to the British period given the use of wooden studs filled with brick, more typical of this period of occupation.
7.1.6.3 Stairway J

This stairway is cased in concrete and thus details of its construction cannot be determined. See Figure 7.33-B for a cross-section view of a brick stair (stairway F) capped with concrete; J may or may not be similar. Stairway J links the corridor of space I with the second floor rooms. The stairs curve ninety degrees at the first floor level and are open at their top (the articulation of these stairs to roof space Z can be seen in Figures 7.41 and 7.44). This is likely the result of structural deterioration rather than the final intended form as to leave the stairs open like this would have surely led to the flooding of the rooms off of corridor I.

7.1.6.4 Room K

Room K is located above cell 40 and is accessed through corridor I. This room overlooks the interior of the serai via a large rectangular window (Figures 7.37-A and 7.38-A). This space has additions that likely relate to the British occupation of the site. This includes the built-in fireplace (7.37-B) as well as the timber frame construction of the walls (already shown in Figure 7.36). The fireplace has had its chimney removed, but it would have once vented through the ceiling and onto roof space Z. The assignment of this room to the British period is based on the style of the construction. This room is not constructed with the same substantial brick-work that is seen elsewhere is the Sikh-period adaptations. It also uses modern bricks to form its walls inside of timber frames, again an approach to wall construction not seen in the Sikh alterations.
to the West Gate. There are also similarities between the wall construction and fireplace in this room and the British-period wall construction and fireplaces in the Fire Brigade and renovated South East corner structures (see section 7.1.9.3). Finally, the incorporation of this room into the structural whole is clumsy and not well executed. Elsewhere, the Sikh alterations required substantial effort and craftsmanship to incorporate the additions and alterations in a seamless fashion with the pre-existing West Gate structure. The interior walls of this room are plastered with no signs of paint or additional interior decoration.

![Image of Room K, West Gate of Gor Khuttree complex, 2007; (A) the placement of K above Cell 40 from the interior courtyard of the serai looking west; and (B) the fireplace on the north wall of room K.]

### 7.1.6.5 Room L/Room M

Room L and Room M are discussed together as they are identical in layout. Room L leads into Room M through a door between the two, and neither room can be accessed directly from exterior roof space O (Figures 7.34 and 7.38-A). These rooms are similar in their interior finishing to the recent construction in the southeast corner of the site where the museum and archaeological lab are housed, discussed below in section 7.1.9.3. This likely reflects the continued use and refinement of these spaces during the British and Pakistani control of the site. We see in them the placement of cabinets rather than niches, the continued use of rectangular doorways, and small un-arched windows commonly used in the British and Pakistani adaptations of the West Gate. The east walls of Rooms L and M have small rectangular windows that overlook the serai courtyard and that have replaced doorways that previously existed in the same locations. The evidence of these doorways can be seen in the post-Mughal brick-work surrounding the windows that shows the in filling of the door space. This indicates
that the window post-dates the doorway. In the corresponding rooms R and S the doorways still remain. The interpretation of these window additions in rooms L and M is that they comprise a British or later period modification, and that during the Sikh occupation of the site these windows were in fact doorways to roof O. All modifications are suggestive of a more utilitarian perhaps British, esthetic. The ceilings however, are comprised of wooden beams holding woven matting in place (Figure 7.38-C) that may be a structural hold-over in these rooms from their original Sikh-period creation. Barr (1889[1839-1842]) describes similar ceilings in his record of a visit to General Avitabile in AD 1839. “The beams in the ceilings of them [the East and West Gates] being constructed of the deodar, (the cedar of Lebanon,) and exposed to the air, threw out a delicious perfume, and reminded me strongly of the abodes of Simla, where this wood is so much used” (Barr 1889[1839-1842]:144). Could these beams seen at the site today be the Lebanon cedar beams that were said to perfume the additions?

Room M and room L each have a projecting balcony window made of carved wood in their west walls (Figure 7.38-B). These jharoka windows are very common in Mughal and Islamic architecture as places from which to address people below and also as a means for women in purdah to view the outside world without being seen (Petersen 1996:131). These projecting balcony windows are screened and thus allow air to circulate through them, likely a welcome feature to anyone remaining inside during the warmest times of year. Whom these windows served is not known; however, these jharoka window correspond stylistically with the larger jharoka window that leads off of Avitabile’s central West Gate apartment room (room W discussed in section 7.1.7.3) as well as those found in rooms R and S, the north side equivalents of these rooms L and M.
Figure 7.38 Details of West Gate Room L and M of Gor Khuttree complex, 2007; (A) the interior wall of these rooms showing the small rectangular windows facing west; (B) the jharoka balcony window of room M facing east; and (C) the beam and matting ceiling of room M looking up.

7.1.6.6 Room N

Room N articulates with room M via an interior doorway and with the roof section O via an exterior door (Figure 7.34). In addition to this exterior door there is an opening that is bricked (post-Mughal brick) closed that would have once allowed passage through the south wall of this room onto the roof over cell 36 as well. This doorway is not seen in Figure 7.34 as this figure depicts the functional components of the rooms as seen at the site during survey and not the interpretation of these components to phases of occupation (this follows in section 7.2). This door may have been closed recently as the roof is now unsafe and access to it is being controlled. The room’s ceiling height is much lower than room L or M (Figure 7.38-A, far left) which may indicate an intended use as a porch or foyer. The ceiling is made of the same beam and matting as is found in the other rooms in this section (Rooms L and M).

7.1.6.7 Roof O

The space marked as roof O comprises the roof above the original serai cells extending from the southwest corner bastion to cell 40 that abuts the West Gate on its south side (Figure 7.2). This space can only be accessed from Stairway F and provides access to the first floor rooms via the door to the Space I corridor or the door to Room N (Figures 7.34 and 7.38-A). A recently constructed wall blocks movement along this roof toward the southwest corner of the serai, as the roof in this area is deemed unsafe.
7.1.6.8 Room P

Moving to the additions built on the north side of the West Gate, we can see a similar but not exactly mirrored arrangement of rooms and spaces (Figure 7.34), although the facades are very similar if not identical (Figure 7.27 A and C). It is my belief that this side of the structure represents more closely the arrangement of the spaces as they were constructed during Avitabile’s tenure at the site. By comparison, the previously described south extension and room additions seem to show the additional and subsequent adaptations of space during the British or Pakistani use of the site. In particular, the West Gate south extension rooms K, L, M, and N all had interior surface treatments that are similar to the British-period alterations seen in the more recently adapted southeast corner of the site. The north extension rooms by comparison do not possess timber framed walls, cupboards in place of niches, or show use of modern brick. In place of corridor I (Figure 7.34), on the north side of the West Gate, the landing at the top of the blocked Mughal-period stairway (the mirror of Stairway A) leads directly from the first floor room above cell 42 into Room P (Figure 7.34). Room P incorporates the space that on the south side is occupied by room K and corridor space I. Room P can also be accessed by the staircase from the interior courtyard that mirrors stairway F. Room P controls access to stairway Q, leading to the second floor and provides access to rooms R and S on the first floor. The ceilings in these rooms, P, R, and S, are of the same beam and matting construction as seen in the south side extension (Figure 7.39).
Figure 7.39 Details of West Gate Room P, R, S, as well as stairway Q of Gor Khuttree complex, 2007; (A) interior façade of P and R facing west; (B) stairway Q as it articulates with room P and leads to the second floor of the West Gate looking west; and (C) the beam and matting ceiling of room P looking up.

7.1.6.9 Stairway Q

This stair case leads from Room P and occupies the symmetrical location of Stairway J, in the south portion of the first floor West Gate extension, although it is of different construction (Figure 7.39-B). Stairway J is constructed of concrete covered brick and its bottom flight does not extend into space I, in contrast the bottom portion of stairway Q extends into space P. The portion of stairway Q that extends into space P is not constructed of brick, but rather of wood. This stair leads to the second floor and the Sikh-period rooms constructed there. The staircase is narrow and has a left hand turn about a third of the way up that marks the joint between the first wooden-flight of steps with the second brick flight of steps. The upper flight of steps is framed in brick and capped with wood. I believe these are either the original Mughal stairs that correspond with stairway I in the East Gate (Figure 7.14), or that these stairs are constructed in the same space that a stairway similar to stairway I from the East Gate would once have been located and from which the roof of the gate during the Mughal period could have been accessed. The stair is currently enclosed from above by the stairs that lead from the second floor to the roof of the West Gate (Figure 7.48-A), stairway f (section 7.1.7.11).
7.1.6.10 Room R/Room S

Rooms R and S are identical in layout and arrangement as rooms L and M in the south extension except that each room can be accessed directly from the roof-top passage marked as space T in Figure 7.34. Rooms L and M do not offer direct access to the roof and, in place of the doors seen in rooms R and S, rooms L and M have windows that overlook the interior serai courtyard (Figure 7.34). Rooms R and S also have jharoka balcony windows that overlook the street outside of the complex (Figures 7.34 and 7.40) and are above cells 45-47 on the ground floor. Room S has an additional doorway in its north wall which leads onto roof T and which may have once led to a similar porch-type area symmetrical to Room N on the south side West Gate extension. No evidence of such a room was detected during my survey.

Figure 7.40 The jharoka windows on the exterior (western) wall of the West Gate room R and S, as well as the parapet of roof T abutting the wall of Room S, Gor Khuttree complex, 2007.

7.1.6.11 Roof T

Roof T is the functional equivalent to Roof O (Figure 7.34). It is the roof-top open passage from the courtyard staircase to the east of the first floor additions (Figure 7.34). Much of this roof and the underlying cells beyond the first floor addition are no longer present at the
site (Figure 7.2). Details of the original lotus parapet (which has been re-faced with Mughal-style bricks) can be seen on the exterior edge of this roof abutting the exterior wall of Room S (Figure 7.40). This re-facing has involved the removal and replacement of the loose Mughal bricks that formed part of the original (Mughal) parapet construction in this location with Mughal bricks purchased for the ongoing Federal Department restoration work on the West Gate. The sources of these purchased bricks is not known, but it was suggested by workers at the site during the survey that various sources were available in the Old City and that much of the brick was gathered for resale during local construction projects.

7.1.7 The West Gate Second Floor

The second floor of the West Gate is recorded in multiple documents from the Sikh period as being the personal apartment of General Avitabile and the place from which he governed (Barr 1889[1839-1842]:143, Havelock and Mackenzie quoted in Grey 1982:135-138). The arrangement of this space is shown in Figure 7.41 and should be compared with Figure 7.24, which shows the roof of the East Gate. The transformation of the roof of the Mughal-period gate into a living space is quite remarkable and the evidence of this transformation can be detected in the architectural details exposed by the current repairs to these spaces by the Federal Department. The second floor was reused after the departure of Avitabile and thus discussion of these spaces will include some information from historical sources from the Sikh period and continuing into the British period use of the site (for further discussion of the Sikh and British occupations at the site see sections 4.3.2.5 and 4.3.2.6.)
Figure 7.41 West Gate of the Gor Khuttree complex, Second Floor Plan. Blue fill indicates raised area where dome intrudes from floor below. Note north is the right.
7.1.7.1 Room U

Room U functions as the landing of stairway Q. Stairway Q connects the second floor to the first floor. Room U also serves as a foyer into room V. This small space is completely plastered; walls, ceiling, and floor. The ceiling is coved, as are all the ceilings on this floor of the West Gate. A large set of wooden doors leads from this landing room into room V (Figure 7.42).

Figure 7.42 The doors that lead to and from room V, Gor Khuttree complex, 2007; (A) the wooden doors that control access from the landing room U into room V, the image is looking north from V into U; (B) room V with a doorway to the left of the image that leads into room c and a doorway to the right of the image that leads into room W, the image is looking southeast.

7.1.7.2 Room V

Like all the rooms on this level, entry into room V requires that you step down into the room, as the door sills are approximately one foot higher than the current floor level (Figure 7.42 A and B). Room V has archways leading from it to Rooms W and c. Room V has a large window in the angled exterior wall (Figure 7.41). Below this window, along the floor-wall articulation, the original Mughal-period roof can be detected. There is a series of steps up to the window sill which encase the domed top of the Space H balcony/alcove which intrudes from the first floor (Figure 7.43). The alignment of the window to the alcove balcony below can also be seen in Figure 7.43-A.
Figure 7.43 (A) The relationship of the alcove balcony on the first floor of the West Gate to the raised floor section below the second floor room V window (B); and (C) the intrusion of the corresponding domed balcony onto the roof surface of the East Gate of Gor Khuttree complex, 2007.

Along this same exterior wall of room V, the incorporation of the original parapet wall of the Mughal gate can also be detected. This wall was incorporated into the construction of the second floor and is easily discernable from the interior of the structure despite being indistinguishable from the exterior. Similar instances of the parapets’ inclusion can be seen in rooms X and Y of the West Gate (Figure 7.44) This confirms that during the Mughal period, both gates had a parapet of this height along the exterior edge of their rooves.

Room V has, in addition to the previously mentioned entrance door from room U, two rectangular doorways that lead into rooms W and c. The door into room W is located in the south wall of room V and the door leading in room c is located in the east wall (Figure 7.41). The room has a cove-ceiling that is entirely covered in plaster.
Figure 7.44 The portions of the second floor West Gate exterior walls that contain portions of the Mughal rooftop parapets, Gor Khuttree complex, 2007; (A) the exterior wall of room X facing south west; (B) the exterior wall of room V facing northwest; and (C) the exterior wall of the room Y facing west.

In addition to the elements noted above, room V also has a painted floor (Figure 7.45). These painted designs are definitely from the Sikh-period occupation of the gate and occur on the plaster that once covered the entire floor. The assignment of these designs to the Sikh period is based on the style of the designs as well as historic references to the Sikh occupation of the site (Barr 1889[1839-1842]:148; Raverty 1852:22). Where the plaster continues up the walls we see that the painted design continued at least as high as the door sills and likely covered much of the walls. This evidence strongly suggests that the raised door sills were original to this Sikh-period second floor addition.
Figure 7.45 West Gate Room V floor of Gor Khuttree complex, 2007; (A) the south west corner of the room showing the best preserved sections of the painted floor; (B) a closer image of the trim pattern of the floor; and (C) a closer image of the pattern details of the interior portions of the painted floor.

7.1.7.3 Room W

This is the largest room anywhere in the West Gate. It is located above the central passage dome/space D (Figures 7.41 and 7.46). In the west wall, is a large jharoka balcony overlooking the street that runs along the west exterior wall of the serai (Figure 7.41 and 7.46-B). It is from this balcony that Avitabile is said to have hung a locked box into the central gate below so that people could place their complaints and requests into it. Avitabile then pulled the box up from this window to address the items contained within. This approach assured that no one was able to influence his response to the people’s concerns and no one could screen his audience time with local people. This space is also the most likely location on the second floor for Avitabile to hold dinners and entertain British gentlemen with dancing girls and musicians. This is also where he likely displayed his gun and sword collections to those who visited him (see sections 4.3.2.5, and 8.1.2 for a full discussion of the historic records of Avitabile’s use of these spaces). In the south wall of room W are two rectangular doors that lead into room X and
b. The north wall is a mirror of the south, with two identical rectangular doors that lead into rooms V and c. The east wall has five screen-windows that overlook the serai courtyard and that are also mentioned in the historic records of British visits to the site during Avitabile’s rule (7.46-C). Through these windows, the bodies of people hanging on the gibbets of the interior courtyard could be seen. The ceiling of this room, like all the ceilings on this floor, is coved and covered in plaster.

The floor of this room has been undergoing repair by the Federal Department and as a result, the door sills are even higher above the floor level than is seen in the other rooms on this story. Some brick-work has been removed to allow for structural repair. The floors are covered in modern brick and in some places overlaid with a sealing plaster that was used in the structural repairs made to this level of the West Gate. The dome itself intrudes from the ceiling below and is also covered with modern brick, reflecting the recent changes that have taken place. For this to have been a functional space and meeting area, the dome would have had to have been covered and the adjacent floors may have been raised to match the dome’s height and create a flat surface and living area. The West Gate dome covering in room W is of a similar style to that covering the East Gate dome. As there is no paint remaining on any of the flooring or walls in room W there is no direct evidence of the original location of the floor level.
Figure 7.46 (A) the interior façade of the West Gate looking west and showing room W above the central passage D; (B) the exterior façade of the West Gate looking east and showing room W above the central passage D; (C) the screen windows in the east wall of room W looking east to the serai courtyard; (D) the jharoka window in the west wall of room W looking west to the serai exterior; (E) the south wall of room W showing the door into room X as well as the brick-work covering the central passage dome; (F) the central passage dome in the East Gate on roof space J, Gor Khuttree complex, 2007.
7.1.7.4 Room X
This room is the symmetrical match to Room V (Figures 7.41, 7.43-A, and 7.44). Once again, the floor height is below the doorsill level and requires a step down into the room. The west wall has a window that overlooks the street exterior to the serai. There is evidence of the Mughal brick parapet in the lotus leaf pattern within the brick structure of the west wall (Figure 7.43-A). The south wall has a rectangular doorway to room Y, while the east wall has a rectangular doorway to room b (Figure 7.41). The north wall has a doorway to room W (Figure 7.46-E). The ceiling of this room is coved and covered in plaster. The floor has no signs of painting.

7.1.7.5 Room Y
This small room corresponds symmetrically with Room U. It is in a very bad state of repair. As room U functions as a landing for stairway Q, so room Y once functioned as a landing or foyer at the top of stairway J (Figure 7.41). The west wall of room Y has the Mughal lotus-leaf parapet incorporated into it (7.43-C). The south wall has a rectangular doorway through which stairway J is accessed, as well as a rectangular opening to the left of this doorway that allows access onto roof Z (Figure 7.47). This rectangular opening is framed and may once have been a proper doorway or even a larger window, although it is now in poor repair. The east wall of room Y is of solid brick construction. The ceiling of this small space is coved and plastered. The floor is covered in brick debris and rubble from the work being complete on the West Gate.

7.1.7.6 Roof Z
Roof Z is formed on top of the extension rooms on the first floor south side of the West Gate. This space is lined with a lotus-leaf parapet wall on its interior (eastern) and exterior (western) edges (Figure 7.47 A-B). A pile of debris found on this roof was removed from the second floor rooms prior to the 2007 repair work. Items in this pile, although without stratigraphic associations or known stylistic dates include portions of painted plaster, glazed tile, and decorative trim all of which likely featured in the rooms of the second floor (Figure 7.47 C-E).
Figure 7.47 Roof Z, West Gate, of Gor Khuttree complex, 2007; (A) the south exterior wall of the second floor of the West Gate facing north, the window to room X can be seen on the left, followed by the access to stairway J, then the rectangular opening into room Y (center left) and finally the doorway to room a (center right); (B) the roof space facing south; (C) painted plaster fragments; (D) decorative terracotta trim; and (E) glazed tile.

7.1.7.7 Room a

This is a small landing room that once offered access between roof Z and room b (Figure 7.41). The west wall of this room is of Mughal brick construction and contains a rectangular niche that has been filled with post-Mughal brick. The south wall has a rectangular doorway that leads to roof Z (Figure 7.47-A). The east wall is of Mughal brick construction and like the west wall has a rectangular niche that has been filled with post-Mughal brick. The north wall has a rectangular door into room b. The ceiling is coved and plastered. The floor is uneven and rubble-filled.
7.1.7.8 Room b

Room b can be accessed from Room a, X and W (Figure 7.41). The west wall of room b has a rectangular doorway into room X which is flanked on either side by a niche that has been filled with modern brick. The north wall has a rectangular doorway into room W. The east wall has a small rectangular window that looks into the interior courtyard of the serai and that is flanked on either side by a niche filled with modern bricks (Figure 7.46-A). The south wall of room b has a rectangular doorway that leads into landing room a. The ceiling is coved and covered in plaster. The floor is below the level of the doorsills and is brick with no evidence of plaster or paintings.

7.1.7.9 Room c

This room is similar in design and layout to room b. It can be accessed from Rooms V, W and d (Figure 7.41). The west wall of this room has a rectangular doorway into room V that is flanked on either side by a niche filled with Mughal-period brick. The north wall has a rectangular doorway into room d. The east wall has a rectangular window that looks onto the interior courtyard of the serai and is flanked on either side with a niche that is filled with Mughal-period brick. The south wall has a rectangular doorway that leads into room W. The ceiling is coved and plaster covered. The floor here retains some plaster and painting over brick. The design of this painted flooring is identical to the painting in room V and attributed to the Sikh-period occupation (Figure 7.45).

7.1.7.10 Room d

Room d is the symmetrical equivalent of Room a, acting as a foyer or landing between Room c and the Roof e (Figure 7.41). The west wall of this room is constructed of Mughal-period brick and contains a rectangular niche that has been filled with post-Mughal brick. The north wall has a rectangular doorway that leads to roof e (Figure 7.48-A). The east wall is of Mughal-period brick construction and, like the west wall, has a rectangular niche that has been filled with post-Mughal brick. The south wall has a rectangular door into room c. The ceiling is coved and plastered. The floor is uneven and like its symmetrical equivalent, Room a, is also rubble-filled. The rubble filling of both of these rooms is the result of the clearing of the associated interior rooms in advance of restoration work.
7.1.7.11 Roof e/Stairway f

Roof e is the north side equivalent to roof Z (Figure 7.48). The difference between the two is that Roof e possesses stairway f. This stairway provides access the main roof of the West Gate, a feature that is absent from roof Z. Roof e has a lotus-leaf parapet on its interior and exterior edge (Figure 7.48-B). Stairway f is the only means of accessing the roof of the second floor, the main roof of the West Gate. There is no indication that a symmetrical stair existed on roof Z (7.47-A). Stairway f is a wooden stairway that climbs into a brick-constructed stairwell (Figure 7.48-A). This stairwell has lotus-leaf coping around its top edge and is not covered. The stairs dog-leg at a square wooden landing that divides their rise. They are anchored into the brickwork at their articulation with the primary West Gate Roof, space g.

![Figure 7.48 West Gate Roof e of Gor Khuttree complex, 2007; (A) door to d on the left, stairway f in center, and window to room V on right, facing south; (B) the roof space e facing north.](image)

7.1.8 West Gate Roof

The top most roof of the West Gate is an open expanse offering a commanding view of the interior serai courtyard and the exterior cityscape that surrounds the complex. This roof is covered with tar and edged with a lotus-leaf parapet (visible in Figures 7.32-A, 7.46A-B, 7.47-A and 7.48-A). The construction of these elements was completed using Mughal brick and in its present form incorporates materials from every subsequent occupation phase. Recent drains have been placed along the roof edges, lined with concrete and tar and crudely piercing the parapet. There is no evidence of a pavilion or any other constructed form on this roof surface, although it certainly would have been an ideal location from which to observe the city. It is
possible that structures were once present and were removed prior to the tarring of the roof. Gertrude Bell surveyed Peshawar from this rooftop and described the interior of the serai (Gertrude Bell’s diary, January 26th, 1903, quoted in section 4.3.2.6).

![Diagram of the West Gate of the Gor Khuttree complex, Second Floor Roof Plan. Note north is the right.](image)

**Figure 7.49 West Gate of the Gor Khuttree complex, Second Floor Roof Plan. Note north is the right.**

### 7.1.9 Additional Structures of the Gor Khuttree complex

Though the central focus of this dissertation has been on the alterations made to the gate systems at the Gor Khuttree complex, there were several additional areas of alteration, repair, and construction that are informative in the analysis of the changes made specifically to the gate systems and in understanding how the site was used over time. These portions of the site are discussed in the sections that follow (Figure 7.50).
7.1.9.1 Arched East Wall Stairway

This stairway is located along the interior of the east wall of the serai complex south of the East Gate (Figures 7.50 and 7.51). It is similar in construction and form to the stairways flanking the West Gate, which are believed to have been added during the Sikh use of the site. Figure 7.52 shows details of the arched East Wall stair and its construction details. This stairway, like the stairs flanking the West Gate, obscures cell 53 located behind it (Figure 7.52 A-B) and thus is unlikely to be related to the original Mughal-period construction. The bulk of the staircase appears to be made of reused Mughal bricks with some use of more recent brick to finish the edges and repair the stair base. As with all alteration noted at the site, bricks only offer
a suggestion of repair or earliest possible construction date as it is clear that the reuse of scavenged brick was very common. In many cases the style of the architectural element, its incorporation into other surrounding structures, and the means of construction offer more information about the period of construction than the base materials themselves. Like the stairways that flank the West Gate, the East Wall arched stairway has an arched passage way under its upper flight (compare Figure 7.52-A and -D with Figure 7.33-B). These stairs lead to the roof of the cells behind them (cells 53-56) where there were once first story rooms, which are now collapsed. This series of rooms on these roof-tops is indicated by the arched entrance passage at the top edge of these stairs (7.52-A), the presence of a stair system to access these rooms on the exterior East Wall (7.52-E), as well as the foundations of several of the interior dividing walls of these spaces (Figure 7.52-B). There is also evidence of some painted decoration over plaster on this roof level (Figure 7.52-C).

Figure 7.51 The East Wall of the Gor Khuttree complex, 2007, looking east from the interior courtyard.
Figure 7.52 Arched East Wall stairway of Gor Khuttree complex, 2007; (A) the stairway from the interior courtyard looking south east; (B) the remaining wall foundations on the first floor above cells 53-56 that the stairway accesses, looking south; (C) the plaster and painting details on the exterior wall of ruined first floor rooms above cell 53, looking east; (D) the arched passage under the stairs looking south; and (E) another means of access to this roof-top area via a narrow flight of stairs and a rectangular door from the exterior of the serai, also the presence of a portion of the original Mughal parapet wall.

It is possible that this arched East Wall stairway initially accessed the roof of these cells during the Sikh occupation of the site as the stairway is stylistically similar to the stairways seen flanking the West Gate. If this is correct, then this section may have formed part of the Sikh-period alterations to the East Gate mentioned by Barr (1889[1839-1842]:143) in his description of the site in AD 1839 when the East Gate alterations were not yet finished (see section 4.3.2.5). These additions and alterations to the East Wall could then date to several periods; beginning in the Sikh period and continuing into the subsequent British and Pakistani periods as described
below. This stairway would then have been used to access the more recent site additions such as the Fire Brigade headquarters. The incorporation of modern (post-British-period) brick into the arched stairway repairs supports the continued use of these stairs into the British and Pakistani periods to access rooms constructed during this periods and possibly replacing rooms from the Sikh period.

7.1.9.2 East Wall Cells54-63, the narrow stairway, and the Fire Brigade

Along the east wall south of the East Gate several serai cells have been reworked into garages for the British Fire Brigade which was founded at the site in AD 1912 (Figure 7.54 inscription). The placement of these cells can be seen in Figure 7.2 and Figure 7.51, and the discussion that follows will address the notable alterations associated with the cells 54 through 63, although these cells could not be documented in the thorough fashion afforded cells 1-50 and the site’s gate systems.

6.1.9.2.1 Cells 54-58

The entire section in front of cells 55-58 acts as a porch and is a later post-Mughal addition to the cells. This addition relates to the use of these cells as storage rooms by the Fire Brigade and perhaps the Police (who occupied the site at the same time as the Fire Brigade). This porch section is comprised of British bricks with some reused Mughal bricks. The porch is held up by three walls and three columns that are all made of brick and are then covered in cement (Figure 7.51). The ceiling is made of metal and wooden beams on top of which bricks are cemented into place (Figure 7.53). The Mughal cell remains and their notable attributes were included in Table 7.1.
7.1.9.2.2 Narrow Stairway, South Side of Cells 55-58

These stairs in construction and design appear to be a more recent addition, likely dating to the British use of this area (Figure 7.54-A). They also likely date later than the AD 1912 construction of the Fire Brigade which occupied the first floor rooms above cells 55-58 and accessed via this stairway. There is an arched passage way under the stairs with wooden shutters on one side that imitates the conceptually similar under-stair passages attributed to the Sikh-period of occupation (Figure 7.54-B). However, unlike the Sikh-period stairs which are constructed of reused Mughal brick and have wide treads and a gentle rise, these stairs are constructed of post-Mughal bricks, are narrow, and have a steep rise. In addition, the tread height is also much smaller. These stairs lead to the rooms constructed on top of the Mughal cells (59-63) and that served as the administrative offices and housing for the Fire Brigade (Figure 7.55-A). The presence of this second set of stairs along the interior of the East Wall suggests that the rooms associated with the Fire Brigade could not be accessed from the East Wall arched stairway previously discussed (section 7.1.9.1). This aligns with the increasing restriction of access noted for the site during the British period of construction and occupation (see section 7.3).

The first floor structures above cells 59-63 underwent significant renovations in the mid 2000’s. These included attempts to create a residence for an on-site curator for the North West Frontier Province Department of Archaeology and Museums City Museum. As a result, detailed
architectural analysis of these spaces was not undertaken and will not be attempted here (see Figure 7.56 for plan of the proposed remodel). The original interior façade wall has been maintained including the name plate for the fire brigade (7.55-B).

![Figure 7.54 Details of the Narrow Stairway on the south side of Cells 55-58, East Wall Gor Khuttree complex, 2007; (A) the stairway facing southeast; (B) the arched passage under the stairway facing north.](image)

![Figure 7.55 East Wall, Fire Brigade; (A) the sign over the modified Mughal cell structures; and (B) the incorporation of the sign into the more recent wall structure. Gor Khuttree complex, 2006.](image)

7.1.9.2.3 Cells 59-63

The front porch section of cells 59-63 (the garage-type cells under the Fire Brigade sign shown in Figure 7.55-A and Figure 7.56) relate to the reuse of this area by the Fire Brigade. This outer porch was constructed during this period of occupation and is similar to the porch
over cells 54-58 (Figure 7.56). The columns that support this porch were recently plastered and repaired to look like solid concrete, but this is actually a concrete facing over the interior brick pillars. The roof is made of wooden beams supporting the brick floor found above them. This is the same roofing as seen in the porch in front of cells 54-58. Both of these porches were likely constructed at the same time.

The rear sections of these garage bays (cells 59-63) retain some characteristics from their initial use as Mughal-period cells. These attributes were recorded in Table 7.1. Cells 61 and 62 (Figure 7.57) currently house the two fire engines that have remained at the site since the Fire Brigade was located there. These two cells were completely reconstructed from their Mughal-period counterparts, as all internal details have been removed and the roofs reconstructed and reinforced with iron girders, likely to support the weight of the construction on the floor above. The footprint of these modified cell structures remains dimensionally equivalent to the original Mughal-period cells. The reconstruction of these Mughal cells into garage bays was likely undertaken at the same time as the creation of the first floor Fire Brigade rooms as well as the two-stage porch additions seen in front of cells 54-58 and 59-63.
Figure 7.56 Plan of the Fire Brigade showing details of the planned renovations for 2005-7 (after NWFP Department of Archaeology and Museums commissioned plan, reproduced with permission of Ihsan Ali).
7.1.9.3 Southeast Corner, Municipal Offices, Research Lab, and City Museum

The southeast corner of the Gor Khuttree complex is the location of a recently renovated building that houses municipal offices and the archaeological city museum on the ground floor and the museum’s research lab and recent city history section on the first floor. It was not included in the detailed survey of the site. Despite being recently renovated, the structure does “fit” into the greater serai setting in that it lines the walls of the serai and does not intrude into the courtyard space. It also has a ground and first floor verandah that is supported by columns that roughly align with the spacing of the caravanserai cells that once stood in the same location (Figure 7.58). These columns are not constructed of brick faced in concrete as the previous Fire Brigade verandah columns were, but are instead of solid brick construction. It is my feeling that this structure, although largely a recent renovation and alteration at the site, has at its base some components that date to at least the late-British or Independence (AD 1947) occupation at the site. In Durrani et al.’s site map (Figure 4.4) this area of the site is recorded as being “Police Barricks” and appears to have some extension or porch structure running along its interior edge. In the site map by Ali et al. (Figure 4.5) this area is now called the “new building”, though Ali et al. (2005:229) also say that in AD 2002 “the City Development and Municipal Department (CD & MD), has also repaired the barracks of the British period located at the south-eastern corner”. It is likely then that some of the features within this southeastern structure have been repaired and/or renovated, while other features are likely products of the British period use of the site.
7.1.9.4 Temple Complex

The temple complex in the courtyard of the Gor Khuttree complex was built during the mid-19th century occupation of the site by General Avitabile. Jaffer (1945:85, 104-105) has suggested that this construction occurred at the same time the mosque that had stood in the courtyard was removed. Jaffer (1945:104) concludes that the Sikhs actively destroyed the mosque and allowed the Hindu temple to be constructed. However, it is recorded in the official history of Peshawar that, by the Sikh period, the mosque had decayed as a result of declining adherence to Islam (as recorded in Jaffer 1945:104-105 from the *Tarikh-i-Peshawar* complied in Urdu by Gopal Das in 1874). As discussed in section 4.3.2, there is no architectural or archaeological evidence referencing the mosque or its placement and no supporting evidence to aid in evaluating historic suggestions of the mosque’s original location. Other than the farman and sanads described by Jaffer (1945:104-105) as ordering the construction of a mosque there is no evidence as to the location or appearance of this structure.

The temple complex is located in the southwest quadrant of the serai courtyard (Figure 7.1). The temple is associated with some out-buildings that later came to serve as army and police barracks (Figures 7.1 and 7.62). Architectural details associated with the temple and its surrounding structures offer clues about similar construction techniques, decorations, and
designs in the greater Gor Khuttree complex that may have been commissioned at the same time or made use of the same artisans, such as the paintings and plaster work on the West Gate.

The main portion of the temple is a Shiva temple and its associated Nandi shrine (Figure 7.59). In this typical arrangement, Nandi, the bull figure, is placed such that he opposes and can watch over the placement of the Shiva lingam (Michell 1988:25-26). The temple at Gor Khuttree no longer possesses its lingam or its Nandi bull. In the Nandi shrine there are also several empty niches that likely once held statuary. In the Shiva temple, the lingam and its pedestal is absent though the trough is still present that once directed the milk or water poured over the lingam out of the temple. The Shiva temple has a domed ceiling that is painted on the interior surface (Figure 7.60). It is outside the scope of this dissertation to discuss the many compositions and meanings of this ceiling’s paintings; however, the style and execution of the decoration is worth noting in comparison with similar painted features of the West Gate (Figure 7.60) which were discussed in sections 7.1.5-7.1.7. Similarities also exist between the temple’s plaster work and the plaster work carried out on the interior and exterior of the West Gate; again see sections 7.1.5-7.1.7. This plaster work covers the interior and exterior of the temple complex and has some traces of paint still adhering to it. The plaster is stamped or molded with floral designs and decorative elements. In addition to this plaster work, there are also carved wooden...
door lintels (Figure 7.60). A comparison of these decorative elements with those from the West Gate shows an apparent level of similarity between design motifs and their skill in execution. Though certainly not conclusive, this comparison lends support to the interpretation of these decorative elements as coming from a similar period of creation, the Sikh period of control AD 1838-1842.

Figure 7.60 Comparison of decorative elements from the temple complex and the West Gate, 2007; (A) Shiva temple painting; (B) West Gate floor painting Room V; (C) plaster floral design on temple walkway facing south; (D) plaster floral design on West Gate interior central passage arch facing west; (E) carved wooden door lintel on associated temple building; and (F) ceramic tile from West Gate roof Y.
7.1.9.5 Missing Hammam

During the Mughal period *hammams* became increasingly popular in South Asia (Nath 1988) and persisted into the periods that followed. Royal complexes and serais are noted for having had such facilities. Nath (1988:42-43) offers an extensive list of complexes, mostly palaces and forts but including some serais, that had such bathing chambers. Raverty (1852:20) describes in great detail that in AD 1852 there were eight baths in the city of Peshawar, one of which was then located inside the “Gorkhutree”. He records the hours of operation; women had access between daylight and 9 am and again after 4 pm and men could use the facilities between 9 am and 4 pm. Raverty also (1852:20) provides a detailed account of a *hammam* visit, the site of which is not identified, but implied to be at Gor Khuttree, involving the application of hot and cold water and the aggressive cleaning of the skin. Is this *hammam* that Raverty describes as within Gor Khuttree the one from the original Mughal construction? In serais that provide such *hammams*, they were often placed in elaborated bastion systems or at the locations where one might expect to see a false gate (Nath 1988). Within the Gor Khuttree complex we have no surviving architectural evidence for the placement of such a structure, but like the missing mosque, one is known from the royal farman describing the site and examined by Jaffer (1945:107). Jaffer (1945:106) suggests that the original *hammam* was located where the current mosque at the site is located (see Figure 7.62 for mosque location). He does not explain why he believes this to be the *hammam’s* original location, although one might argue that the water systems of the *hammam* could have been used for the ablution pools of the mosque. A large Mughal-period drain (Figure 7.61) was found in the recent excavations in the northeast corner of the serai courtyard. This drain may have carried water from the *hammam* or the original mosque’s ablution pools dependent on the location of these features. The drain is located in Ali et al.’s. (2005:235) layer ten and is seen as an intrusion from the layer six, the serai’s construction layer.
Several places are possible for the Mughal hammam’s original location. The first is the northwest corner of the serai. In this corner there are no surviving elements from the Mughal period but we do know this was the location of a police station at the time of the Durrani et al. (1997) excavations (Figure 7.62). Another potential location is the northeast corner of the structure. This location is tentatively ruled out, as the excavations carried out in this corner to date show no elaboration of the bastion complex allowing for the construction of a hammam. Little information is available for the southeast corner and so, although there is no evidence in favor of this location, there is also no evidence against the hammam being located there. The southwest corner of the serai is also an unlikely candidate as the portions of the serai structure that survive here do not indicate the presence of a hammam despite the recent use of that corner of the serai as a public bath (Figure 7.62).
Presuming the *hammam* did lay along one the courtyard walls and followed the Mughal architectural principle of symmetrical balance along a *four-iwan* plan then another possibility must be considered. As there is a false gate in the center of the south wall, it is expected that in the center of the north wall some structure was present to create a mirrored or balanced plan. It has been assumed that this was likely another false gate; however, I believe consideration should be given that this location was the location of the missing *hammam*.

Though excavation has not been carried out in this location, and no architectural remains exist to support this theory, I believe that the presence of a *hammam* in the center of the north wall makes sense in terms of the remains we know to have existed in this location and in conforming to the symmetrical principles of construction that governed all other Mughal architectural elements surviving on the site. Should the *hammam* have been placed in the center of the north wall it would offer balance to the *Iwans* of the site. If it was placed here and did not survive structurally into the British period, then perhaps it survived in the function of the space. What I mean to imply by this is that the *hammam* may have been removed from the site, but in its place and perhaps making use of its drainage and water systems was a public toilet; Figure 7.62. The west aligned junction of the Mughal drain exposed during excavation offers some support to this hypothesis. Future excavation or geophysical survey that traces the course of this drain would be very helpful in addressing the question of the location of this *hammam* or even the Mughal-period mosque.
7.1.9.6 Missing Mission House

A Church of England mission house is known to have existed at the site into the late 1800’s based on records of the missionary society (Clark 1885:167; The Church Missionary Atlas 1865:27), local gazetteers (Gazetteer of the Peshawar District 1989[1897-98]:116), and an existing historic photograph (Figure 7.63). Several records list its location as the corner of the serai. Which corner is referenced variously as the northeast corner (Gazetteer of the Peshawar District (1989[1897-1898]:116) and the northwest corner (Ross 1970[1859]:83). The surviving photograph of the mission house (Figure 7.63) clearly shows its incorporation into the corner fabric of the serai. But what happened to this mission house? As a significantly sized component of the site that would not have been easily dismantled it is difficult to account for its absence at the site today.

First, looking at Durrani et al.’s (1997) map (Figure 7.62) of the Gor Khuttree complex we can see that the northeast corner of the serai is the least likely location for this mission house as no architectural traces of such a structure have been revealed over the course of the excavations in this location. Second, Durrani et al.’s map (1997) shows the northwest area of the complex to be the location of both houses and a police station, although neither of these remain at the site today. These structures were removed when the police vacated the site in 2002 (Ali et al 2005:202). It is possible that the mission house occupied this corner and was reused and altered by locals either as private housing or as a police station. The southwest corner of the
serai has its original cells remaining and these show no major post-Mughal alterations. Therefore, this southwest corner is not the location of the mission house. The southeast corner of the serai is now the location of the recently renovated barrack-building discussed in section 7.1.9.3, although this could have replaced the earlier mission house. The historic sources do agree that this mission house was located in one of the northern corners of the site.

If we look at the photo of the mission house (Figure 7.63) we see that the shadows of the people in the image are directly (to the left as seen in the image) behind them. Given what we know about the architecture at the site this means that if the image was taken in the morning then behind them, to the left, is the serai’s West Wall and if the image was taken in the afternoon then behind them is the serai’s East Wall. Figure 7.64 shows the shadow directions for each of the serai corners with regards to a morning or afternoon placement of the sun. From this figure, the southwest and northeast corners of the serai are ruled out as possible locations of the mission house.
Figure 7.63 An undated photograph of “The City Mission House, Gurkhatri, Peshawur” (reproduced with permission from the British Library).

Figure 7.64 Schematic of shadow direction given the time of day; (A) shows the direction of shadows in morning sun; (B) shows the direction of shadows in afternoon sun; and (C) shows that only the northwest and southeast corners are viable locations for the mission house based on the direction of the shadows in Figure 6.63.
The mission house was likely constructed in the southeast or northwest corner of the serai. The sun study suggests these are both viable locations. The northwest possibility is further supported by the historic missionary record of Ross (1970[1859]:83), while the location presented in the later Gazetteer record (1989[1897-98]:116), the northeast corner, does not align with the information from the sun study. Future excavation and documentary research may offer a more definitive location for this structure.

7.2 Phased Analysis

To analyze the effects of the structural changes made at the Gor Khuttree complex over time I consider the results generated from three-dimensional modeling and the space-syntax and planning analysis completed on the site data for each architecturally known phase of occupation. As was discussed chapter four, there are several chronological phases in the life history of the place Gor Khuttree. The archaeological and architectural records provide evidence for the Mughal, Sikh, British, and Post-Independence occupations. These are the phases of occupation that my analysis will address.

The Durrani period, which predates and intermingles with the Sikh period, is not treated as an independent phase of analysis as we have little evidence to correlate with this occupation. The Durrani period in Peshawar was brief and focused on the occupation and control of Bala Hisar Fort. Any alterations to the Gor Khuttree complex’s architecture undertaken during the Durrani period are likely to be lumped into the alterations seen during the Sikh phase. As with all labels, the phases used to discuss the alterations to the site over time likely over-emphasize the degree of alteration made during any named occupation. For example, those alterations made toward the end of the Mughal occupation and which were continued into the Durrani and Sikh phases are compounded in this phased analysis and result in an over-emphasis of Sikh/Durrani alteration. This then erroneously implies that the Mughal phase was a static period architecturally. As the Mughal period at the site extended over a hundred years, this is unlikely to have been the case.
7.2.1 Mughal Phase

7.2.1.1 Three-dimensional Modeling

The use of three-dimensional modeling and the methodologies applied were outlined in chapter five. The application of these modeling techniques to the Mughal period was based on the survey data gathered over two seasons of field research at Gor Khuttree Serai and has focused on the interpretation of the Mughal gates and the arrangement of the serai as understood from historic records, my architectural recording, and the archaeological remains uncovered during excavations. The three-dimensional model that has been generated is thus a culmination of architectural, archaeological, and historic data synthesized for this period as well as some interpolation based on information about serai construction in general from the Mughal period and examples from additional Mughal structures. Discussion about this specific Mughal period three-dimensional model and three-dimensional models more generally as research tools can be found in Campbell (in prep).

The hypothesized elements at the site, notably the hammam and the mosque, have not been included in the presented model, although future work might address the potential locations of these features more completely. The arrangement of the bastion spaces is shown in two forms. The first represents only the portions of the bastions that can be observed directly from the architecture remaining at the site (the northeast and northwest corners of the site in Figure 7.65), and the second is based on the previously discussed (section 7.1.3) interpretation of bastion form that accounts for the archaeological and architectural information as well as the similarity of these remains to the Nur Mahal arrangement (the southeast and southwest corners, Figure 7.65).
Figure 7.65 ArchiCAD Model of the Mughal Caravanserai at Gor Khuttree as originally constructed. Left, showing the placement of cells and Right, showing the first-level roof space.
In addition to the general site arrangement, the model offers detailed representations of the gate systems. As previously mentioned, the East Gate at the Gor Khuttree complex has retained a largely Mughal appearance while the West Gate has been altered and adapted in the subsequent phases of site occupation. However, as was outlined in the architectural survey data, at the core of the West Gate is a gate system that is remarkably similar to the one found in the East Gate today. Thus, the modeling of these two gates combined information from the architectural survey of each such that the gate represented in the Mughal-period model most effectively incorporates the total information garnered from the remains on site.

The arrangements of the spaces within the Mughal gate system are reviewed in the architectural survey of the East Gate presented in section 7.1.4. Figures 7.66 through 7.70 show views generated from the three-dimensional rendering component of the ArchiCAD software package, including elevations from the interior and exterior of the gate systems. These images depict the appearance of the structure just after construction and aid in the analysis of the function of its spaces and in determining how the site would have been perceived by users. Of course, these models do not encompass the ephemeral actions and items that would have populated these spaces in the past (see discussion of models in section 5.4).

Figure 7.66 ArchiCAD model of the Interior of the Mughal Caravanserai East Gate at Gor Khuttree.
Figure 7.67 ArchiCAD model of the Exterior of the Mughal Caravanserai East Gate at Gor Khuttree.

Figure 7.68 ArchiCAD model of the Mughal Caravanserai East Gate at Gor Khuttree showing the interpreted placement of the roof parapets as well as the articulation of the north side stair.

Figure 7.69 ArchiCAD model of the Mughal Caravanserai East Gate from exterior showing hypothesized bastions, Gor Khuttree.
Figure 7.70 Elevation models from ArchiCAD of the Mughal Caravanserai East Gate, Gor Khuttree; (A) from the interior looking east; and (B) from the exterior looking west.

7.2.1.2 Space-syntax, Planning and Access Analysis:
To consider the syntaxes that governed Mughal period use and arrangement of spaces, I have generated and interpreted a functional access graph of the Mughal period gate system. In order to complete these analyses, the spaces identified in the site survey were assigned as discrete spatial nodes with arbitrary number markers. These node numbers are correlated to the previously discussed East Gate spaces in Table 7.2. The results of the spatial analyses are presented here. For a complete discussion of the applicable methodologies please refer to section 5.5.
Table 7.2 Architectural survey letter designations for Mughal-period rooms along with assigned spatial nodes for access analysis.

<table>
<thead>
<tr>
<th>Assigned Letter Designation</th>
<th>Mughal period Assigned Spatial Node(s)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>A, stairway</td>
<td>10, 11</td>
<td></td>
</tr>
<tr>
<td>B, room</td>
<td>5, 7</td>
<td></td>
</tr>
<tr>
<td>C, storage room</td>
<td>6, 8</td>
<td></td>
</tr>
<tr>
<td>D, passageway</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>E, exterior</td>
<td>2, 3</td>
<td></td>
</tr>
<tr>
<td>F, room</td>
<td>13, 17</td>
<td></td>
</tr>
<tr>
<td>G, balcony</td>
<td>18, 19</td>
<td></td>
</tr>
<tr>
<td>H, rooftop</td>
<td>12, 16</td>
<td>Spaces are combined given the principle of co-presence.</td>
</tr>
<tr>
<td>I, stairway</td>
<td>12, 16</td>
<td></td>
</tr>
<tr>
<td>J, rooftop</td>
<td>20</td>
<td>Spaces are combined given the principle of co-presence.</td>
</tr>
<tr>
<td>K, rooftop</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

Figure 7.71 shows the assignment of spaces within the Mughal phase’s gate system and the associated justified access graph. The spaces have also been assigned a functional descriptor such as stairway, room, passageway, etc., that identifies the basic function that each space is understood to have served, as previously discussed in the architectural descriptions of the affected spaces (sections 7.14-7.18). This consideration of the assigned or interpreted function of a space incorporates ideas presented in planning analysis, where the organization of space is considered through the functional arrangement of spaces.
The general pattern of access emphasized by the arrangement of spaces and paths in the justified access graph (Figure 7.71) shows that the entire gate system has a tendency to distribute access to specific spaces, essentially meaning that many of the spaces can be accessed from more than one route. Therefore, the spaces are not interpreted as having highly restricted access. In fact, the entire system, relative to the carrier space (1), can be seen to comprise two
main access loops that represent the organization of space on the ground and first floors. The first loop consists of spaces 4, 5, 7, and 9 and the second loop consists of spaces 9, 10, 12, 20, 16, and 11. It is important to note that spaces 10 and 11 are the Mughal gate stairs to the first floor and include within them the flight of stairs, their first floor landing, as well as the few (2-3) steps between these landings and the roof spaces they access. These components are combined into a single spatial designation based on Fishers (2007) concept of co-presence where any person in any component of these spaces would be aware of any person in any other component (section 5.5.1).

Not surprisingly, the spaces with the most non-distributed access are dead-end paths off of these main loops and include the two under-stair storage closets (6, 8), the two small niche enclosures outside the gates (2, 3), and the balconies accessed via the second-floor rooms that flank the central passageway (14, 15, 18, 19). It is important to note that from the cell rooftops (spaces 12, 13), the entire serai roof system can be accessed and by extension the opposing gate and possibly the bastion system. As information about the nature and arrangement of these articulations is lacking, it must suffice for now to acknowledge that the rooftops are not closed systems and access to them and from them to the main gate systems further emphasizes the integrative arrangement of this aspect of the Mughal caravanserai.

In the analysis of the syntactical principles of the spaces represented in the justified access graph, the control value (CV) for each space was plotted against the space’s Real Relative Asymmetry Value (RRA). Here, CV can be seen as a measure of how much control a given space exercises over the spaces to which it allows access and RRA is a means of quantifying how integrated or separated a given space is within the graphed system (see section 5.5 for further discussion of these terms). The spaces in the resultant scatterplot (Figure 7.72) were further distinguished by the functional uses of each space. The separation of spaces shown in this scatterplot reinforces what was already noted from the justified access graph. The most non-integrated spaces (balconies, exterior niches, and storage rooms) form a loose cluster in the top left of the graph showing high RRA values with low CV values, as segregated spaces that have no control of access to other spaces. On the opposite side of this spectrum, in the top right we see the loose clustering of spaces that control access to a number of other spaces and yet are not well integrated into the global structure. These spaces include the exterior carrier space (1) from which all paths of access originate, as well as the second-floor rooms (13, 17) that control
access to the balconies. The spaces 13 and 17 can be conceived of as the starting point of short branches off of the central ringy-gate-access-path. Finally, occupying the middle ground of the scatterplot is another loose group that displays the middle range of control and integration. These are the spaces that comprise the two main rings of the justified access graph integrated with each other via space 9. Thus, these rings include spaces 4, 5, and 7 in the lower ring that connect, via space 9, with spaces 10, 11, 12, 16, and 20.
Figure 7.72 Gor Khuttree Mughal Phase Gate System Scatterplot of Control Value vs. Real Relative Asymmetry.
7.2.2 The Sikh Phase

The Sikh phase of site occupation has the greatest amount of historic information known about it yet. However, despite the alterations that remain apparent in the West Gate, much information about additional structures once found at the site has been lost. I have not been able to locate above-ground physical remains of the many interior courtyard store houses, offices, and go-downs described in the historic records from this period. Likewise, the appearance of the courtyard with these structures, the vegetable gardens, and parade grounds can only be imagined (section 4.3.2.5). For this analysis, the focus has remained on the alterations distinguishable within the form of the West Gate and is based in no small part on the active renovations that were in process at the site at the time of my fieldwork. These renovations and restorations offered the unique opportunity to acquire data about the alterations made to the site prior to their complete removal or their erasure from the field of observation through re-plastering and repair. The determination of the portions of this gate that date to the Sikh/Durrani phase of occupation has been made through consideration of the architectural whole and to correspond with the appearance of the site suggested by historic records. Thus, the interpretation of the structure presented here is a likely hypothesis of appearance and not a fact. It may help in this regard to see the alterations within the Sikh phases as ones likely to have been in place or to have begun during the Sikh use of the site.

7.2.2.1 Three-dimensional Modeling

The three-dimensional modeling of the Sikh Phase of occupation has focused on the alterations seen in the West Gate of the Gor Khuttree complex, the area of major renovation and central use by authorities. The results of this modeling are presented in the figures (7.73 and 7.74) and serve to record the alterations made to the site and also a means of envisioning the experiential alteration of the spaces in question.
Figure 7.73 ArchiCAD model of the Interior of the Sikh Phase West Gate, Gor Khuttree complex, looking west.

Figure 7.74 Elevation models from ArchiCAD of the Sikh Phase West Gate, Gor Khuttree complex; (A) from the interior looking west; and (B) from the exterior looking east.
7.2.2.2 Space-syntax, Planning and Access Analysis

The additions and alterations made to the West Gate of the Gor Khuttree complex and associated with the Sikh phase of site occupation significantly affected the arrangement of spaces within the structure (see Table 7.3 for a summary of the space and node associations made in this analysis). In this section I present the syntactical relationships of these spaces and discuss the suggested patterns of space uses and functions. In the discussion that concludes this chapter I compare what is known about space use and function from each of the phases of occupation. Figure 7.75 shows the assignment of nodes to the floor levels of the West Gate. The structure is represented as it is believed to have appeared during this occupation phase (the architectural details that informed this analysis were previously presented in sections 7.1.5-7.1.8).

Table 7.3 Architectural survey letter designations for Sikh-period rooms along with assigned spatial nodes for access analysis.

<table>
<thead>
<tr>
<th>Assigned Letter Designation</th>
<th>Sikh Period Assigned Spatial Node(s)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>A, stairway</td>
<td>10, 11</td>
<td></td>
</tr>
<tr>
<td>B, room</td>
<td>5, 7</td>
<td></td>
</tr>
<tr>
<td>C, storage room</td>
<td>6, 8</td>
<td></td>
</tr>
<tr>
<td>D, passageway</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>E, exterior</td>
<td>2, 3</td>
<td></td>
</tr>
<tr>
<td>F, stairway</td>
<td>12, 13</td>
<td></td>
</tr>
<tr>
<td>G, room</td>
<td>14, 18</td>
<td></td>
</tr>
<tr>
<td>H, balcony</td>
<td>16, 20</td>
<td></td>
</tr>
<tr>
<td>I, room</td>
<td>17</td>
<td>Same as K, an open room during Sikh period.</td>
</tr>
<tr>
<td>J, stairway</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>K, room</td>
<td>17</td>
<td>Same as I, an open room during Sikh period.</td>
</tr>
<tr>
<td>L, room</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>M, room</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>N, room</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>O, rooftop</td>
<td>27, 28</td>
<td>Spaces are separated given the</td>
</tr>
</tbody>
</table>
Spaces are separated given the principle of co-presence.
Figure 7.75 Nodes and their Assigned Functions; Sikh Phase, West Gate, Gor Khuttree complex.

Figure 7.76 shows the justified access graph for the spaces within the West Gate during the Sikh phase with the carrier space defined as space 1.
Figure 7.76 Justified Access Graph, West Gate, Gor Khuttree complex, Sikh Occupation Phase.
As anticipated, the arrangement of spaces within the Sikh phase West Gate began similarly to that seen in the Mughal Phase gates (Figure 7.71). This central form is then altered through Sikh phase renovations, and the overall spatial system of the West Gate becomes much “bushier”, as identified by the number of spaces that are now interlinked. The system now contains a series of interconnected rings as well as a number of terminal branches. Despite its increased depth the system remains fairly distributed. This distributed nature is represented by the series of interconnected rings of movement, where spaces along these rings have their access controlled by more than one other space(s). These rings again represent a symmetrical arrangement of the spaces with the south and north portions of the gate structure, for the most part mirroring each other and essentially reconnecting along the east-west axis that divided the structure.

The syntactical properties of these spaces were explored to seek patterns that might suggest functional constraints on space use and location within the structure. Figure 7.77 shows the resultant scatterplot of the control values vs. the real relative asymmetry values for these spaces. We can again detect the underlying Mughal pattern of spatial arrangement and use but also subsequent changes.

The left side of the graph contains spaces with little control over neighboring spaces and middle-range RRA values. This suggests these are asymmetrical and segregated spaces relative to the global pattern for the gate system. The left side of the graph is comprised of the same balcony (15, 16, 19, 20), storage room (6, 8), and exterior spaces (2, 3) as were seen in the Mughal phase equivalent scatterplot. In addition, the new interior courtyard staircases, spaces 12 and 13, trend toward this group. In fact, all of the stairways except stairway 44 are concentrated in the lower left quadrant of the graph, suggesting that they are some of the most integrated spaces within the structure, are symmetrical with regard to the global system, and have low control over their immediate neighbors. This is as anticipated, as these spaces comprise part of the ring paths of access and form symmetrical pairs in the mirrored arrangement of the gate system. The single stairway not found in this quadrant of the graph, stairway 44, is the single un-partnered stairway in the structure and the one that controls access to the third-floor roof, space 45, the highest point within the structure. This space has a high RRA value suggesting a segregated and asymmetrical nature with a middle-range control value. It is located at the end of a linear path that shows some segregation from the over-arching system. Functionally we would
anticipate this arrangement, as this space is the deepest space that can be reached within the structure and although ultimately constrained by a four-space-deep linear path it can be reached via a number of alternative routes prior to this route restriction. This roof-top is the one from which the best view of the serai surroundings can be gained and would have also required passage through the second-floor personal rooms of General Avitabile. Thus, this space would not be accessible to all serai visitors. It was likely restricted for the use of Avitabile, his family, immediate entourage, or accompanied guests.
Figure 7.77 Gor Khuttree Sikh Phase West Gate System Scatterplot of Control Value vs. Real Relative Asymmetry.
An interesting cluster of nodes is seen in Figure 7.77. Those nodes that represent spaces interpreted as rooms, the light blue dots, cluster together with the exclusion of the outliers 14 and 18. Syntactically, these clustered spaces have mid-range control values and low to medium-range RRA values, suggesting that they are for the most part symmetrical in their global arrangement and well integrated into the system. In addition, these rooms exercise moderate to low control over their neighboring spaces. This of course corresponds exactly with the placement of these rooms on ringed access paths where they often control access, but this access is along a looped path of movement that feeds back into itself. It is noteworthy that rooms 35, 36, 37, 39, and 49, those comprising General Avitabile’s personal apartments and meeting rooms, display a similar access pattern and are on the low side with regards to their control values. Those able to access these rooms would likely be able to move freely between them, although this does not necessarily mean that access to the suite itself was uncontrolled, as can be seen in the access graph (Figure 7.76). The two outlier rooms, 14 and 18, are rooms located along linear paths, and are the two second-floor rooms found in the original Mughal gate organization that control access to the interior and exterior second-floor balconies. Access to these spaces would have been restricted to those persons needing to oversee the activities inside and outside the caravanserai. The higher control values assigned to these two rooms both in the Mughal phase and in the Sikh phase of occupation are the result of their controlling access to balcony spaces that essentially terminate a path of movement.

Similar to the clustering that was seen in the scatterplot for the Mughal-phase’s gate system there is a loose clustering at the right side of the graph of a series of spaces that have medium to low RRA values but high control values. These spaces, 1, 9, 14, 18, 28, and 29, are symmetrical and integrated within the gate system and also exercise the highest degrees of control relative to their neighbors. Spaces 14 and 18 represent two second-floor rooms and have already been discussed. Space 1 is the exterior carrier space for the system and controls access to the two exterior niche spaces as well as the central passageway, space 4, from which all other paths originate and as the only way to get into the gate or the interior courtyard. Space 9, which represents the courtyard space, displays a high level of control with the lowest level of global integration (RRA value), an expected result as functionally this space exists outside of the gate system and yet it is here that routes of access into the structure originate.
7.2.3 The British/Pakistani Phase

Alterations to the West Gate after the well-documented Sikh occupation by Avitabile are difficult to tie definitively to a specific phase of occupation and thus will be considered as part of a broad British/Pakistani phase. As was discussed previously, it is during these periods that we see the use of the caravanserai as a mission house, hospital, religious center, tehsil office, Fire Brigade, Police Brigade, government storage facility, museum, and park. These varying uses and their impacts on the formation of space and place are the subject of chapter eight. Here, the analysis of the spatial alterations made to the site will again focus on those changes identified within the West Gate of the complex.

7.2.3.1 Three-dimensional Modeling

These alterations have been modeled and the models are presented in the figures that follow. The Sikh phase West Gate did not undergo much alteration in the form of new spaces in the occupations that followed it. Instead, the spaces that existed in the Sikh phase are reinterpreted and access patterns between these spaces are altered. These alterations are identifiable in the bricking-over of windows, doorways, and access paths; in the timber-frame construction of walls; through the inclusion of recent brick types; and in constructions with stylistic elements that are not harmonious with the surrounding (pre-existing) structures (see sections 7.1.5-7.1.8 for discussion of period alterations at the site). Thus, the three-dimensional model for this phase of occupation looks similar to the model created for the Sikh occupation phase with the addition or removal of several walls and doorways (Figures 7.73, 7.74, 7.78 and 7.79).
7.2.3.2 Space-syntax, Planning and Access Analysis

The access analysis based on the justified access graph and the component spaces syntactic properties is particularly interesting for this occupation phase as it is based largely on the same nodes that were present in the Sikh Phase’s analysis. That is, basic room spaces do not change but access paths to them do (see table 7.4 for space designators to node assignments).
Thus, the changes in the properties of these spaces are the direct result of choices made by the users about how these spaces should be related to each other and how certain functional spaces ought to be used and located within a particular structure. These choices and the resultant changes in the justified access graph and the syntactic properties of these spaces are discussed below.

Table 7.4 Architectural survey letter designations for British/Pakistani period rooms along with assigned spatial nodes for access analysis.

<table>
<thead>
<tr>
<th>Assigned Letter Designation</th>
<th>British/Pakistani Period Assigned Spatial Node(s)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>A, stairway</td>
<td>10, 11, 46, 47</td>
<td>Stairways separated from landings, and stairway 10 no longer has access to landing 47.</td>
</tr>
<tr>
<td>B, room</td>
<td>5, 7</td>
<td></td>
</tr>
<tr>
<td>C, storage room</td>
<td>6, 8</td>
<td></td>
</tr>
<tr>
<td>D, passageway</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>E, exterior</td>
<td>2, 3</td>
<td></td>
</tr>
<tr>
<td>F, stairway</td>
<td>12, 13</td>
<td></td>
</tr>
<tr>
<td>G, room</td>
<td>14, 18</td>
<td></td>
</tr>
<tr>
<td>H, balcony</td>
<td>16, 20</td>
<td></td>
</tr>
<tr>
<td>I, passageway</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>J, stairway</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>K, room</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>L, room</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>M, room</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>N, room</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>O, rooftop</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>P, room</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Q, stairway</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>R, room</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>S, room</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td>T, rooftop</td>
<td>29, 30</td>
<td>Spaces are separated given the</td>
</tr>
</tbody>
</table>
Figure 7.80 shows the arrangement of the nodes and their preliminary assigned functions for the British/Pakistani phase of site occupation. These spaces are similar to the spaces outlined in Figure 7.76. How these spaces relate to each other in terms of paths of movement through the structure has changed. An additional note needs to be made about the addition of another room to the British/Pakistani phase of occupation. During this phase, room 22 was formed through the erection of wood-studded walls that were in-filled with brick. This room was previously discussed in section 7.1.6.4 of this chapter, where it was labeled room K. The creation of this room also resulted in the creation of the T-shaped passageway, 17, previously described in section 7.1.6.2 as space I.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>principle of co-presence.</th>
</tr>
</thead>
<tbody>
<tr>
<td>U, landing</td>
<td>41</td>
<td></td>
</tr>
<tr>
<td>V, room</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>W, room</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>X, room</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>Y, landing</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>Z, rooftop</td>
<td>35</td>
<td>Single space, where previously two spaces. The roof is now defined by a wall.</td>
</tr>
<tr>
<td>a, landing</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>b, room</td>
<td>37</td>
<td></td>
</tr>
<tr>
<td>c, room</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td>d, landing</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>e, rooftop</td>
<td>43</td>
<td></td>
</tr>
<tr>
<td>f, stairway</td>
<td>44</td>
<td></td>
</tr>
<tr>
<td>g, rooftop</td>
<td>45</td>
<td></td>
</tr>
</tbody>
</table>
Figure 7.80 Nodes and their Assigned Functions; British/Pakistani Phase, West Gate, Gor Khuttree complex.

The resultant justified access graph of this phase of occupation in the West Gate is seen in Figure 7.81.
The basic structure of the justified access graph presented in Figure 7.81 demonstrates the further division of the West Gate spaces into less integrated spaces and path systems. The entire graph as compared to the access graph from the Sikh phase of occupation is more linear and less bush-like. Rings continue to exist within the overall system; however, numerous linear
paths of non-distributed movement also occur, caused largely by the asymmetrical alterations of paths of movement that restrict access or create larger rings of access. I believe this indicates the alteration of the relationships of these spaces to align more clearly with ideals from outside of South Asia, perhaps most heavily influenced by the ideals of spatial arrangement common in the British Empire. This can be seen in the patterns of spatial organization, assigned functional allocations, and structural interpretations.

The blocking off of doors has clearly closed paths of access that existed in the system during the Sikh occupation. These alterations are made more apparent by the consideration of the syntactic proprieties of these spaces as well as consideration of their functional interpretations as presented in the scatterplot in Figure 7.82. Like the previous scatterplots of the syntactic properties of nodes, Figure 7.82 has several patterns that immediately jump out. Clearly, the nodes are roughly aligned into two clusters. The majority occupy the left half of the graph, while a limited few, six nodes in total, occupy the extreme right side. In addition to this, most of the rooms (light blue nodes) and stairways (yellow nodes) cluster together to the left of the graph. A more detailed examination of these patterns follows.

Looking more closely at the six nodes on the right side we see a familiar pattern. These nodes include rooms 14 and 18, which are the two second story rooms residual from the Mughal phase arrangement of this gate and maintaining control of their two adherent balconies. In this iteration of the West Gate, we see that access to room 14 has been further restricted by the blocking off of both of the south side stairways to this story, thus the entire north side of the structure must be negotiated in order to access this room. As a result, space 14 exercises control of its two balcony spaces (15 and 16) but also appears more deeply integrated into the global system by the need to negotiate many other spaces along the path to it. By extension, the room represented by space 18 is seen to be more segregated by nature of occurring at a more shallow position within the system.
Figure 7.82 Gor Khuttree West Gate British/Pakistani Phase Scatterplot of Control Value vs. Real Relative Asymmetry.
Spaces 9 (the courtyard) and 1 (the exterior carrier space) are also found at this side of the graph. The courtyard is functioning as an integrated space relative to the global system that exercises control over access to neighboring spaces. The courtyard controls access to the four staircases that allow access to the second and higher floors of the system and also to the interior ground floor spaces. This space is accessible to almost any space and yet controls access to a great many spaces; this is exactly as would be anticipated for a space of gathering that is very public. Conforming to this functional role as an integrative space from which access to deeper spaces can be achieved is its shallow position in the depth of the system.

The space defined by node 17 is also included in this cluster, due again to the degree of control this space has over its neighboring spaces. This space corresponds with the T-shaped passageway that controlled access to a number of rooms as well as to stairway J that allowed access to the third floor. This space is integrated into the overall system and yet has a great deal of spatial control.

Finally, the rooftop space represented by node 29 is within this cluster. Space 29 controls access to a number of spaces. It is also a means of accessing a path that leads deeply into the structure. As a rooftop space that is accessible from the interior courtyard this space functions in a similar way to the courtyard space. Both spaces are easily accessible and provide access to a number of spaces from them. In this British period arrangement of the spaces, space 29 now has different properties than its previously symmetrical space, space 28.

The clustering of the room nodes (light blue) is familiar from the pattern observed in the Sikh phase of occupation. These nodes represent those spaces which composed Avitabile’s apartments during the Sikh phase and later became administrative offices and storage spaces. Access to these rooms was further restricted during the British/Pakistani phase by the blocking of stairway access to the south side of the gate. However, the arrangement of these spaces relative to each other remained unaltered from the Sikh occupation.

As with the stairways presented in the Sikh occupation phase, the British/Pakistani phase stairways continue to cluster together in the bottom left of the scatterplot. This continues to be interpreted as the functional component of these stairways. They are some of the most integrated and symmetrical spaces within the overall system. Yet, they have low control of their immediate neighbors, especially where a discrete landing space is adjacent to them. These landing spaces
leech the control of these stairway spaces over rooms accessed by movement through them. As with the Sikh-period occupation, stairway 44 during the British/Pakistani period lies well outside of the cluster of other stairways. This again occurs as a result of stairway 44 being the only unpaired stairway in the structure that controls access to the deepest space in the system (roof space 45).

7.3 Architectural Interpretations: Spatial Alterations over Time.

I began this chapter by outlining the results of the 2006-2007 field survey of the Gor Khuttree complex. This detailed survey demonstrates the level of data that can be recorded through an intensive survey strategy. What was revealed was an architectural palimpsest. Many portions of the Gor Khuttree complex show a layering of architectural elements, their variable adaptations, and replacements. Fine-grained analysis has revealed that certain locations were extensively used and reused in the periods following their construction. This was not unique to the Mughal-period architectural elements as reuse of subsequent period structures was also apparent. The pattern of spatial organization established by the Mughal serai was realigned over time to suit the needs of the subsequent users of the site. It was however, not forgotten and lies just below the surface, still detectable through careful observation. The spatial map from the Mughal period is read by subsequent site users and mapped onto them in their own uses of the place. I explore this further in chapter eight’s consideration of the roles of places in forming memory associations and adaptable identities.

The presented survey data has revealed a number of architectural styles that can be roughly assigned to occupation periods at the site. These assignments are based not only on the element’s construction materials, but also on their style and their incorporation into the surrounding architectural fabric. These are not “types”. They are not directly transferable to additional survey sites. The general patterns and architectural tendencies can and should be considered at additional surveyed locations; however, it is not sufficient to say that a staircase similar to the Sikh staircases at Gor Khuttree is definitively a Sikh construction at another site. It may be, but further consideration of the history of occupation and the context of the element will be required for such associations to be valid.

In this vein, this research has demonstrated the need for caution when assigning periods of construction by associated brick type. Time and again in the survey of the Gor Khuttree
complex it was apparent that brick scavenging and reuse was, and continues to be, a common practice in South Asia. This means that bricks can only offer a potential date of construction. For example, the Mughal elements at the site are constructed of Mughal waziri brick in lime-mortar. They do not use or inter-mix earlier brick forms and thus we can feel somewhat certain that the earliest date of construction for these elements was during the Mughal period. However, in the Sikh period we see new architectural elements emerging on the site constructed from Mughal-brick though often with a mud mortar. These new elements if dated by brick alone would be assigned to the Mughal period. To complicate this matter further we see that the Sikh period also makes limited use of more recent looking bricks (post-Mughal) and the British period which follows uses a combination of brick types from all time periods. As stated previously, bricks offer clues about dates of construction but they must be considered in relation to the context of the architectural element, its incorporation into the surrounding elements, and the style and execution of its construction.

The general architectural patterns by period of construction, material choice, and architectural style for the site Gor Khuttree are presented in Table 7.5. The overall impressions of the periods of architecture apparent at the site, an admittedly subjective position, follow some general trends as well. The Mughal period involves the complex use of brick. Brick is used exclusively in this construction phase and is laid with a high level of skill and refinement. Ceilings are elaborated with edge-laid-brick domes or edge-laid bricks in the teardrop pattern seen in both the East and West Gates. There is no evidence of trussing or internal reinforcement of these brick structures at the site. They are of solid construction and required planning in their execution. No Mughal element appears as an independent construction; rather, all aspects of the serai are woven into each other, with ceilings flowing into walls and stairways defining storage spaces below them. The Mughal serai is conceived and constructed as a whole, not as a series of component parts connected superficially after erection.

The Sikh period alterations which survive at the site are in many cases fully incorporated into the Mughal structure. The integration of the Mughal parapet wall into the Sikh second floor expansion of the West Gate is one example of the seamless melding of forms (section 7.1.7.2). When plaster was applied, during the Sikh period, many of the changes would have blended almost unrecognizably into the Mughal form. The Sikh stairs constructed in the courtyard of the serai (see sections 7.1.5.5 and 7.1.9.1) do block access to the Mughal-period cells behind them;
however, I believe that this too would have appeared more seamless in its incorporation once plaster was applied over these structures.

The British and Pakistani period constructions that survive at the site appear the most architecturally intrusive. This impression reflects a number of factors. The site was used for a number of activities in these periods. Though most had an administrative or bureaucratic function the alterations these uses afforded to the site were not executed to move the site toward a collective vision of its use. It is more likely that the site was altered or tweaked throughout the period with few major episodes of construction, resulting in the structures surveyed in this research that can seem haphazard in their construction and maintenance. The modern restoration of the site ongoing during the 2007 survey forms another component of the Pakistani use of the site (further discussed in section 8.1.4). Some interpretations about the life history of the place Gor Khuttree will be presented in chapter eight along with consideration of the phases of use that have occurred there. I now turn to discussion and comparison of the results of the spatial analysis and modeling from all phases of site occupation.
<table>
<thead>
<tr>
<th>Architectural Element</th>
<th>Mughal</th>
<th>Sikh/Durrani</th>
<th>British/Pakistani</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walls</td>
<td>Brick construction.</td>
<td>Brick construction with limited use of wood.</td>
<td>Wooden studs filled with brick, limited all-brick construction.</td>
</tr>
<tr>
<td>Ceilings</td>
<td>Edge laid brick used in domes or patterned coves.</td>
<td>Some are coved, others of wooden beams and interwoven matting.</td>
<td>Metal girders covered with cement mortared brick as well as wooden beams with interwoven matting.</td>
</tr>
<tr>
<td>Stairways</td>
<td>Straight and narrow <em>waziri</em> brick stairs with a steep rise.</td>
<td>Wider stairs with a more-gentle rise, mixed brick construction, and some use of wood. Doglegs common to break a steep rise.</td>
<td>Narrower than the Sikh-period stairs, mixed brick construction, concrete capping, and often straight with a steep rise.</td>
</tr>
<tr>
<td>Niches</td>
<td>Arched and shallow.</td>
<td>Arched and shallow</td>
<td>Deeper, rectangular cupboards with doors and shelves.</td>
</tr>
</tbody>
</table>
7.3.1 Comparison of Phased Spatial Analysis

In the analysis of space arrangement and use such as that undertaken in this research it at times seems the conclusions to be drawn about the function and arrangement of spaces are already apparent. As Fairclough (1992:350) has stated “(t)here can be a tendency to suggest that rigorous analysis of space is less suited to buildings of more recent date, because, paradoxically, their better survival and associated documents are taken to suggest that meaning and significance are self evident”. However, this self evidence does not detract from the value of the analysis, but instead speaks to the strengths of such analytical approaches. The functions known for the spaces within the gate systems of the Gor Khuttree complex only further the interpretative value of the syntactic analysis of these spaces. The consideration of changes in the function and arrangement of these spaces over time aids in our understandings of how the place Gor Khuttree was able to be reoccupied and altered such that it served a host of functions (see chapter eight). Gor Khuttree is a test case demonstrating the value and accuracy of syntactic analysis.

The analysis of the phased occupation of the Gor Khuttree complex can be considered in terms of the renegotiation of spaces and their functional arrangement. The pattern observed in the Mughal period is the base onto which subsequent occupations scripted their actions. Looking specifically at the gate systems, the Mughal gates were structures that incorporated participants into the production of caravanserai life. Individuals entering the serai would have been directed along the central passageway where they would have interacted with the persons administering the use of the serai. They then would have come into the general courtyard, bustling as it likely was with the persons and vestments of travel and trade. There they would occupy one of multiple equally-accessible cells. These cells re-emphasized the inclusive and integrating function of the serai spaces.

The degree to which the gate systems were accessible to all persons cannot be directly determined. Certainly, doorways could have barred entrance to the interior stairways or, likewise, doors might have blocked access to the upper first story rooms. From what we know about general caravanserai arrangements from historic records, we can reasonably suggest that the first and ground floor rooms of the gates were reserved for use by the administrative officials of the serai or served as areas where important guests would be housed. Either of these functions aligns with the syntaxes of these spaces, segregated from the global gate pattern and exercising control over the spaces to which they grant access. The value of the first floor rooms should not
be understated, as it was from here that those approaching the serai and those within the courtyard were observed. Many of the first floor rooms were also spaces from which the negotiations of payment and passage to the interior of the serai could be overseen, if not directly participated in.

I develop an understanding of the integration, within the serai, of inhabitants and transient occupants from the Mughal arranged gate system. The specific uses of the Gor Khuttree Serai are defined by its individual spaces, but are also reinforced by the replication of similar syntactic arrangements in serais across the sub-continent. Thus, there is an administrative and utilitarian ubiquity to these places. Serais are ‘read’ both from their form and from their function; the anticipated and understood suite of activities and resources they are expected to house. Visitors to Gor Khuttree Serai during the Mughal period, who were temporary occupants by definition, were in many ways the ones whose activities informed the arrangement of the serai spaces. Serais are intended to provide for their users, and thus the gate systems, administrative in function, serve to screen the users of the serai before they moved into open and integrated courtyard and cell spaces. These gates also separated, and perhaps to some degree protected, those persons who occupied the serai more permanently, the administration.

The occupation of the Gor Khuttree complex during the Sikh period resulted in the elaboration and expansion of the West Gate’s spatial system in particular. This expansion served to house the governor’s apartments and some of his administrative offices. The elaboration of the gate syntactically seems to honor the pre-existing spatial arrangements. The integrated and “ringy” nature of the global system offered various means of access and resulted in limited control of specific spaces. As previously discussed, the suite of rooms that housed the private apartments of Avitabile and his entourage existed in a position of some depth. Access to these rooms was, almost certainly, further controlled by doorways. The landing areas outside the entrances to these household spaces (nodes 42 and 33, Figures 7.76 and 7.83) suggest an area of control, where individuals might present themselves for consideration or prepare themselves to be admitted to the more central rooms.
Figure 7.83 Justified Access Graphs for the West Gate, Gor Khuttree complex, for each occupation phase; A the Mughal Phase; B the Sikh Phase and; C the British/Pakistani Phase.
The access graph reveals that the spatial arrangement of the West Gate complex during the Sikh Phase of occupation closely resembles the arrangement in the Mughal Phase’s West Gate system, even though the number of spaces has greatly increased (Figure 7.83). Both arrangements are based on interconnected rings of access that reflect their underlying symmetrical architectural formations. This may reflect several possible decisions regarding the West Gate Sikh period construction and the resultant spatial arrangement, none of which are exclusive as an explanation. First, the persons contracted to oversee the expansion of this gate were likely local workers, and thus would have been familiar with the local conventions of architectural construction. This is not to suggest they had direct knowledge of the imperial construction of the AD 1640 Mughal serai, but that they would have had a phenomenological understanding of how Mughal structures were arranged; knowledge founded in their local experiences of such structures and, possibly, of having frequented such structures in their own travels. Along with this indigenous knowledge, the pre-existing layout of the Mughal gate certainly would have encouraged that the alterations be made to fit into the preexisting style and spatial patterning. Second, Avitabile’s decision to occupy the caravanserai can be interpreted as a decision to live amongst the people over whom he governed. As a result, he may himself have requested to have the alterations made in such a way as to remain inline with the pre-existing arrangement of architectural spaces. In furtherance of this possibility is the knowledge that Avitabile adopted a local retinue, had a Pathani partner, was familiar with the local customs and spatial practices, and if the records are to be believed, kept a daughter in a courtyard apartment (Calcutta Review 1846:247). These practices were, of course, not identical to those of the Mughal elite; however, the basic principles of male-female separation as well as hosting and entertaining elite guests would have carried over.

The spaces defined by his apartments feed back onto each other; each room has more than one way to exit or enter. This echoes patterns of movement in houses where servants or, in some cases, women need to be able to gain access to or remove themselves from certain spaces without being noticed. If this can be assigned some interpretive value in the South Asian context, it can be suggested that the arrangement of Avitabile’s apartments speaks to the arrangement of spaces within South Asia for the accommodation of caste, gender, and occupations which be required of an administrative entourage. Based on the records of the appearance of the West Gate during the Sikh occupation phase, the entire structure was covered with locally inspired decoration and was often visited by dancers as well as members of
Avitabile’s *harem* including his daughter and wife, who were acknowledged as existing, although kept out of view of strangers and guests (Barr 1889[1839-1842]:142-143; Calcutta Review1846:247). Avitabile’s servants; such as cooks, personal guards, and military personal, would also have needed access to these spaces.

The elaboration of the West Gate during the Sikh Phase of occupation heightens the dominance of this gate in the entire Gor Khuttree system. The serai in the service of the traveler and mnemonic to Mughal authority (including some degree of piety) was replaced with the serai as an administrative element and as a private residence. It was then used more as a stage for the performance of individual governance involving both the daily tasks of a governor as well as the display of power through the hosting of social events for invited guests. It was a space that was open to visitors and yet maintained a divide about which spaces individuals could access and which locations were meant to house power and control. We see a shift in the previously symmetrical layout of the site, with the elaboration of the West Gate into a “mansion house” (Barr 1889[1839-1842]:143-144) while the East Gate remains largely unaltered as, “the gateway”. Yet when looking at the gates as independent elements there is a relative maintenance of symmetry. The more elaborate arrangement of spaces in the West Gate continues to echo a Mughal symmetrical esthetic. The implication of this symmetry maintenance is revisited in chapter eight in the discussion of place use and reuse vis-a-vis identity and memory formation and the legitimization of rule.

The British and then Pakistani period occupations and alterations of the site modified the arrangement of space established in the Sikh period. The resultant patterns of spatial arrangement and the specific properties of spaces within the West Gate system seen in this period are not the result of new construction but rather the movement of doors. The importance of access in defining spatial functions and cultural meanings is emphasized in the comparison of the justified access graph of the last occupation phase, British/Pakistani, with the graphs of the Sikh and Mughal occupation phases (Figure 7.83).

The re-ordering of spaces through the restructuring of paths of movement resulted in a spatial pattern that suggests increasing segregation of spaces and controlled access to certain areas of the structure. This is suggestive of the further movement of the West Gate structure from one housing transients as well as permanent residents and staff (travelers in the Mughal period, guests and military personal in the Sikh period) to one emphasizing the separation of
administrative power and control. Furthermore, the use of the West Gate by the British as an administrative space, a *tehsil* office, transformed this space from one which was continuously occupied (by administrators and residents in both the Mughal and Sikh periods) to one occupied during set hours. The West Gate became an office building occupied for prescribed tasks and then vacated at the end of each day. The British arranged the spaces within this office setting as they were used to experiencing them, with power sequestered. Control and status prescriptions were spatially reinforced by the separation of private spaces from public spaces, with certain spaces acting to control passage to the deepest portions of the structure. To the British sensibility, the organization of the Sikh Governors administrative offices must have seen convoluted and unfocused. By the simple removal of points of access and points of exposure, through the blocking of doorways, the British were able to remake the existing spaces to align with their cultural constructs of access and the spatial placement of power. Also, the varying uses of the site during the British period are emphasized in how the space was divided into a number of functional areas: the *tehsil* office, the mission house and hospital, the Police and Fire Brigade, etc. The complex was no longer unified in purpose.

Why did the Pakistani occupation of the site continue in this way? The closed doors could easily have been opened, the spaces reintegrated into the whole. That this did not happen may be a result of the continued use of the site for multiple functions, including as a store house and *tehsil* office. These uses reflect administrative functions established during colonial rule that require the separation of spaces. As I elaborate in section 8.14 this site-use reflects an alternate strategy of spatial reuse, one that seeks to develop specific memory associations and foster certain shared identities. In chapter eight, I return the analyses presented in this chapter to the theoretical considerations presented in chapter two. I also draw together the methodologies applied in this research and outline the directions these methodologies will take in the future.
Chapter 8  Spaces, Places, Meanings, and Memory

The culmination of the research presented in the preceding chapters allows a final focus in this chapter on how and why certain places are occupied, reoccupied, abandoned, or curated through time. I began this thesis by laying out a number of theoretical approaches to the study of the built environment. Building on Knapp and Ashmore (1999), I developed three concepts of place to assist my consideration of how structures, their functions, and forms may be used in memory creation and identity formation: places formed, places in practice, and places in memory. I have also, throughout this dissertation, kept Kostof’s (1985) architectural premises regarding oneness, setting, community, and meaning in mind when recording, analyzing, and interpreting architecture and architectural places. Methodologically, this research has set in motion a system of architectural survey and analyses that will be expanded on and strengthened through future research. These approaches to survey and the contingent spatial analyses are a move toward the study of the life histories of built places (Ashmore 2002). Simple typological categories of structures, though useful as static architectural assignments or as studies of large-scale landscape patterns, fail to acknowledge the many engagements of occupied spaces in the life history of a place.

The example of the place Gor Khuttree and its various phases of occupation will be used in this chapter to structure interpretations about the meanings of places, the ongoing construction of group identity through the formation of memory, and the manipulation of historic legitimization. This chapter acknowledges the need for further architectural work on caravanserais, to strengthen the architectural interpretations that can be drawn once we have an increasingly robust comparative body. It also returns the discussion of caravanserais and specifically the space and place Gor Khuttree to the theoretical ideas introduced in chapter two about our ways of “knowing” spaces and assigning meanings and values to them, while also constructing identity and memory through them. I extend these concepts to look at architectural spaces as they contribute to formations of nationalism, post-colonialism, identity, and social memory, and how they can be seen as agents of power negotiation and legitimization. Architecture is human action, interpretation, reproduction, and alteration, and its study is necessarily an attempt at reconstructing these levels of engagement. This research has demonstrated that such reconstructions are valuable, as through detailed analyses of past
occupations we can move toward a more comprehensive understanding of why heritage sites and the histories presented through them are so valuable today.

8.1 The Reoccupation of Space and Place

I begin by outlining the reoccupation of the place Gor Khuttree. These reoccupations are considered through the memories and identities presented at the site during each occupation phase. I move from these historic phases to the present phase of occupation where I consider the role that archaeology can and does play in identity formation. Particularly, I focus on how nationalism shapes identity and fosters a shared sense of national identity (section 2.1). I complete this phased review by summarizing the impacts of the life history of the place Gor Khuttree on the host of activities that have occurred there. Following this, I consider the contribution of expedient architectural surveys alongside intensive forms of architectural analyses to more comprehensive approaches to structures in the past. Architectural research can happen on a number of levels and can speak to a number of archaeological research questions. I conclude this chapter with a consideration of future research directions and future research questions. I address how this research will continue and what gains can be expected from the application of the methodologies outlined and demonstrated effective in this dissertation as a means of understanding a cacophony of voices speaking from places in the past.

8.1.1 The Mughal Period

When the history of the place Gor Khuttree begins we do not yet know, but we do know (see chapter four) that it has long hosted activities and housed actions. I begin the consideration of the occupation and reoccupation of Gor Khuttree and its participation in processes of identity formation with the erection of the Mughal imperial caravanserais that has been central to my research, although I acknowledge that the choice to erect this structure at this location was likely anchored in the occupations that came before it. As locations along travel networks, caravanserais represent economic prosperity and encouraged the trade that sustained the Mughal Empire and the city of Peshawar for centuries (Richards 2000:50, 110). I suggest that control of this imperial serai space thus came to symbolize the control of and support for the economic
strength and growth of the region. Serai maintenance and prosperity would then also become an important indicator of the stability of the region in the Mughal period.

The military strength of the Mughal Empire was centered in its mobility. The identity of the empire was housed in the emperor directly and in the location of his mobile camp (Richards 2000:12, Sinopoli 1994). Sinopoli (1994) has suggested that the emperor’s mobile camp provided a connection to the ruler and allowed his patrons to see his authority as it moved across the landscape. Many patrons would never travel to the emperor’s capital and thus the recollection of the emperor as an effective leader omnipresent on the landscape was fostered in the mobility of the emperor directly and in the architectural vestiges of his imperial control. Asher (1992:98) has noted that in the “expanding Mughal Empire, architecture increasingly served as a symbol of Mughal presence”. Like the mobile court, the imperial caravanserai was an object of the monumental vernacular meant to reference an often unseen imperial leader and system of rule. Caravanserais were public structures that facilitated economic and personal travel and also drew travelers into an economic system that strengthened the tax-based imperial system of regional governorship (Hasan 2004:110-125). Serais demonstrated the stability granted by the empire and underscored the value of the imperial body in ensuring safe passage throughout the empire. The use of architecture to legitimize rule and to create associations to imperial control through places was an important component of Mughal rule and an architectural theme of some importance in the reoccupation of places over time. Caravanserais can be seen as mnemonics of Mughal imperial control and economic strength. Caravanserais are also active arenas of social engagement and exchange.

The serai was an economically and politically powerful arena. The mixing of people within sernais could result in the exchange of knowledge and the formation of new economic and political alliances. Their courtyards were filled with travelers from various places seeking to create trade relationships and to perhaps augment their social standing and class. The arrangement of spaces within the serai meant that users were encouraged to interact within the courtyard itself. The cells along the courtyard walls provided similar accommodations to most visitors. These cells would downplay any status differences between most serai users. Those persons who required more elaborate accommodations may have stayed within the gate or bastion spaces that were nominally removed from the courtyard environment.
Trade and interaction is an agent of transmission for economic, political, social, and religious information. Thus, serais, although underscoring the imperial strength, were also spaces of vulnerability to the empire. To address this vulnerability, administrators were likely charged with overseeing the courtyard spaces and tasked with ensuring that those persons using these facilities were not acting against the overarching system (Kumar 1978:464-472). Serais projected imperial authority and identity, but this projection could also be challenged by the individuals who made use of such structures. Caravans were not only susceptible to attack while travelling, but also when sharing accommodation in a caravanserai. These places required some degree of administrative control and this control was likely centered in the administrative spaces within the gate system.

When the Gor Khuttree Serai was constructed, becoming a place in form, it ensured that traders coming through the Khyber Pass from Afghanistan and Persia would stop at this location and be integrated into the Mughal economic system, the place in practice. There was critical need to house and integrate these travelers. By maintaining a safe passage for travelers, the Mughal rulers were able to stabilize a long-turbulent region of the empire, one that functioned as the gateway to the great Mughal domain (Richards 2000:50). Additional non-imperial Mughal serai constructions historically known from Mughal-period Peshawar (Raverty 1852:23) only further demonstrate the importance of this city along the Grand Trunk Road. The physical location of Gor Khuttree Serai was also an important aspect of its integrative abilities. Caravans entering or leaving the Peshawar Valley followed the Grand Trunk Road, which ran along the exterior of the city rather than directly through it. Thus, if the imperial serai at Gor Khuttree was able to draw travelers into the city, it was more likely they engaged with the local economy.

Although serving a mostly economic function, the serai at Gor Khuttree was also a pious endowment. It became a place in the practice of religious veneration, as well as a place in the collective memory as a reference to its commissioner. Jaffer (1945:104) says Jahan Ara ordered its construction for “the comfort and convenience of Muslim travelers”. She also established a waqf (endowment) for the maintenance of the serai and the mosque constructed within, to pay for the upkeep as well as for the required servants and administrators. The farman (viewed by Jaffer 1945:106-107), affirmed that Mughal government officials in Peshawar were to keep “the Serai and its appurtenances immune from official interference and encroachments at the hands of aliens”. This statement underlines the value of the structure and the concern that it might fail
into or under the control of those outside of the Mughal domain (perhaps the Afghan kings who continued to threaten the control of the region).

The form of the Mughal Gor Khuttree Caravanserai is recurrent within the greater corpus of Mughal serais. The setting of this place within the landscape, however, individualized it. Gor Khuttree Serai became a destination; a formed place on a landscape of travel. Places formed become places in practice and through these practices become places in memory. This tripartite conceptualization allows the multiple functions of the Gor Khuttree Caravanserai and the multiplicity of purposes found there by its patrons. The place Gor Khuttree was reformed during the Sikh occupation, when it was used to house the Sikh governor and contain the practices of governorship, and it eventually developed new memory and identity associations relative to the practices which transpired there. “Human bodies, moving within a place or between places, animate and impute meaning to them through experience and perception, and in turn take away seemingly natural images of social or cosmological order from the structure of their movement in the place or landscape” (Richards 1999:83-84).

The movements of people for economic, political, and religious purposes are often tied to individual perceptions of who they are; their non-tangible relationships and experiences. The functional role of the Gor Khuttree Serai involves both individual conceptions of the place as well as their experiences within that place as structured by the power and authority expressed in imperial architecture. Seen another way, individual users of the Mughal serai would develop memories of this place on two levels. The first level involves short term individual memories that structure an identity of selfhood and would not extend beyond the individual. The second level involves collective memories formed perhaps unconsciously and habituating the association of the serai with a Mughal identity and legitimation of rule. Serais provide users with a sense of identity that relates to their mnemonic forms. “People recognize, inscribe, and collectively maintain certain places or regions in ritual, symbolic, or ceremonial terms; conversely, these places create and express sociocultural identity” (Knapp and Ashmore 1999:14-15). The Mughal Gor Khuttree Serai as an imperial vestige represents the Mughal Empire; it is a symbol of the trade and travel it encouraged and in turn was sustained by.

Figure 8.1 shows the hypothesized arrangement of the Mughal Gor Khuttree Serai based on the historical documents reviewed in section 4.3.2.3 and further informed by the architectural
survey of the site from section 7.1. As mentioned previously, this serai was not constructed in an empty landscape. The historical linkages vested in this place prior to the Mughal Serai construction cannot be addressed currently, though future excavations and additional historic research may reveal more nuanced motivations for serai construction in this location. What suffices for now is that this imperial construction occupied a place in an active landscape, where it hosted specific practices and likely served as a memory aid for the strength of the empire and the economic and travel systems that empire provided. This place, the Mughal Gor Khuttree Caravanserai, in form, practice, and memory is the one onto which the Sikh occupation scripted its own occupation, resultant actions, and memory associations.
8.1.2 The Sikh Period

Though Peshawar was not held by General Avitabile and the Sikhs for long, the occupation of the Gor Khuttree Serai allowed Avitabile a central position from which to govern within the city of Peshawar. When Avitabile became governor, he took the opportunity to occupy Gor Khuttree as a defensible location in the heart of the Old City and a place from which he could oversee the requirements of his post, both administrative and social. I add to this that his occupation of this structure would have helped to legitimize his rule as he controlled a core symbol of the city’s economic strength, and its vestige of imperial power, remembering that at this time Bala Hisar Fort located on the city’s edge was in a state of disrepair and thus an
unlikely location for immediate occupation. Having spent time at Avitabile’s West Gate mansion house sometime between AD 1839 and 1842, Barr (1889[1832-1849]:143) gives his own commentary on why Avitabile may have chosen to occupy the city center:

[T]he place is easily converted into a fortified situation, capable of containing a large garrison, and of affording strenuous resistance in case of a siege. In choosing a place of residence, amongst the undisciplined population committed to his government, Avitabile was doubtless swayed by these considerations; and should the Afghans at any future period endeavor to cast off the yoke of their conquerors, he would, if such were necessary, easily be enabled to hold this position until succor arrived from the Punjab. Independent of the caravanserai being erected on elevated ground, the General’s mansion is raised to the height of three stories, thus completely commanding the city…

As this passage illustrates, the benefits of living in the city center within a defensible location were likely of importance to Avitabile who could have faced a mutiny at any time.

Initially, Avitabile’s administrative power was also displayed and legitimized through the reoccupation of a dynamic symbol of Mughal rule and control. Not only would the people of Peshawar have been aware of this symbol of control, but so too would travelers who continued to frequent the city, though the specific visitors to the serai would have been increasingly restricted to invited military guests. The Pathans, who historically occupied the spaces outside the city of Peshawar and had repeatedly challenged the Mughal right to rule the region, would have also seen the occupation of this location by Avitabile as a link to the previous period of rule. In the city, Avitabile was surrounding himself with the most diverse portion of the population in the region, which, although dominated by the Muslim community, also had strong Hindu and growing Sikh components (Syed 1980:582). These were the people Avitabile governed most directly and who immediately felt his authority as he extracted taxes and distributed punishments to them and to the surrounding tribal groups who frequented the city. The visits of many European travelers to the serai are summarized by Grey (1982:131-137). Their reports all mention the control that Avitabile was able to exert over the citizens of Peshawar from this central position, a position that highlighted his civic, economic, and judiciary roles in the city.

Gor Khuttree as a place formed was altered during Avitabile’s tenure (chapter seven). These alterations allowed for new spatial practices and eventually allowed the place to have new memory associations. Some of these associations survived into the subsequent periods of
occupation. Avitabile’s alterations to the site have been outlined in chapters four and seven and an overview of Avitabile’s approach to governorship was provided in section 4.3.2.5. It is this approach to rule that I return to now in order to suggest how these actions and practices shaped the memories associated with the site following Avitabile’s departure and further developed the complex identity of Gor Khuttree.

Avitabile’s style of rule relied greatly on the performance of punishment. Individuals were not only punished but made into public spectacles. Therefore, this location in the center of the city provided Avitabile an immediate audience for his performance of authority. Gibbets were placed all around the caravanserai and, at any given time, the dead and dying might be observed in the serai courtyard (Grey 1982:131-133). An additional example of Avitabile using his central locale as a stage for public spectacle and gruesome performance is presented in a letter by the British Political Assistant at Peshawar, dated March 26th, AD 1841. Cited in Greg (1982:133):

Some other Peshawaris who also proved obdurate to a fine were dealt with by being tied together and a wall built round them leaving no space within which to move. Each day they were asked to pay, and on still refusing, a few more courses were added to the erection. Yet, though without either water or food, they held out for six days, until the crowning arch had begun to close upon them, before surrendering. Meanwhile, on the third day one of them had died, the others being compelled to keep the rotting body upright in their midst. Naturally, when they were brought before Avitabile, the stench from the garments of the survivors was so dreadful the he ordered them to be instantly removed and buried to the neck in fresh soil, to “sweeten them up”.

Avitabile seemed to delight in the macabre, and Wilton (1848:368) observed during his visit to Gor Khuttree that a gallows had been erected across from Avitabile’s personal bedroom from which 18 persons were hanging.

Avitabile’s practice of governance within the place Gor Khuttree operated at two levels. The first is the performance of rule involving the surrounding populace, where he took the role of judge, jury, and executioner. As outlined in section 4.3.2.5, it is clear that the local people respected Avitabile and his approach to justice. He was perceived as fair, but also exceedingly demonstrative with public punishments, ensuring all understood the suffering that faced wrongdoers. In this way, he was able to establish a certain degree respect for himself from the people he governed.
The second level of his performance of Governorship was his role as a host to military officers and facilitator of British operations in the Khyber. The struggle to define Avitabile’s character evident in the records of British officers who spent time with him at Gor Khuttree arises from their difficulty in reconciling his apparent barbarous acts of punishment with his generous and gracious acts as host, entertainer, and facilitator. Avitabile was an exceptional host, offering accommodations to numerous officials and extending dinner and entertainment invitations to scores of officers. An unnamed German officer in the service of the East India Company notes that Avitabile lived in a fort within which he had:

the haudsomest Indian residence I have seen in all the country. His apartments are fitted with splendid carpets; the walls beautifully painted in the Indian style, and garnished all around with rows of fresh orange-trees: now and then a musical box or clock tickles the ear; and the whole mansion smacks of an Asiatic luxuriousness, to which we, camp followers, are utter strangers (The United Service Magazine 1842:587).

Atkinson (1842:384), a British Officer and guest of Avitabile, noted that “on every occasion his table has been crowded with guests, and, according to oriental custom, the sumptuous entertainments always concluded with a grand nautch, his figurante-company of Cashmeer women consisting of about thirty, singers and dancers, from the age of twelve to twenty-five”. This hospitality included having between 80 and 180 persons dining at his house during any British military visit to Peshawar (Allen’s Indian Mail 1852:175).

Avitabile’s hospitality and its extension to the British likely had several motivations. He was at the end of his tenure in Peshawar very much interested in leaving India and returning to Italy. Winning favor with the British was likely a strategy to facilitate this movement. It is also likely that Avitable, a foreigner himself, had some affinity for the British and enjoyed their company. He was in all accounts a consummate entertainer with a large personality and domineering spirit, hosting several balls, dinners, and hunts for British visitors (Wilton 1848:367). It is also known that Avitable did not host the British entirely out of a sense of charity or social obligation. He was able to earn a significant amount of money by providing loans to the British military and in arranging for their provisions and safe passage to Jamrud and beyond (Wilton 1848:367).

Ultimately, the British refused to aid Avitabile in leaving his post in Peshawar, as they saw him as valuable in maintaining order between the Sikhs, Afghans, and Pathans and in
stopping any combination of these factions from uniting and staging a revolt. When Avitabile did finally leave South Asia, he received a number of military honors. He was also formally acknowledged by the East India Company in AD 1846, with the gift of a gold-enameled sabre (Allen’s India Mail 1852[1846]:175). This was a token of their appreciation for his assistance to British troops on military operations in Afghanistan, and his hospitality to their officers while Governor of Peshawar.

Through Avitabile’s occupation and his various practices as Governor, the place Gor Khuttree was again altered as a place in form, practice, and memory. It was re-formed by the addition of rooms and structures; it was assigned new spatial practices; and by the end of Avitabile’s tenure, it had assumed new memory associations and a new identity as a place of control. The Mughal identity at the site as a referent to imperial absentee power was replaced by the identity or memory of the site and of those who controlled it, with the actualized performance of rule. The site and its users’ identities were now attached to specific stories; memories tied directly to the place that had contained them. The spatial patterning of the site was defined by symmetrical West Gate expansion during this period. Mapping onto the patterns of spatial use established in the Mughal serai, Avitabile transformed the place formed to serve as an administrative center and domestic locale that both accommodated and entertained. Figure 8.2 shows the hypothesized arrangement of Gor Khuttree during Avitabile’s control of the site. Again, this period of occupation shows the hypothesized placement of numerous elements as suggested by the historic documents, architectural survey, and excavation findings. Symmetrical balance within specific features of the site persists. The West Gate maintained internal symmetry; however, overall site symmetry began to be broken in this period. The West and East Gate, though mirrored in location, are no longer mirrors in form, practice, or memory. The dynamics of the site are altered during the Sikh period and these alterations affect the memories and identities expressed through the site into the British period.
Figure 8.2 The hypothesized form of the Sikh occupation of Gor Khuttree. The placement of the hammam, the store houses, go downs, parade grounds, and flower gardens are based on the historic and structural information reviewed in the study of this site.

8.1.3 British Period

The transition from regionalized forms of rule to a more or less unified British India is a complicated and oft-studied part of the history of the sub-continent. I do not attempt here to review the enormous body of work on this transition, but before delving into the reoccupation of the place Gor Khuttree by the British, I will address the general approach taken by the British to Mughal and other local architectural traditions across the sub-continent. This offers an additional context through which to consider the architecture of this transition period and the way that places within the built environment were adapted to British control.

After the takeover of much of the northern sub-continent by the British East India Company in AD 1803, we see variable attitudes toward existing Mughal, regional, and pre-
Mughal architecture. It has been argued (Nath 1989:8-20) that the East India Company established a policy to destroy medieval monuments in order to remove from the collective consciousness any referent to the past power and strength of earlier empires. I have examined Nath’s arguments for this and suggest that, although there was a need to present the British government in a favorable and powerful light, this was accomplished through multiple means including both destruction of Mughal monuments but also their continued use, reuse, and veneration. The reasons for these variable approaches need to be considered within the larger practices of empire and relative to the value of specific monuments’ monumentality: the structure’s intended meaning, its perception by both British and ‘native’ residents, and finally the ease with which it could be converted to serve new purposes.

Imperial conquest is often accompanied by efforts to rebuild existing cities and towns and renegotiate monuments and their meanings (Hodder 1982; Shanks and Tilley 1982; Shennan 1982). Thus, it is not unique to the British takeover of the sub-continent that some degree of destruction and rebuilding occurred. The alterations seen in the pre-Mughal through Sikh occupations at Gor Khuttree are examples of this. I would argue that the reuse of these places was a result of the needs of the incoming authority to appropriate past symbols of power and reinterpret them within their own system of social and spatial order. These places can then serve as representations of the modernization and incorporation of the past system, borrowing from the past power system and improving on it. The appropriation of place and reinterpretation of space does not inevitably replace historic meanings, but it does transform them to make previous meanings relevant within the new system of control. The British were not entirely replacing the Mughal, or in the case of Gor Khuttree, Mughal-cum-Sikh places; instead they continued to use them. Research on similar acts of reinterpretation and appropriation can be seen in the work of Swenson (2003) in the Andes as well as King’s (2009) study of the Norwich merchant’s houses as appropriated symbols of power for identity formation.

Many monuments and Mughal structures were sold and destroyed under the British rule and some of this destruction was likely spurred by the need to publically destroy Mughal vestiges, but some was also likely inspired by the need for land, space, and bricks. Examples of the destruction of monuments for materials is evident in the explosion by gunpowder of the tomb of Jodhabai, the queen of Shah Jahan and mother of Jahangir, for the scavenging of the stone and brick (Nath 1989). Again this is not a new phenomenon in the history of shifting
power control and is preceded in India by the reuse of Buddhist and Hindu materials in the construction of early Mughal and earlier Islamic-period structures (Thapar 1960, Wink 1999). The site of Gor Khuttree has demonstrated that the reuse and scavenging of brick continues even today.

Dar (1999:109) suggests that when control of the sub-continent passed to the British in AD 1849, a renewed life was given to the infrastructure for transit. Whatever may have been happening in the larger city centers, the British generally came to protect and support the system of caravanserais that allowed easy travel across their new lands, especially for the military. This resurgence in support for existing travel amenities was short-lived as the “new rulers re-aligned the G.T. Road, widened it and improved its services by building more bridges…shifted [it] a bit southward…[then] many old and important caravanserais and historical towns falling on the older routes lost their business and went out of history” (Dar 1999:109). Those serais that remained on the shifted route continued to be used for some time, but eventually even this system broke down as local bodies opened their own rest houses and *dak* bungalows to serve the British traveler (Dar 1999:110). Pakka Khanpur Serai is an example of an alternative course in the life history of a structure to that of Gor Khuttree Serai. Pakka Khanpur was left off of the main highway after the route shifted and as a result was abandoned over time and transformed to house a rural village. Many serais, at least initially, represented a kind of architecture that was valuable to the British; they were able to make use of these structures to serve their government and military goals. Prior to its abandonment, Pakka Khanpur Serai was also used as a modified fort and military station (Allen’s Indian Mail 1852:158). During the Anglo-Sikh wars, many serais were used by British as well as Sikh servicemen as modified fortification spaces. Those serais that the British could not use were commonly allowed to fall into disrepair. Again, Pakka Khanpur Serai is an example of this, as are numerous other surviving rural serais found in the sub-continent. Left off of routes, they were reinterpreted by local peoples, often to house villages, and they deteriorated as imperial vestiges and identity referents.

Returning to Gor Khuttree, we need to consider what the site offered to the British both in the structures found there (Figure 8.2) and in the memories and identities associated with the place. The memories of Gor Khuttree that were established during Sikh rule would likely have been powerful associations for the people of Peshawar. As the British slowly came to take control over the region they also came to occupy the seat of Avitabile’s power. Like the Sikhs
before them, the British altered portions of the serai to suit their purposes (see Figure 8.3 for a hypothesized early-British appearance of the site).

![Figure 8.3 The hypothesized form of the early-British occupation of the place Gor Khuttree. The placement of the toilets, the reuse of the Sikh-period structures, the Police and Fire Brigade barracks, and the location of the mission house are based on the historic and structural information reviewed in the study of this site.](image)

As the British continued to struggle with control over the region, notably with the tribal lands located just beyond the city, the occupation of the serai could again be seen as an appropriated symbol of a collective memory of an authoritative identity; this time likely building on associations of the place with the legacy of Avitabile’s rule. Using the serai as a center of regional and city control, as Avitabile had during the Sikh period, the British were able to continue to exercise control over the Old City. The people in the Old City now fell under the watch of the centralized police department. Unlike the British in the newly built cantonment area, those occupying the serai were centrally located within the oldest and most densely populated area of the city surrounded by the people they governed. This position should have been a dangerous one as tensions within the region simmered over the next 70 years (after AD 1848). The associations of this place Gor Khuttree with the variably tyrannical and considerate
rule of Governor Avitabile, along with the structural alterations made to the place during Avitabile’s rule, would have lent an aura of authority to the location, a place steeped in history. Based on historic accounts, the local populace was affected by memories of Avitabile’s use of the site. In AD 1886, Hubner records that “the Pathans revere his memory to this day. Barbarous people worship brute force even when it manifests itself in acts of cruelty” (Hubner 1886:115).

In addition to the local population’s memory associations with the site based on Avitabile’s control and authority, the British themselves would have had their own memory associations defined by the site’s previous entertaining-host and their facilitator, General Avitabile. For the British, having both of these memories anchored to the place Gor Khuttree would have been attractive. Some memories reinforced their sense of security and familiarity with the site, while others served to legitimize their administrative identity and authority to the local population.

Later British visitors to the site reflected on the alterations that had taken place at this location and within Peshawar in general. Durand (1883:439), in a letter to his wife from AD 1870, recorded that Avitabile’s house was then a tehsil office and (incorrectly) notes that it no longer had a second floor, stating that it had been destroyed. The architectural remains at the site show that this is not the case, as the second-floor Sikh apartments are still present with intact floor paintings, balconies, and Mughal parapet wall incorporation (section 7.1.7). Durand (1883:439) also observed that the trees that continue to line the courtyard in the British period were notably absent of hanged men. In a reflection on the approaches to rule used by the British as compared with Avitabile, Durand (1883:439) remarks, “if he hung too freely, we perhaps hang too few, murders and robbery are rife. What would be the thought of such a mode of administration with us?” Durand (1993:439) goes on to remark on the changes in the kinds of entertainment now being offered to the British in Peshawar: “[w]hen Avitabile entertained us, he, after dinner, led us into the large upper room which then existed, where we found the room entirely encircled with nauch girls”. He goes on to note that, now in the cantonment they are always having balls and dinners but never dancers.

During the threat of Sikh mutiny, which persisted through late 1800s, the site again saw use as a fortified location. The British plan in the event of mutiny in the cantonment was to retreat to the fortified West Gate and await rescue (Valbezen 1883:58). The West Gate was an ideal location to endure such a siege, as the site was defensible and replete with supplies for officers staying in the barracks.
As noted previously, during British use the Gor Khuttree complex housed a varied collection of activities, all of which drew on the value of the serai as, paradoxically, a defensible location as well as a place of association with and access to local people. It was a place from which rule could be established and supposedly dangerous populations engaged. As noted previously, the spatial patterning within the West Gate system supports the alignment of the site to serve more office-based administrative purposes during the British phase at the site. Though some persons likely continuously occupied the site, such as employees of the Police Headquarters, Fire Brigade, military post, or tehsil office, they were not permanent residents of the West Gate. Overall, the site was no longer a place of habitation, no longer the home to a charismatic governor or to his retinue.

In some ways, the most unexpected reuse of the site is the occupation of a corner of the serai as a mission house by Church of England Missionaries (sections 4.3.2.6 and 7.1.9.6). With entirely different motivations than Avitabile, the missionaries came to the serai to engage with the people they hoped to save. The occupation of the serai by the missionaries happened shortly after the mission to Peshawar was founded in AD 1855 (Church Missionary Atlas 1865:27). Rev. E.C. Stuart stayed in the city mission house for several days in December of AD 1866 (as presented by Clark 1885:167) and reflected on the mission in the Church Record Book. He noted that the decision to occupy the “Gurkhatri” was a sound one, as from that location the “sociable Afghans” could be easily engaged and invited to social visits where they might be instructed in the ways of the church. The dangers of preaching in the heart of the city were real; the first missionary to Peshawar, Rev. Dr. Pfander, was told by local leaders that he would be killed if he went on preaching in the bazaars (Clark 1885:165-166). The missionaries persisted at Gor Khuttree into the late 1800s, further underlining the safety offered by this place despite its location within the heart of the Old City.

The varied uses of the site during the British period all benefited from its defensible nature as well as the collective memory associations of the site with the firm control of General Avitabile (Clark 1885; Grey 1982; Hubner 1886; Valbezen 1883). Over time, however, even these powerful associations with the Sikh occupation were likely eroded and in some ways were replaced with the more recent association of the site with an administrative tehsil office, Fire Brigade, and City Police Headquarters.
8.1.4 Post-Independence/Pakistani Period

The transition from British to Pakistani rule in Peshawar was foreshadowed for several years by the increasing integration of local leadership into the then-British system of city and regional governance. The occupation of the place Gor Khuttree continued after the founding of Pakistan with little change. The Fire Brigade, Police Office, and tehsil office continued to operate from this location. Over time, the site was encroached upon by local construction and it faced a similar outcome as Pakka Khanpur Serai. Given time, it is likely that the site would have been absorbed by the city around it, detectable perhaps only by portions of reused cells or modified gate systems and alluded to in the oral histories of the story-tellers’ bazaar. Such stories do continue to be told on internet blogs and in chat-rooms. This demonstrates the persistence of the figural Avitabile in the collective memory and shared history of people from Peshawar. The continued existence of Gor Khuttree Serai as a historical structure has much to do with the decision by F. A. Durrani to begin an archaeological excavation in the remaining open space of the once vast caravanserai courtyard. Durrani et al’s. (1997) map of the site (Figure 8.4) can be viewed as an indicator of the direction that the site’s appearance was moving toward in AD 1997. The encroachment of local populations into open spaces, especially in city centers, is common around the world, and can reflect the ability of a place’s occupants to forget or discount associations with history as opposed to venerating them (Sinopoli 2003:32).
My discussion of the reuse and reinterpretation of the Gor Khuttree complex in the Post-Independence/Pakistani period draws on conceptions of national identity formation as a post-colonial response. It is important to remember that it is during the modern period that the site Gor Khuttree became the location of an archaeological excavation and a centre of conservation and restoration efforts.

8.1.4.1 Nationalism and the Formation of Identity

The formation of identity, especially group or shared identities, is often constructed in the post-colonial context as a constituent of nationalism. The construct of a nationalist identity and the interface between politics, history, archaeology, linguistics, and religion has been addressed in anthropological arenas (Kohl 1998; Pels 1997; Smith 2000; Syed 1980) and was previously introduced in section 2.1.3. The political nature of archaeological research is not to be understated (Shaw 2000).
Looking specifically at the nation state of Pakistan, we can isolate some unique aspects of identity formation and maintenance that play a role in the preservation and interpretation of historic places and archaeological sites, including the ongoing uses of the place Gor Khuttree. The formation of Pakistan can be seen as contingent on the historic growth of a sense of Muslim nationalism, where people see themselves as ideologically linked and where religion is the key identifier of nationhood (Syed 1980:575-576). The foundation of a nation state on a core identity that extends beyond its geographic bounds has created a conflicted sense of Pakistani national identity. The Pakistani nation is comprised of all its peoples regardless of religious practice, but the Muslim nation is predicated on separation along systems of belief. Syed (1980) discusses the political tension that results from this complicated sense of nationhood. He examines the various regions within Pakistan and identifies areas where Muslim nationalism can be seen to fracture Pakistan and establish regional senses of identity that coexist with senses of national belonging. Within the North West Frontier Province (NWFP, recently renamed Khyber Pakhtunkhwa), Syed suggests that the ability of Pathans to associate with Afghan or Iranian political systems is a facet of them all being part of the Muslim nation so that they share a “national” identity beyond the bounds of their geo-political affiliation. For the NWFP, Syed (1980) goes on to suggest that a shared history specific to this region has led to identity formation based on tribal memberships.

How groups in the NWFP today remember the various periods of colonial control in the past depends on the collective histories they associate with each occupation. Some Pathan tribes actively fought the Mughal occupation of the Peshawar valley, aligning with their Afghan relations, the Durranis (Syed 1980:582). The inclusion of the NWFP in the Indian sub-continent was not even solidified until the British arrived; the area was considered as part of Afghanistan prior to this time. The Sikh occupation of the region was resisted even more greatly than that of the Mughals (whose ultimate acceptance seems to have been largely the result of their religious preference) and the British occupation even more strongly than the Sikh (Syed 1980:582).

Khattak (1980:166) sees the resistance to the colonial British as less focused on the colonial as it was on the un-Islamic. For him, the Sikhs were less opposed by the local populace as they were not trying to alter the region but to extract money. The change in local reaction to the presence of the Sikhs and then the British within the NWFP was gradual, delayed by the gentle weaning from Sikh to British governors prior to a fully fledged attempt to implement a
The demarcation line between the Sikh rule administered by English officers and English rule by almost the same men is very thin” (Khattak 1980:167). The attempt to extend Raj control into the NWFP was never truly successful; 74 battles were waged in this region between AD 1849 and 1926 and the tribal regions were mostly bought off as they continually rejected the authority of the British (Khattak 1980:168).

In the next section, I apply these constructs of national identity formation and the historical valuing of place to the interpretation of the Post-Independence/Pakistani period in the Gor Khuttree complex.

**8.1.4.2 Post-Colonial Nationalism at Gor Khuttree**

The Gor Khuttree complex has recently been the focus of restoration work (begun in 2002 by both federal and provincial authorities) coupled with the 2007 opening of a city museum by the NWFP Department of Archaeology and Museums, as well as the ongoing creation of a municipal public park in its courtyard (Figure 8.5). Under these plans, the majority of the serai will be reconstructed or restored. In most instances, the serai is being reconfigured to appear as it was constructed in AD 1640 as a mid-Mughal period serai with the addition of a Mughal-style garden in the central courtyard (Ali 2005:229), although the original serai would not have held such a garden. The Sikh alterations to the West Gate will also be preserved as will the Sikh-period Shiva Temple in the southwest section of the courtyard. The maintenance of cultural heritage and the opening of public museums is an important exercise in creating a sense of Pakistani and regional nationalism. The emphasis on the Mughal period of serai occupation reflects the original date of serai creation, the association of serais with the Mughal period, and perhaps the easier (as outlined by Khottak 1980 above) affinity between Pakistanis and their Mughal predecessors.
The creation of public parks or recreation spaces within or near heritage sites in the subcontinent is not uncommon. These spaces provide places for families to visit, and help to associate a domestic tourist location with positive experiences that will draw people back. A very similar revitalization project was undertaken in Lalbagh Fort in central Dhaka. Smith (2000:703-705) quotes a brochure describing the placement of this garden: “a typical Mughal Garden was laid out inside the fort after removing all modern encroachments inside and renovating the decrepit Mughal buildings”. The results of this project on local use of the site were readily apparent; people came to visit the site, enjoyed the park, and became more engaged with the history of the place through the pleasant experiences they associated with their visit.
This association fostered not only a personal connection to the place but also helped to make a lasting impression about the importance of conservation and preservation of historic places.

Like the British, the Mughals were colonizers in South Asia and brought with them a vibrant trade, economy, art, and theology. They are also remembered as the perpetuators of the great synthetic Mughal architectural style, the Indo-Islamic style. The collective remembrance of Mughal rule in Pakistan is a nostalgic review of the successful amalgamation of a large geographic region, subsequent economic prosperity, and Islamic rule of an empire, often (although not always) with tolerance for other religions. This is reflected in almost every history of Mughal-period architecture, art, and administration. Although not all Mughal rulers are remembered for their religious practices and affiliations, the study of Mughal buildings in the NWFP is the examination of Islamic structures, as Islam and its presence in the region has become inextricably linked to Mughal rule of the country (now Pakistan). Taj Ali and Ziaullah Sehrai (1998:66) remarking on fifty years of archaeological research in Pakistan stated:

[t]his is a brief sketch of the glorious Islamic architectural heritage, which gradually developed and saw its culmination in the Mughal period. It shows cultural interactions with the neighboring regions and evolved a style which is an assimilation of several architectural traditions but the credit goes to the Muslims who, in spite of regional diversities gave the Islamic art and architecture a unique character.

Now that we are an independent Nation celebrating our Golden Jubilee, it is our duty to prove our identity as a Muslim. It is high time to project our heritage and to take effective measures for its protection and preservation for the upcoming generation.

This statement is not a call for the veneration of Muslim monuments or Mughal history above all others, but it is suggestive of an underlying connection with history, memory, and place; a connection that has a Muslim identity and speaks to Muslim people. “The rise of nationalism and anti-imperialist sentiments in the twentieth century fueled the idea of reclaiming a pristine and glorious pre-colonial past” (Hosagrahar 2002:358), creating a message of “ancient and medieval greatness” (Hosagrahar 2002:359). Thus, the restoration of the Mughal serai at Gor Khuttree could be viewed as a historical emphasis of the Mughal rule of the city. Likewise, it could be seen as an attempt to link the history of Peshawar to an even deeper past, as the goals of the archaeological excavations are to seek the complete sequence of occupation of the city (Ali et al. 2005, Durrani et al. 1997). The decision to occupy historic sites, whether trade
centers, administrative centers, police headquarters, or city-based museums, stems from an assignment of value to a space or place. The incorporation of a historic structure into a public space and associated museum can be a means of displaying power, control, or nationalist sovereignty. This is not unique to Peshawar or Pakistan, as many museums incorporate archaeological sites and architectural remains (Coningham and Lewer 2000, Smith 2000; see Kohl and Fawcett 1995 for further discussion of nationalism, propaganda and ideological archaeology). Much like the alterations made to Gor Khuttree Serai in the Sikh and British periods, today’s alterations and repairs reflect the ability of the government to appropriate historical places and present them as a display of power, association, and belief, and to incorporate these alterations into a process “of nation-making [where] the past is ‘invented’ or ‘rediscovered’ through the selective use of inherited symbols, myths, and material remains” (Kohl 1998:225).

It is not my intention to criticize this phenomenon. The alteration and repair of the serai at Gor Khuttree has been carefully undertaken with the involvement of architects, craftsmen, and archaeologists. The form of the structure prior to repair has been documented and forms a vast portion of my own doctoral research. The end result is a better understanding of the construction of serais and an enhanced ability to study standing structures, as only through a structure’s deconstruction can the process of construction be fully understood (Campbell 2009).

If anything, the choices made by the present custodians of the site only further demonstrate the value of place, and the ways people in both past and present negotiate the values of places in relation to their current worldview. At the end of this repair work, the serai at Gor Khuttree will house a museum, a public garden, and may even become a functioning serai and cultural destination for future generations, if the suggested plans for the creation of a small tourist hotel on the destroyed north side are carried out. Within the place Gor Khuttree, new memories, meanings, and identities will be formed and transformed, some in reference to and some in contestation of the past.
8.1.5 The Life History of a Place

Beyond its limited role in the formation of identity for the present people of the NWFP, the place Gor Khuttree has had countless meanings, experiences, and cultural associations since it was first occupied. The reoccupation of this site over a long period is evidence of its importance and speaks to the ability of places to anchor action and encourage occupation. The fact that people continually occupy certain places, despite the availability of equally accommodating locations and at times limited knowledge of the actions that occurred there in the past, is indicative of the formation of a lasting spatial memory. A spatial memory or association evolves over time, and people may lose track of when or why a place’s occupation began; however, human occupation continues as entwined histories associate and re-associate themselves with specific places. Inherited and habituated spatial memories are the habitus of landscape. These memories can be the most archaeologically elusive; we see the results of their existence in the reoccupation and reinterpretations of spaces and places, but we struggle to find the source memory, the first iteration of occupation or spatial knowing that develops into all those that follow. Through the exploration of the life history of a place, we can begin to uncover some of the memory details that are structuring spatial occupation and reuse. As archaeologists, we cannot expect to know the past completely, but we can move toward deeper and more contextually informed interpretations by considering the life history of places.

The phased alterations made to the Gor Khuttree complex show how alteration over time reordered or reemphasized the importance of place while maintaining links with historic periods and, I argue, associated identities. In the Gor Khuttree example, this allows for power legitimization to link phases of occupation. Despite the uniformity of the Mughal caravanserai structures, the social, political, and economic atmosphere within which these serais exist changes over time. As this happens, the transformation of these spaces, not easily perceived in their constructed form when it is isolated temporally, will be apparent in and have an impact on any individual’s experience with and conception of the caravanserais over time. This structural life history is an archaeological palimpsest: the layering of temporal space such that all past phases of occupation have a shadow at the site during any phase which follows them. These spatial shadows have varying shades that change in intensity as any specific action is intentionally or unintentionally remembered or forgotten (see Figure 8.6 for a figural representation of this palimpsest). By exploring the layers of site use, through phased
architectural analysis, we can explore life histories and the involvement of specific places within the evolving cultural landscape.

Figure 8.6 The Gor Khuttree complex as a palimpsest, showing the layering of the hypothesized phases known since the Mughal Serai construction in AD 1640.

8.2 Future Directions and Concluding Remarks

In this research, I advocate for the careful study of surviving architecture. By developing a robust architectural record we are able to ask detailed archaeological and historic questions about specific uses of places, and their development over time. My focus on the reoccupation of architecture does not diminish the value of the expedient survey, directed toward a single phased analysis of a structure. The survey strategy developed in this research acknowledges the varying
goals of architectural research and accounts for these goals through both expedient and intensive surveys.

Expedient survey can quickly gather an architectural dataset on which complex analyses can be completed. My work on Pakka Khumpur Serai (chapter six) has shown that expedient surveys generate sufficient data to allow interpretive and comparative analysis of a structure. They also facilitate the creation of more nuanced caravanserai typologies in the future. Additional expedient surveys of serai structures throughout South Asia will vastly enlarge the dataset from which we draw temporal conclusions, and will lead to improved typologies. Intensive surveys can punctuate this overall survey work as they offer detailed understanding of specific instances of serais, their construction, use, and reuse. Detailed architectural analysis, such as that demonstrated for the place Gor Khuttree, furthers the analytical depths achieved from an expedient survey alone. These approaches to survey, expedient and intensive, emphasize the intertwining of two levels of analysis and consideration; Mughal caravanserais as a corpus of Islamic buildings types, and Mughal caravanserais as unique and particular places within a given time and location. “[T]aken as a whole, architecture presents a picture of cultural integration of the time, and taken as an individual building, it becomes an index to the various elements and factors that go to build the cultural traditions of the society in one area or another at a particular given time” (Dani 1988:23).

Many remaining caravanserais in South Asia are in a desperate state of repair. The threat that these structures will disappear completely before significant study can be achieved is real. Therefore, future research should involve the creation of an inventory of these structures. This inventory should include not only serais from the Mughal period but any others that remain from earlier and later periods. An intensive inventory program has also been called for by Saifur Rahman Dar (1999), who implores researchers to inventory not only the caravanserais but also the highway systems on which they were found. Parihar (2008) admirably moves toward such an inventory of serais along the Agra-Lahore highway, but as yet offers little comparative analysis of the sites recorded. Evidence indicating the locations of the ancient routes themselves are also at risk of disappearing, since the constructions that mark their paths are on the verge of extinction. The recording and analysis of these transit and trade vestiges is the directive of the Caravanserai Networks Project and significant ground work has already been done to facilitate the recording and analysis of trade and travel amenities. Future work will continue to analyze
and interpret structures along transit systems, augmenting the body of data that informs architectural comparative analysis.

Further typological study of serais is required and will create a body of research to which future serai studies can be compared. This typological study would benefit from a move away from the current architectural naming systems and the implementation of a recording system similar to that outlined in this research. Simply identifying a structure as Islamic or Iranian in style is not fully beneficial, since the understanding of what essentially defines these styles is not always clear. As was discussed in chapter three, attempting to typify any caravanserai is a frustrating prospect, as regional variations are poorly acknowledged and serais are generally presented as static, ubiquitous “Islamic” structures. Certainly, any consideration of variations to the standard Persian form has been limited to the analysis of a small sample of Ottoman, Iranian, and Mughal formations. Ali (2000), Begley (1983), Dar (1999), Deloche (1993), Khan (1990) and Parihar (2008) have all examined serais within the sub-continent and some (Dar and Khan) have attempted to make typological assignments. However, these typologies have ultimately fallen back on trying to fit the sub-continent’s serais into a Persian frame of reference. By establishing a new system of documentation and an extensive program of survey, future research into South Asia’s serai forms can establish a typology that is detailed enough to allow consideration of unique and regionalized features, as well as begin to determine the standard form of these structures in Pakistan, across South Asia, and ultimately throughout the ancient Islamic world. This process will necessitate the cooperation of a number of researchers.

Such a collaborative research network was loosely formed in 2009. At the 2009 Paris seminar Caravanserais and Caravan Roads - State of Knowledge and Inventories, researchers of caravanserais gathered to take stock of the state of research. What became apparent from the presentations at this meeting was that, despite a great deal of interest in these structures, researchers are struggling with a way to deal with the phenomenon of the caravanserai. The lack of a founding typological framework is contributing not insignificantly to the difficulties all researchers are encountering. Therefore, the refinement of a typology of South Asian serais will make a considerable contribution to the research on these structures throughout the historic Islamic world. Regionalized though such a typology must be, it will begin to open dialogues about the definition of forms and the concept and perception of caravanserai function that extends beyond the standard type as defined by hypothesized Persian archetypes. Serais should
be typed based on date of creation, form, and architectural details, with functional assignments informing the analysis when and where possible. Work in this vein will further reveal the interplay of various regional styles and construction techniques in the creation of these structures.

The value of historical accounts in evaluating the appearances and uses of Gor Khuttree Serai, and to a lesser extent Pakka Khanpur Serai, was apparent in this dissertation. Further textual research will be invaluable to our understanding of the function and creation of other serais. Pilgrims, merchants, government officials, and other travelers kept records of their time in these structures and this information needs to be synthesized in order to expose all of the firsthand information that relates to the use of Mughal serais during and after the Mughal period. This textual research will reveal more about the nature and degree of regional interaction by travelers and residents within these structures. It will also reveal more about the internal workings of these serais.

Related to the need for further examination of textual information is the need for additional in-depth analysis of the division of space within caravanserais. Textual information can enlighten us about what went on within these structures. In addition to the recorded histories and records for a given site, researchers can make use of an increasingly accessible collection of images that date from early periods of European exploration across the historic Islamic world. These include sketches, plans, photographs, and paintings of caravanserai structures that are increasingly available through online museum collections, some with open source distribution (the British Library Collection for example). These images can help inform interpretations of structural ruins and offer a view into historic activities that took place at a given site. The use and division of space can then be explored archaeologically and architecturally through an analysis of the physical plans of serais, and this analysis can be further informed through the incorporation of historic sources. This task will not be easy, since the floors of most of these serais do not present sealed archaeological contexts and in some cases historic documents are scarce. However, as previously stated, these structures are in many cases on the verge of disappearing and it is necessary that as many lines of evidence as possible be explored.

Since the walls of many of these serais are in rubble, this research has presented a program that will aid in determining what the vertical structure of these buildings looked like. Information can again be garnered from textual sources, but also through comparative research
with more complete serais dating from all periods. Where enough of the serais remain intact to allow the study of their vertical structure, care must be taken to note the occurrence of first floors and the nature and size of the spaces defined therein. The study of the vertical structure would also benefit from photographic analysis of early 19\textsuperscript{th} century photos of serais, as well as from the comparison of Mughal serais with serais from other regions, including Central and Western Asia (Erdmann 1976, 1961; Housego 1974; Kleiss 2002; Kleiss and Kiani 1995; Sauvaget 1940, 1939, 1937; Siroux 1974, Tukel 1969, and Yavuz 1997, 1995). Many of the serais in these regions are in much better shape than most of those in the sub-continent and, although different in many respects, would serve as a basis for interpretation and hypothesis creation in instances where Mughal serai information is almost completely lacking.

Future research will also draw on the technological advancements in reverse-engineered three-dimensional models. As was demonstrated in this research, by using reverse-engineered temporal models, we can more clearly interpret a site as it appeared in the past. This includes evaluating the changes in spatial use relative to the experience of a given structure. This spatial analysis is centered by our ability to move a structure forward through time, through various stages of development, and track these changes in a three-dimensional environment. Recent developments in these software packages allow modeled structures to be placed within a landscape, as represented by a satellite map. Future considerations in this vein might consider line of sight and sun paths, studies conducted within an experiential virtual model of a given space within its associated landscape.

Within the ArchiCAD suite, users can now export their designs into Google Earth-derived satellite images and thus take into the model all the related terrain and metadata available. Once scripted into map-metadata these models can then inform GIS based analyses, again offering new analytic directions for research into transit and travel systems through time. The combination of multiple lines of spatial evidence will allow users to run more sophisticated and accurate place and space use simulations. We can place individual users into these three-dimensional environments and get as close to an on-the-ground experience as may be possible outside of true virtual reality simulations.

An extension to the ArchiCAD suite that was not used in this research but that will, I believe, become increasingly important in expedient field surveys is an application called ArchiFacade. This is a Plug-in for straightening perspective images. It allows images
(photographs of façades, objects, etc.) to be transformed in order to correct or "straighten" them. Based on the principles of projective geometry and using a few known measurements and the appropriate mathematical transformations to remove perspective distortions from an image, a rectified version is generated. This technology not only allows true-to-life facades to be overlaid onto drafted wall components but, more importantly, it allows measurements missed, overlooked, or near impossible to take in the field to be measured within the software itself. This rectification feature means expedient field recording can be undertaken with amplification of the primary measurements occurring in the lab.

The Mughal caravanserais, which originally provided secure stopping places along trade routes over northern South Asia and Afghanistan, were variably used and reused in the periods subsequent to their Mughal period construction and control. These buildings became representative of the political, economic, and ritual control of collective memory and associated spatial identities both in their initial periods of creation and in the periods that followed. The reinterpretation and assignment of value and meaning to these structures continues into the present. My research has demonstrated that through periods of reuse, reinterpretation, and repair, structures take on cultural meanings that have more to do with collective memory, identity, and the performative aspects of space than their existence as simply static enclosures (Figure 8.7).

The research presented in this dissertation involves the complex interplay of a number of structural, analytical, and experiential variables. The architectural survey method I have developed results in an architectural dataset that can then be used to generate three-dimensional architectural models that in turn enhance the analysis of spatial arrangements through the life history of a structure. The results of these spatial analyses are used to address complex archaeological questions about the use of spaces and places through time, and in the formation of memories, meanings, and identities for persons using a given structure. This research responds to the global need for expedient survey of standing historic architecture and aligns such survey work with spatial analysis enhanced through three-dimensional modeling as a means to better understand and interpret the past. Understanding how people relate to structures and places is of importance to a number of research fields. People define and redefine themselves through their connection to places. They use these connections to legitimize identities and reaffirm commitments to culture.
Figure 8.7 The Central Courtyard of the Gor Khuttree complex, 2007, facing east.
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Young, James E.


Zamindar, V.F.Y.

Appendix A

This appendix includes reproductions of the survey sketches taken of the Gor Khuttree complex, in the spring 2007 field season.
East Gate, Exterior, Facade Facing West. Photos Taken N

Cross Section Gate Arches Facing South.

March 3rd/07, Jennifer Campbell
East Gate, Facade Facing Northwest, Left Side of Gateway Exterior.

Notes:

March 3, 2007
Jennifer Campbell

Ceiling Detail

1. Ceiling height at concentric ridge and arch piles.
   \[ C = 3.3 m + \text{trippod height} \]

2. Ceiling height at ridge edge:
   \[ C_{1} = 150 \text{ cm} \]

3. Ceiling height at ridge edge at ridge:
   \[ C_{2} = 150 \text{ cm} \]

4. Ceiling height at ridge edge at ridge:
   \[ C_{3} = 150 \text{ cm} \]
East Gate, Side Façade, South Facing, Exterior.

Feb 28, 07. Jennifer Campbell

Cut-away view showing stair details.
East Gate, Cell 49: North Side of Central Passage.

Floor plan: 

North Wall:
- 160 cm
- 140 cm
- 120 cm
- 100 cm

East Wall:
- 18 cm
- 18 cm
- 325 cm

South Wall:

West Wall:
- 200 cm

Ceiling Details:
- Curved portion where ceiling meets the wall.

The ceiling is flat with patterned basic layout.

Jennifer Campbell

Diagram:

325 cm
160 cm
140 cm
120 cm
100 cm
18 cm
18 cm
325 cm

X = 200 cm

16E-17
East Gate, Arched and domed interior Passage.

Floor Plan. N

Photos Taken

March 1st 107.

Jennifer Campbell

North Wall, Domed Section. N
East Gate, Arched and domed interior Passage
Photo's Taken

March 1st/69
Jennifer Campbell

East Wall, Domed Section

South Wall, Domed Section
East Gate, Arched and domed interior passage.

Photos Taken.

March 15th /07.

Jennifer Campbell

East Gate Door Detail

West Wall, Domed Section

N 46 14

4 87cm

4 257 cm

A 14cm

N

E - F: 483 cm
B - D: 689 cm
A - C: 690 cm

C = height & dome center
from floor: 7.233 m.
West Gate, East Facing Interior façade, South Wing Extension.

X = esch on memb. need to consult with r.o. diaphragm

24 blue leaf cancellations

9 blue leaf cancellations

Stairway details stucked on B. #
Nest Gate, East Facing Interior Façade, North Wing Extension, Mar 15, 19
Jennifer Campbell

[Hand-drawn architectural diagram with measurements and notes]
West Gate, Central Section, South Side Interior Stairway

Cross Sections

Looking Upstairs

Holes = 10

Looking Downstairs

Holes = 10

R = 32.1 cm

C = 27.2 cm

Height of Tim Pen = 91 cm

To bricked 8/6 wall

Landing Ceiling

To bricked off wall

Behind bricked off wall

Floor Plan

Landing floor Plan

Stairs 150 cm

12 cm

121 cm

12 cm

10 cm

12 cm

127 cm

12 cm

12 cm

15 cm

8 cm

9 cm

12 cm

Brick wall

9 cm

26 cm - 01
West Gate, Central Section, South Side Second Floor Room.

North Wall

West Wall

East Wall

Ceiling Details

South Wall

Floor Plan IGK-22

Horn 14/07 Jennifer Campbell
Photographed

Add implied height to height for total height. Thatched height = 96 cm.
West Gate, West Facing Exterior Façade, South Wing.

X₁ = 15.3 cm
X₂ = 14.7 cm

C = height at
Centrality of
Ornate & Wages
C = 386.2 cm + 93 cm

D = 198.6 cm

Height of The
Triped = 95 cm
West Gate, West Façade Exter from façade, North Wing

\[X_1 = 154.1 \text{ cm}\]

\[X_2 = 155 \text{ cm}\]

C = height at
confluence goathid and wedges
C = 3.24.6 cm
C = 94 cm

D = 184.5 cm

height of tripod = 94 cm
West Gate, Arched and Domed Interior Passage.

West Wall, Domed Section. N → 26L-2

North Wall Domed Section. N ↑

Mar 19. 207

Photographed.

48.2 cm

45.5 cm

48.4 cm

33 cm

13 cm

12 cm

13 cm

37 cm

25.5 cm

28.4 cm

39.1 cm

38.1 cm

2.5 cm

4.5 cm

4 cm
West Gate, Arched and Domes Interior Passage.

March 19/04 Jennifer Campbell, Photographed.

West Gate Interior Domes Ceiling, Dome or Pendentives?

Dome is greatly reduced, if present at all.

East Wall Domes Section, N

\[
\begin{align*}
\overline{AC} &= 656cm & N \\
\overline{BD} &= 695cm \\
\overline{EF} &= 469cm &= \text{diameter of dome} \\
G &= 791.9cm &= \text{height of dome from center to floor add to this the height of the tripod} \\
&= \text{tripod height} = 98cm
\end{align*}
\]

26K-3
West Gate: North Wing Extension. Room A from 2006 survey. March 13

Floor Plan

North Wall

East Wall

South Wall

West Wall

Ceiling Details
Flat ceiling, wood beam, maulding heights can be taken from walls.

Trussing Details

Trussing Posts
West Gate, North Wing Extension. Room A stairway from 2006 Survey

Plan View → Partially Framed Newel Stair.

Second floor of Stairs Wall Plans.

North Wall
- 129 cm

South Wall
- 149 cm

East Wall

West Wall
- 48 cm
- 480 cm

Ceiling Details
- The ceiling is made of the steps to the central passage roof.

Handrail Details

Ceiling heights match the west wall heights.

2GR - 15

This section refers to each occupied space in the stair.

N
West Gate, Third floor landing at the top & Room A Stairway.

floors plan N↓

East Wall

South Wall

North Wall

West Wall

Ceiling Details

A: 36.4 cm  C: 35.3 cm
B: 35.8 cm  D: 35.1 cm

Ceiling height = 9.6 cm

Mar 13

Photographed

Jennifer Campbell

Photographed
West Gate, 3rd Floor, Room B from 2000 Survey.

East Wall

North Wall

South Wall

West Wall

Ceiling Details

402
West Gate, 3rd floor. Room C from 2006 survey.

Mar 12

Jennifer Campbell
Photographed

[Diagram of room C with measurements]

North Wall.

South Wall.
West Gate, 3rd floor, Room D. From 2006 survey

Har 12, 707. J. Campbell Photographed: West Wall.

North Wall

South Wall

East Wall

Ceiling Details.

Notes:

A = 456.2 cm
B = 435.8 cm
C = 438.5 cm

Odd to all the height of the tripod when...

Floor Plan:
- North Wall:
  - Heights: A = 446.3 cm, B = 447.7 cm, C = 448.1 cm, D = 449.3 cm, E = 450.3 cm
  - Add height of tripod to heights. Tripod height = 9.7 ft.

South Wall:
- Dimensions:
  - 183 cm, 120 cm, 204 cm, 182 cm, 147 cm, 108 cm, 64 cm

East Wall:
- Dimensions:
  - 210 cm, 183 cm, 120 cm, 204 cm, 182 cm, 147 cm, 108 cm, 64 cm

West Wall:
- Dimensions:
  - 210 cm, 183 cm, 120 cm, 204 cm, 182 cm, 147 cm, 108 cm, 64 cm

Ceiling Plan:
- Dimensions:
  - 497.7 cm
North Wall

East Wall.

West Wall

Ceiling Details.

Add to all height members the height of the tripod.

Tripod height = 97 cm
West Gate, 3rd floor, Room F, landing from 2000 Survey.  Map 13 67 Jennifer Campbell, Photographed.

South Wall.

North Wall.

East Wall.

West Wall.

Ceiling Details
A = 399.7cm C = 392.4cm
B = 391.1cm D = 402.9cm
Add height of tripod to all height mounts.
Tripod height = 97cm

ZGK-16
West Gate, 3rd floor, South Extension Stair, accessed via Room D Landing. Photographed.

West Wall

East Wall

North Wall

South Wall

Ceiling: There is no ceiling, the stairway is open to the sky.

Heights in ( ) meters in cm. and measured from the top of the stair it is placed on to the bottom of the stair/floor below it.

X = \frac{91}{44}
West Gate, South Extension Roof Access via Room E landing

March 15. JF Jennifer Campbell
Photographed.

North Wall (The Only Wall)

heights & butts
leaf cancellations
from roof floor.

A = 55cm  E = 85cm
B = 58cm  F = 76cm
C = 62cm
D = 41cm
West Gate, South Extension, Room G.

North Wall:

South Wall:

East Wall:

West Wall:

Ceiling Details:

Foot ceiling, use wall heights.

26k-20
West Gate, South Extension, Room H 2015.16 Photo graphed: Jennifer Campbell

East

North Wall

South Wall

West

Ceiling Details:

Use heights from walls.

N
West Gate, South Extension Room I Photographed March 15, 2007 Jennifer Campbell

Norn Wall

South Wall

East Wall

West Wall

Ceiling Details

{Diagram with measurements and notes}

UN

2GK-22
West Gate, North Side, 2nd Story Extension Roof Stair.  March 2007  Jennifer Campbell
Photographed.

Dog leg Staircase.

North Wall.

<table>
<thead>
<tr>
<th>Height (cm)</th>
<th>(18)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 cm</td>
<td></td>
</tr>
<tr>
<td>42 cm</td>
<td></td>
</tr>
<tr>
<td>60 cm</td>
<td></td>
</tr>
<tr>
<td>83 cm</td>
<td></td>
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<tr>
<td>103 cm</td>
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<tr>
<td>123 cm</td>
<td></td>
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<tr>
<td>143 cm</td>
<td></td>
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<tr>
<td>163 cm</td>
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<td>183 cm</td>
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<tr>
<td>203 cm</td>
<td></td>
</tr>
<tr>
<td>223 cm</td>
<td></td>
</tr>
<tr>
<td>243 cm</td>
<td></td>
</tr>
</tbody>
</table>

Heights in ( ) are measured in cm, and show the height of the stair from the top of the stair or floor preceding it.

N  26K-25
West Gate, South Extension, 2nd Flr. Room

Chaukdar's Room, May 20/07

Photographed

North Wall

East Wall

West Wall

South Wall

North Wall

Oriel Window

Ceiling Details

2GK-26
West Gate, South Extension, 2nd flr. Room. (Artifact Rm).

Floor Plan.

North Wall.

West Wall.

South Wall.

East Wall.

Ceiling Details:

Heights of ceilings relate to the heights of the walls. The walls are measured to the ceiling beams.

422
South Wall, Sample Cell, Measured 1st as practice, Cell #1, Feb 30th 04. Jennifer Campbell.

East Wall Front Section:
- 236.8 cm
- 196 cm
- 141 cm
- 78 cm

East Wall Rear Section:
- 220.9 cm
- 142 cm
- 78 cm

South Wall Front Section:
- 260.8 cm
- 180 cm
- 143.2 cm
- 264.7 cm

South Wall Rear Section:
- 224.8 cm
- 145 cm
- 78 cm

West Wall Front Section:
- 205.9 cm
- 160 cm
- 145 cm

West Wall Rear Section:
- 205.9 cm
- 145 cm

Floor Plan, N↓
Rough sketch & Gk, For reference & GPS points.

West Gate.

Southwestern Corner

Folace Gate.

A

B

C

D

E

N

H.

G.

Library?

Open Excavation

New Excavation

High bars

Exposed,

Mosque.

East Gate.

North East Corner

Bashion

2GK - 29

All GPS pts were taken approximately 4 meters out from the associated feature. It is into the courtyard, except the eastern which was taken from the center.
NE Bastion Remains, Mar 21/77. Photographed.

Jennifer Campbell.

Largest heights (int) or (ext) as notes.

A = 75cm (int)
B = 72cm (int)
C = 40cm (int)
D = 106cm (int)
E = 120cm (int)
F = 10cm (int)

26K-30.