

## Protohistoric Cultural Sequence of Excavated Sites in Kurukshetra District, Haryana, India

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**Abstract:** This study examines the protohistoric cultural sequence of excavated archaeological sites in Kurukshetra district, Haryana, located within the Sarasvati–Drishadvati basin of the Sutlej–Yamuna interfluvium. Archaeological investigations in the region reveal settlements primarily associated with the Late Harappan, Bara and Painted Grey Ware (PGW) cultural traditions, representing the later phases of protohistoric occupation in north-western India. The analysis is based on archaeological evidence from major sites including Bhagwanpura, Jognakhera, Daulatpur, Kasital, Mirzapur and Thanesar. Excavations at Bhagwanpura provide important stratigraphic evidence for the transition between the Late Harappan and PGW phases, while Jognakhera and Daulatpur illustrate the development of the Bara cultural horizon. The study demonstrates that Kurukshetra formed an important settlement zone during the post-urban phase of the Indus tradition and highlights cultural continuity and transformation in the Sarasvati basin during the second and early first millennium BCE.

**Keywords:** Protohistoric Archaeology, Kurukshetra District, Sarasvati–Drishadvati Basin, Late Harappan Culture, Bara Cultural Phase, Painted Grey Ware (PGW), Settlement Patterns, Haryana Archaeology.

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## 1. Introduction

The later phases of the protohistoric period in north-western India are marked by a series of cultural developments that followed the decline of the urban Harappan civilization. Archaeological research across the Indus–Sarasvati region indicates that after the disintegration of the Mature Harappan urban

system during the early second millennium BCE, several regional cultural traditions emerged along the eastern margins of the Indus cultural sphere. These post-urban developments are generally grouped under the Late Harappan phase, which is characterized by smaller rural settlements, regional ceramic styles and changes in settlement organization (Kenoyer, 1998; Possehl, 2002). Evidence from the Sarasvati–Drishadvati basin further demonstrates that these developments played an important role in shaping the protohistoric cultural landscape of north-western India.

In the eastern Ghaggar–Sarasvati plains, the Late Harappan phase gradually evolved into regional ceramic traditions such as the Bara culture. Archaeological studies suggest that Bara pottery represents a local transformation of the Late Harappan ceramic tradition in the eastern Sarasvati basin and reflects continuity with earlier Harappan cultural practices. Excavations and archaeological surveys in Haryana have documented numerous sites belonging to this phase, indicating that the region remained an active settlement zone during the post-urban Harappan period (Uesugi & Dangi, 2017).

Following the Late Harappan and Bara cultural horizons, the archaeological record of northern India reveals the emergence of the Painted Grey Ware (PGW) culture. Painted Grey Ware is a fine grey pottery decorated with black painted geometric motifs and serves as the principal diagnostic marker of this cultural phase. The PGW cultural horizon is widely distributed across the Sutlej–Yamuna interfluvium, the Ghaggar plains and the upper Ganga–Yamuna Doab. PGW pottery typically occurs as a small but distinctive component of ceramic assemblages and is often accompanied by plain grey ware and red ware pottery (Gupta & Mani, 2017).

Excavations at several sites indicate that the appearance of PGW does not represent an abrupt cultural break but frequently occurs in association with earlier cultural deposits. At Bhagwanpura in Kurukshetra district, excavations conducted by the Archaeological Survey of India under the direction of J. P. Joshi revealed a stratified cultural sequence demonstrating the transition from the Late Harappan phase to the PGW cultural horizon. The lower levels belong to the Late Harappan phase, while the upper levels contain Painted Grey Ware pottery along with the continuation of certain Late Harappan traits, indicating a period of cultural overlap between the two traditions (Joshi, 1993).

The PGW ceramic tradition is characterized by thin-walled vessels such as bowls and dishes decorated with black painted geometric designs on a grey surface. Although the painted motifs display considerable similarity across many sites, regional variations have also been observed. For example, ceramic assemblages from sites such as Madina in Haryana demonstrate both common PGW decorative patterns and locally distinctive features, suggesting regional diversity within the broader PGW cultural tradition (Singh & Tribedy, 2018).

Chronologically, the PGW culture is generally dated between approximately 1200 BCE and 600 BCE and is regarded as an early Iron Age cultural horizon preceding the Northern Black Polished Ware phase. Archaeological evidence suggests that PGW settlements were primarily rural or semi-urban communities situated along river systems and fertile plains. Settlement pattern studies in the western Gangetic plain and adjoining regions further indicate that these communities were closely associated with agricultural landscapes and riverine environments (Bhardwaj et al., 2023).

Within this broader archaeological framework, the region of Haryana occupies a crucial position in understanding the cultural transition between the Late Harappan and Painted Grey Ware (PGW) phases. Situated within the Sarasvati–Drishadvati basin and the Sutlej–Yamuna interfluvium, Haryana

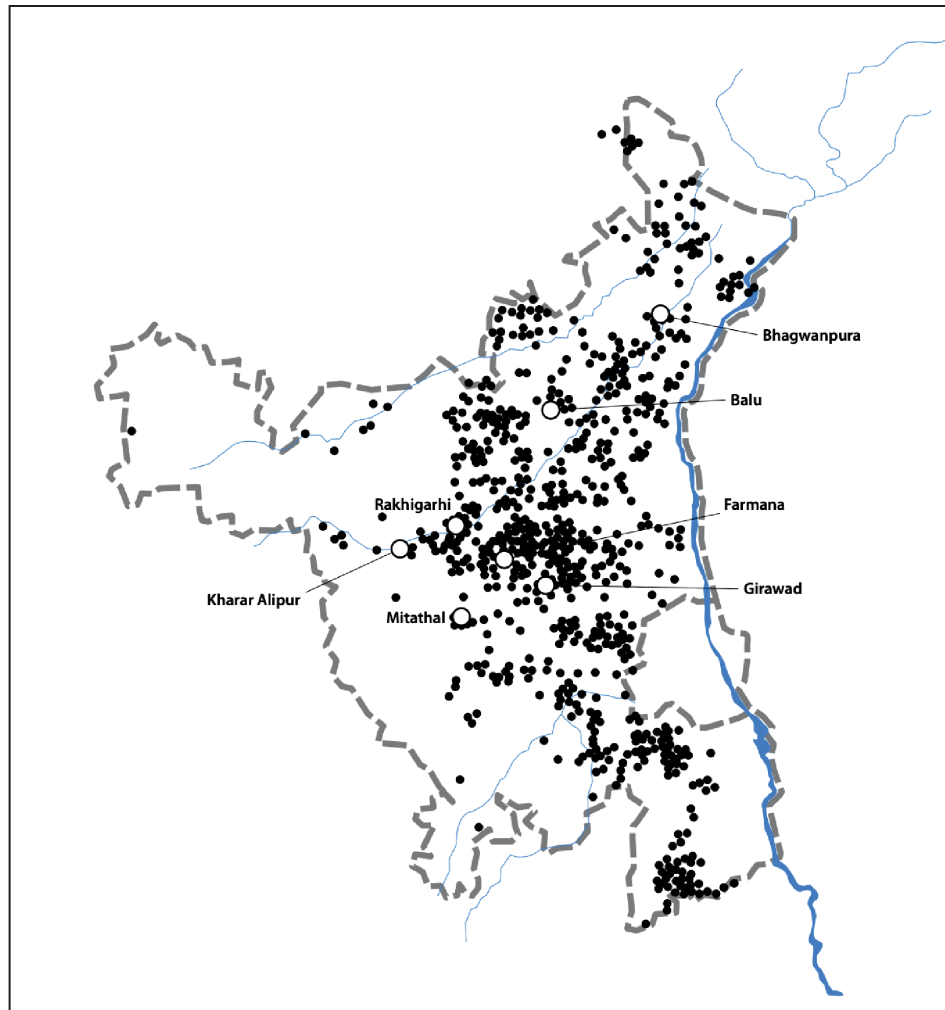


Figure 1: Distribution of Late Harappan sites in Haryana (after Kumar, 2009).

contains numerous protohistoric sites representing the later stages of the Harappan tradition as well as the Painted Grey Ware cultural horizon. While several parts of the state preserve evidence of earlier Harappan phases, other regions primarily reflect the later protohistoric developments that followed the decline of the Indus urban system.

The Kurukshetra district represents an important region where the archaeological record is primarily associated with the Late Harappan, Bara and Painted Grey Ware cultural phases. Archaeological investigations in the district have identified several protohistoric sites, including Bhagwanpura, Jognakhera, Daulatpur, Kasital, Mirzapur and Thanesar. These sites provide valuable evidence for understanding patterns of settlement continuity and cultural transformation in the Sarasvati–Drishadvati basin during the second and early first millennium BCE.

Among these settlements, Bhagwanpura is particularly significant as it provides clear stratigraphic evidence for the transition from the Late Harappan phase to the Painted Grey Ware cultural horizon. Other sites, such as Jognakhera and Daulatpur, have yielded material remains associated with the Bara cultural phase and subsequent PGW occupation, while Mirzapur has produced pottery and faunal remains that shed light on the subsistence practices of protohistoric communities in the region. Collectively, these sites constitute an important archaeological dataset for reconstructing the protohistoric cultural

landscape of Kurukshetra district and for understanding the cultural developments that followed the decline of the Indus Civilization.

## 2. Geographical and Environmental Setting of Kurukshetra District

An important factor influencing settlement distribution in the region is the network of palaeochannels associated with the Ghaggar–Sarasvati drainage system. Geological, geomorphological and remote-sensing studies have identified several palaeochannels in the Ghaggar–Hakra basin, suggesting the presence of a major fluvial system in this region during the Holocene period (*Giosan et al., 2012; Dixit et al., 2018*). These channels are believed to have carried seasonal flows originating from the Shivalik foothills and adjacent highlands, creating favourable conditions for human habitation along their banks.

Within Kurukshetra district, several seasonal streams form part of this drainage network. Among the most prominent are the Markanda and Tangri rivers, which originate in the Shivalik hills and flow southward across the plains before eventually merging with the Ghaggar drainage system. Archaeological surveys in the region indicate that many ancient settlement mounds are situated in proximity to these drainage channels and associated palaeochannels. This pattern suggests that access to water resources and fertile agricultural land played a significant role in determining the location of protohistoric settlements in the region (*Bhardwaj, 2016*).

The environmental setting of Kurukshetra during the protohistoric period was also influenced by climatic conditions characteristic of the northwestern plains. Palaeoclimatic studies indicate that Kurukshetra district is situated in the northern part of the state of Haryana in north-western India and forms an integral part of the vast alluvial plains of the Indo-Gangetic region. Geographically, the district lies within the Sarasvati–Drishadvati basin and occupies an important position in the Sutlej–Yamuna interfluvium. The district extends approximately between 29°52' to 30°12' North latitude and 76°26' to 77°04' East longitude. It is bounded by Ambala and Yamunanagar districts in the north, Karnal district in the south, Kaithal district in the west and the Yamuna River forming the boundary with the state of Uttar Pradesh in the east (*Government of Haryana, 1995; Surinder Singh, 2006*).

Physiographically, Kurukshetra forms part of the level alluvial plains of north India, consisting largely of recent and sub-recent alluvial deposits brought down by rivers originating in the Himalayas. The terrain of the district is generally flat with a gentle gradient from the north-east towards the south-west. The soils are predominantly fertile alluvial loam, which have historically supported intensive agricultural activity and favourable conditions for human settlement. Such fertile alluvial plains have been considered one of the important factors responsible for the continuous occupation of the Sarasvati basin since protohistoric times (*Suraj Bhan, 1973; Singh, 2006*).

The hydrography of the Kurukshetra region is closely associated with the ancient Sarasvati river system. Although the river itself has long since disappeared, several palaeochannels and seasonal streams such as the Markanda, Tangri and other minor drainage channels are believed to represent remnants of the ancient river network that once flowed through the region. These watercourses ultimately connect with the Ghaggar river system and have played an important role in shaping the environmental history of the district. Archaeological studies have demonstrated that many protohistoric settlements in the Sarasvati–Drishadvati basin were located along these palaeochannels

and floodplains, indicating the importance of riverine resources for early agricultural communities (Suraj Bhan, 1973; Possehl, 2002).

Climatically, Kurukshetra experiences a semi-arid to sub-humid climate typical of the north-western plains of India. The region is characterised by hot summers, moderate monsoon rainfall and relatively cool winters. Most of the annual rainfall is received during the southwest monsoon between July and September. These climatic conditions, together with fertile alluvial soils and the availability of water resources, created a favourable ecological setting for early agricultural and pastoral communities (Government of Haryana, 1995).

Because of these favourable geographical and environmental conditions, the Kurukshetra region has witnessed human occupation since protohistoric times. Archaeological explorations and excavations in the district have revealed the presence of several settlements belonging to the Late Harappan, Bara and Painted Grey Ware cultural traditions. The environmental setting of the region, particularly the fertile plains and the river systems associated with the Sarasvati basin, therefore played an important role in the development and distribution of protohistoric settlements during the second and early first millennium BCE (Suraj Bhan, 1973; Possehl, 2002).

### 3. Literature Review

Archaeological investigations in the Kurukshetra region began in the nineteenth century with the pioneering explorations of Sir Alexander Cunningham, who documented several ancient mounds and historical remains in the area (Cunningham 1871). Subsequent archaeological work further expanded the understanding of the region's cultural sequence. B. B. Lal (1985) contributed significantly through his broader studies of the upper Ganga–Sutlej basin, which also helped contextualize the protohistoric and early historic developments of the Kurukshetra area. Later explorations by scholars such as U. V. Singh (1976), Suraj Bhan (1977), Manmohan Kumar (1978) and Amar Singh (1981) identified numerous archaeological sites and provided important data on the protohistoric cultural landscape of Haryana. More recent studies and explorations by Arun Kesarwani (1991) and Vinay Kumar and S. Krishnamurthy (2022) have further contributed to documenting the archaeological heritage of the Kurukshetra region.

### 4. Research Gap

Previous studies have contributed significantly to the understanding of the Painted Grey Ware (PGW) culture in northern India, particularly in relation to its chronology, ceramic typology and geographical distribution (Gupta & Mani, 2017; Bhardwaj et al., 2023). Similarly, archaeological investigations in the Sarasvati–Drishadvati basin have highlighted the importance of Haryana in understanding the transition from the Late Harappan phase to the early Iron Age cultural horizon (Suraj Bhan, 1973). However, most of these studies focus on the broader distribution and characteristics of PGW culture, while detailed regional analyses of specific areas remain limited. In particular, the protohistoric settlements of Kurukshetra district—such as Bhagwanpura, Jognakhera, Daulatpur, Kasital and Mirzapur—have rarely been examined collectively within a regional framework. Therefore, the present study attempts to examine these settlements in order to better understand the cultural development and settlement pattern of the Late Harappan and PGW phases in the Kurukshetra region.

## 5. Aim and Objectives

- The primary aim of the present study is to examine the protohistoric cultural sequence of excavated archaeological sites in Kurukshetra district, Haryana.
- The study seeks to understand the cultural development of the region through archaeological evidence associated with the Late Harappan, Bara and Painted Grey Ware cultural phases.
- The specific objectives of the study are to analyse the cultural sequence of important excavated sites in the district.
- The study also aims to examine the material cultural assemblages reported from these sites in order to understand their chronological position within the protohistoric period.

Objective is to explore the cultural transition and interaction between the Late Harappan tradition and the Painted Grey Ware horizon in the Kurukshetra region. Through this analysis, the study attempts to reconstruct the protohistoric cultural development of Kurukshetra district within the broader archaeological framework of the Sarasvati–Drishadvati basin.

## 6. METHODOLOGY

The present study is based primarily on the analysis of archaeological data obtained from excavated protohistoric sites in Kurukshetra district, Haryana. The research adopts a descriptive and analytical approach in order to understand the cultural sequence of the region during the protohistoric period. Archaeological information related to the excavated sites has been collected from excavation reports, research articles, published monographs and other relevant scholarly works dealing with the archaeology of Haryana and the Sarasvati–Drishadvati basin.

The study focuses on the excavated sites of Bhagwanpura, Jognakhera, Daulatpur, Kasital, Mirzapur and Thanesar, where evidence of Late Harappan, Bara and Painted Grey Ware cultural phases has been reported. Data related to cultural deposits, ceramic assemblages and associated material culture from these sites have been examined in order to understand their chronological sequence and cultural characteristics.

In addition, secondary sources such as archaeological survey reports, settlement pattern studies and relevant academic publications have been consulted to contextualize the archaeological evidence within the broader protohistoric developments of the region. The collected data has been analysed comparatively in order to reconstruct the cultural sequence of the excavated sites and to understand the transition between the Late Harappan and Painted Grey Ware phases in the Kurukshetra region.

## 7. Protohistoric Sites of Kurukshetra District

Archaeological explorations and excavations carried out in Kurukshetra district have revealed several protohistoric settlements that provide significant evidence for understanding the cultural development of the region during the later stages of the protohistoric period. The archaeological record of the district is primarily associated with the Late Harappan, Bara and Painted Grey Ware (PGW) cultural phases, indicating that the region continued to be occupied even after the decline of the urban Harappan centres. The fertile alluvial plains of the Sarasvati–Drishadvati basin, along with the presence of

palaeochannels and seasonal streams, created favourable environmental conditions that supported human habitation and agricultural activities.

The excavated sites of Bhagwanpura, Jognakhera, Daulatpur, Kasital, Mirzapur and Thanesar have yielded important archaeological data that help reconstruct the protohistoric cultural sequence of the district. Among these, Bhagwanpura is particularly significant because it provides stratigraphic evidence for the transition from the Late Harappan phase to the Painted Grey Ware cultural horizon. Other sites such as Jognakhera and Daulatpur have produced cultural materials associated with the Bara and Late Harappan traditions, while Kasital, Mirzapur and Thanesar have yielded Painted Grey Ware pottery along with associated ceramic assemblages.

These archaeological sites collectively demonstrate that Kurukshetra district formed an important settlement zone during the later phases of protohistoric cultural development in the Sarasvati–Drishadvati region. The evidence obtained from these sites contributes to understanding the cultural continuity and transformation between the Late Harappan and Painted Grey Ware phases in north-western India. The spatial distribution of the major protohistoric sites of the district, including Bhagwanpura, Jognakhera, Daulatpur, Kasital, Mirzapur and Thanesar, is illustrated in Fig 2. A brief discussion of these sites is presented in the following sections.

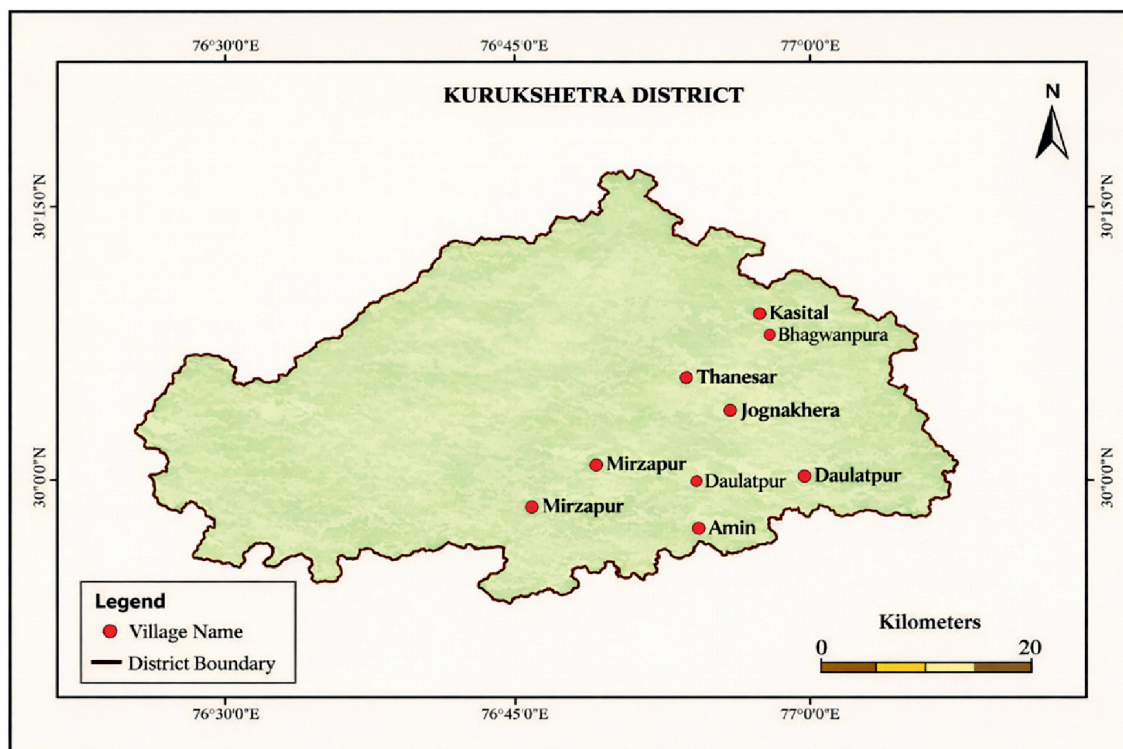


Figure 2: Map showing the location of Protohistoric archaeological sites in Kurukshetra District, Haryana, discussed in the present study- Source: Prepared by the author.

### 7.1. Bhagwanpura

Bhagwanpura is an important protohistoric site located in the Kurukshetra district of Haryana, situated on the right bank of the ancient Sarasvati (Ghaggar) river at approximately 30°04' N latitude and 76°57'

E longitude. The site was excavated by the Archaeological Survey of India between December 1975 and February 1976 under the direction of J. P. Joshi, with the objective of examining the relationship between the Late Harappan and Painted Grey Ware (PGW) cultural traditions in the Sarasvati–Drishadvati region (Joshi, 1975–76; Archaeological Survey of India, 1976, p. 16). Excavations revealed an occupational deposit of about 2.70 m thickness, representing a twofold cultural sequence. The earlier occupation corresponds to the Late Harappan phase (Period IA), while the later phase is associated with the Painted Grey Ware culture (Period IB). The stratigraphic sequence indicates a continuity of occupation and a clear cultural overlap between the Late Harappan and PGW traditions at the site. Archaeological studies of PGW settlements in Haryana have also identified Bhagwanpura as representing an early stage of PGW expansion in the region, where PGW communities coexisted with the Late Harappan population (Joshi, 1975–76; Dutt, 1986).

Evidence from the excavations further indicates that the architectural development at Bhagwanpura passed through several stages, beginning with semicircular or rounded huts and later evolving into structures with mud walls and eventually baked brick constructions, suggesting a gradual transformation in settlement pattern and building technology. The excavations also revealed a large structural complex with thirteen rooms of varying sizes, reflecting a relatively developed settlement organization. Two graves, one belonging to a child and the other to an adult, were also discovered at the site, although they were devoid of grave goods. Other finds from the site include animal figurines, beads, bone objects and copper artefacts, which provide important evidence for the material culture of the settlement during the PGW phase (Tripathi, 1976, p.32).

**Late Harappan Phase:** The earliest settlement at Bhagwanpura was established on the alluvial deposits of the Sarasvati River. Archaeological evidence indicates that the inhabitants constructed solid mud platforms to protect their habitation from periodic flooding. One such platform measuring approximately  $4.25 \times 10$  m with a landing step was exposed during excavation. After the accumulation of about 0.70–0.80 m of cultural deposit, the settlement appears to have been affected by flooding, although occupation continued even after this event (Joshi, 1975–76; IAR 1975–76).

The ceramic assemblage of this phase mainly consists of sturdy red ware pottery, comparable to that reported from Late Harappan sites such as Bara, Bahadarabad, Atranjikhera, Siswal IIB, Mitathal IIB and Daulatpur. Common pottery forms include dish-on-stand, bowls, drooping dishes, cup-on-stand, high-necked jars, basins and button-based goblets. Decorative motifs on pottery include horizontal bands, criss-cross patterns, hatched triangles, arches and pipal leaf designs, which are typical of Late Harappan ceramic traditions in the Sarasvati basin (Joshi, 1975–76).

Other archaeological finds from this phase include terracotta bull figurines with long horns, anthropomorphic terracotta figures, copper rods, terracotta toy cart-wheels, beads of faience and semi-precious stones, and terracotta bangles, indicating a well-developed Late Harappan settlement characterised by domestic occupation and craft activities.

**Painted Grey Ware Phase:** The later occupation at Bhagwanpura belongs to the Painted Grey Ware cultural phase, although the early levels of this phase still show the continuation of Late Harappan pottery and cultural elements. This suggests that the arrival of PGW-using communities did not immediately replace the Late Harappan population but resulted in a period of cultural interaction and overlap. Such stratigraphic coexistence of Late Harappan and PGW assemblages at Bhagwanpura

has been recognised as an important indicator of the transitional cultural horizon in northern India (Joshi, 1975–76; Dutt, 1986).

Painted Grey Ware pottery from this phase is characterised by a fine grey fabric decorated with black painted geometric designs, including linear bands and intersecting patterns. The principal ceramic forms include bowls and dishes, which represent the typical vessel shapes of the PGW ceramic tradition.

Excavations revealed three phases of structural activity during the PGW occupation. In the earliest phase, inhabitants lived in round or semi-circular huts supported by wooden posts. A structure defined by twenty-three postholes was discovered in the southeastern part of the mound. Within this structure, saddle querns and pestles were recovered, suggesting its possible use as a grain-processing area (Joshi, 1975–76; IAR 1975–76).

The second structural phase is represented by mud-walled houses forming a residential complex consisting of thirteen rooms, a corridor and a courtyard. These rooms yielded PGW pottery along with associated grey ware and red ware, animal bones, terracotta beads, bone styli and copper objects. Small quantities of Late Harappan pottery were also recovered from these levels, indicating the persistence of earlier cultural traditions within the PGW settlement (Joshi, 1975–76, p17).

In the third structural phase, structures constructed with baked bricks were identified. Bricks of different sizes were recovered, some bearing finger impressions, suggesting local manufacture. Excavations also exposed oval-shaped structures with heavily burnt walls, which may have served specialised functions and possibly had ritual significance.

## **7.2. Daulatpur**

Daulatpur is an important protohistoric mound situated in the Kurukshetra district of Haryana, within the Ghaggar–Sarasvati basin, located at approximately 30°07' N latitude and 76°52' E longitude. Excavations at the site were undertaken by the Department of Ancient Indian History, Culture and Archaeology, Kurukshetra University under the direction of U. V. Singh, assisted by S. P. Shukla. The excavations were carried out in successive seasons with the aim of obtaining further evidence regarding the earliest occupation of the mound and examining the relationship between the Late Harappan and the Painted Grey Ware cultures as reported in *Indian Archaeology – A Review (1976–77; 1977–78)*.

The investigations revealed a stratified cultural sequence comprising three principal periods, indicating continuous occupation of the mound from the Late Harappan phase to the early historical period.

The earliest occupation, Period I, represents the Late Harappan cultural phase. This level is represented by an occupational deposit averaging about 1.80 m in thickness above the natural soil. Structural remains of this phase include walls constructed of baked and half-baked bricks, ovens and mud corn-bins, indicating domestic habitation and food storage facilities. The ceramic assemblage consists predominantly of thick red ware decorated with black painted linear and geometric designs, sometimes accompanied by incised decoration. The pottery shows a mixed assemblage combining Pre-Harappan, Harappan and Cemetery H ceramic traits, comparable in some respects with the pottery traditions of the Bara cultural horizon. Associated antiquities from this level include terracotta animal figurines (mainly bulls), toy cart-wheels, triangular and circular terracotta cakes, beads of paste,

faience, steatite, terracotta and stone, shell bangles, bone points and arrowheads, along with a copper fishhook and a fragment of a copper spearhead (IAR 1976–77, p.19).

The succeeding phase, Period II, corresponds to the Painted Grey Ware (PGW) cultural horizon. This phase is characterized by the occurrence of Painted Grey Ware pottery along with coarse grey ware, red ware and black-slipped ware. Excavation revealed three structural levels including floors with broken pottery found in situ, indicating repeated episodes of occupation. Evidence of post-holes and a storage corn-bin suggests domestic architecture and agricultural storage practices. Artefacts from this phase include terracotta humped bull figurines, ghata-shaped beads, ear-studs, discs and toy cart-wheels with single or double hubs, along with bone points, arrowheads, stone beads and copper ornaments. The upper levels of this phase also yielded fragments of iron objects and a piece of glass bangle, suggesting the gradual introduction of new materials and technological developments (IAR 1977–78, p.23; Tripathi, 1976, p.33).

The uppermost occupation corresponds to Period III, belonging to the early historical phase. Although no substantial structural remains were recorded from this phase, a number of artefacts were recovered including terracotta sealings bearing Brahmi inscriptions, animal figurines representing horses and camels, terracotta discs and beads, glass and shell bangles, copper coins and several iron objects such as blades, nails and sickles. These finds indicate that the mound continued to be occupied during the early historical period.

### **7.3. Kasital**

Kasital is an archaeological site located in Kurukshetra district, Haryana, within the Sarasvati–Drishadvati basin, situated at approximately 30°09' N latitude and 76°49' E longitude. Excavations at the site were carried out by the Explorations Branch of the Archaeological Survey of India under the direction of Jagat Pati Joshi, assisted by S. N. Jaiswal, J. R. Batra and G. Laxminarayana, with the objective of determining the cultural sequence of the settlement (IAR, 1975–76, p17).

The excavation revealed a three-fold cultural sequence, and the stratigraphy indicates that the site experienced successive flooding episodes of the Sarasvati River, which influenced the formation of the occupational deposits.

The earliest occupation at Kasital belongs to the Painted Grey Ware (PGW) culture. The ceramic assemblage is characterized by the presence of Painted Grey Ware along with a small quantity of black-and-red ware. Some red ware shapes recovered from the site resemble the Ahichchhatra type and rimless handis, indicating similarities with PGW assemblages known from other sites in the Sutlej–Yamuna interfluvium.

Among the notable artefacts from the PGW levels are ghata-shaped terracotta beads and a dagger-shaped ivory pendant. Structural remains include a circular barn measuring about 2.05 m in diameter and a mud wall with post-holes, indicating habitation activity and storage facilities within the settlement (IAR, 1975–76, p17).

The upper levels of the mound yielded materials belonging to later historical and medieval periods, indicating subsequent reoccupation of the site. However, these phases fall outside the scope of the present study, which focuses on the protohistoric cultural developments of the Kurukshetra region.

The evidence from Kasital thus confirms the presence of Painted Grey Ware settlements in the Kurukshetra area, contributing to the understanding of protohistoric occupation in the Sarasvati–Drishadvati basin.

#### **7.4. Mirzapur**

Mirzapur is a small protohistoric mound located in Kurukshetra district, Haryana (29°58'N; 76°49'E), approximately 200 m east of Raja Karna ka Qila (used here only as a geographical reference point). Excavations conducted by the Department of Ancient Indian History, Culture and Archaeology, Kurukshetra University between 1972 and 1976 revealed important evidence of Late Harappan occupation in the Sarasvati–Drishadvati basin (IAR, 1975–76, p18; Sharma, 1996). Topographical observations indicate that during the earliest phase of settlement the Sarasvati river flowed close to the site, although today its course lies nearly four kilometres away.

Archaeological investigations revealed that the earliest habitation at Mirzapur belongs to the Late Harappan phase (IAR 1975–76; Sharma, 1996), represented by a deposit approximately 1–1.5 m thick. The settlement was characterized by mud-brick structures belonging to three structural phases. Architectural remains include fireplaces, refuse pits, ovens and mud corn-bins, indicating domestic habitation and food-processing activities. The material culture recovered from these levels includes a large variety of beads made from semi-precious stones such as agate, jasper, crystal and carnelian, along with faience ornaments, terracotta figurines, terracotta cakes (circular and triangular), toy-cart wheels, discs, marbles, stone querns and pestles, and copper objects such as chisels, needles and rings (IAR 1975–76).

Zooarchaeological evidence from the site provides significant insights into the subsistence practices of the Late Harappan inhabitants. A detailed study of the animal skeletal remains recovered from the excavation was conducted by A. K. Sharma, who analysed 155 bone specimens, of which 84 belonged to the Late Harappan levels (Sharma 1996). The faunal assemblage indicates that domesticated animals dominated the economy, with cattle (*Bos indicus*) forming the most abundant species, followed by sheep (*Ovis*), goat (*Capra*) and buffalo (*Bubalus bubalis*). The predominance of cattle remains suggests that bovines played a central role not only as a source of meat but also as draught animals used for agricultural activities and transport (Sharma 1996).

Other domesticated species represented in the assemblage include pig (*Sus scrofa*), dog (*Canis familiaris*) and possibly horse (*Equus caballus*). In addition to domestic fauna, several wild species such as spotted deer (*Axis axis*) and hare (*Lepus nigricollis*) were also identified, indicating that hunting supplemented the pastoral economy of the settlement. Aquatic resources were also exploited to some extent, as evidenced by the presence of fish remains and freshwater mussel shells, reflecting the proximity of water bodies in the ancient landscape (Sharma 1996).

A detailed examination of cattle bones revealed skeletal changes such as pedosis and exostosis in phalanges, suggesting intensive use of cattle for ploughing and traction, which in turn indicates the importance of agriculture in the local economy. The absence of bone rarefaction further suggests that adequate green fodder was available in the region, implying favourable environmental conditions for pastoral activities during the Late Harappan period (Sharma 1996).

Recent syntheses of zooarchaeological evidence from Harappan sites of Haryana also place Mirzapur within the broader subsistence pattern observed in the Ghaggar–Sarasvati region, where Harappan communities relied primarily on cattle-based pastoralism supplemented by sheep, goat and occasional hunting of wild fauna (Grover & Rajpal, 2025)

Archaeological investigations at Harsh ka Tila (Thanesar) also attempted to examine the possibility of protohistoric occupation in the Kurukshetra region. Excavations undertaken by the Archaeological Survey of India aimed to identify Painted Grey Ware cultural levels beneath the historical deposits of the mound. However, the exploration did not yield clear stratified evidence of PGW remains, although the investigation highlighted the archaeological potential of the site and indicated the need for further systematic excavations in the region (IAR 1987–88, p28).

### **7.5. Jognakhera**

Jognakhera is an important protohistoric site located in Kurukshetra district of Haryana, situated on the north-western bank of a palaeochannel of the Sarasvati River at approximately 29°59' N latitude and 76°48' E longitude. The mound rises to a height of about 5 m and originally covered an area of nearly 4–6 acres, although a large portion of the deposit has been disturbed due to soil removal for agricultural and domestic purposes. Archaeological investigations have demonstrated that the site represents one of the significant settlements of the Bara cultural horizon in the eastern Sarasvati–Drishadvati basin, with subsequent evidence of Painted Grey Ware (PGW) occupation (IAR 2003–04; IAR 2004–05; Malik et al., 2003–05).

Excavations at Jognakhera were carried out during the field seasons 2003–04 and 2004–05 by the Department of Archaeology and Museums, Government of Haryana under the direction of D. S. Malik and Madhav Acharya, assisted by R. S. Dahiya and other members, under the overall supervision of R. S. Bisht of the Archaeological Survey of India. The investigations were undertaken as part of the Sarasvati Heritage Project with the objective of examining the cultural sequence of the mound and understanding the stratigraphic relationship between the Bara cultural horizon and the later Painted Grey Ware deposits (IAR 2003–04; Malik et al., 2003–05).

The excavations revealed a cultural deposit of about 4.20–4.25 m above the natural river sand, consisting of nearly fifteen stratigraphic layers. The earlier and dominant occupation at the site belongs to the Bara cultural phase, which represents a regional development of the Late Harappan tradition in the Ghaggar–Sarasvati plains. Studies on the development of Bara pottery indicate that this ceramic tradition emerged during the post-urban phase of the Indus Civilization and reflects a transformation of Harappan ceramic traditions in the eastern domain of the Ghaggar basin (Uesugi & Dangi, 2017). The presence of this ceramic assemblage at Jognakhera therefore places the site within the broader network of Late Harappan settlements distributed across the Ghaggar plains.

The ceramic assemblage recovered from the Bara levels consists primarily of red or buff ware pottery with a fine slip. Common vessel forms include dishes, bowls, dish-on-stand, bowl-on-stand, vases and storage jars. These vessels often display painted geometric designs executed in black or brown pigments, such as horizontal bands, loops suspended from bands, triangles filled with oblique or wavy lines and other linear motifs.

In a few instances naturalistic designs depicting animals such as bulls or birds are also present. Some vessels also bear incised decorations composed of wavy lines, zig-zag patterns and horizontal



Figure 3: Jognakhera archaeological mound, Kurukshetra district, Haryana: (a) general view of the mound showing exposed cultural deposits and disturbed sections; (b) site identification board marking the location of the mound along the palaeochannel of the Sarasvati River. Photographs by the author.

bands intersected by oblique strokes (IAR 2003–04; Malik et al., 2003–05; Uesugi & Dangi, 2017). These ceramic features correspond closely with the Bara pottery tradition identified at several sites in the Ghaggar plains including Farmana, Mitathal and Bedwa-2.

The artefact assemblage associated with the Bara phase at Jognakhera includes beads made of carnelian, agate, steatite, shell and faience, along with terracotta objects such as toy wheels, animal figurines, discs and balls. Copper objects including a razor and bangles were also recovered, indicating the presence of craft activities and metalworking traditions at the settlement (IAR 2003–04; Malik et al., 2003–05). The occurrence of these artefacts suggests that the inhabitants of the site were engaged in a mixed agro-pastoral economy supported by local craft production.



**Figure 4: Artefacts from the Bara cultural phase at Jognakhera: (a–b) red ware pottery vessels, (c) copper razor, and (d) painted and plain ceramic fragments recovered during excavation- Source: Department of Archaeology & Museums, Haryana, Jognakhera Excavation Booklet.**

One of the most notable features of the excavation is the discovery of several kilns and furnaces, particularly in the south-western part of the mound. These installations are generally oval in shape and some measure up to about  $2.50 \times 1.10$  m. The sides of the furnaces show intense burning, while their bases consist of sandy deposits. In certain cases partially burnt or incomplete vessels were recovered from within these structures, suggesting that they were used for pottery firing. The concentration of such installations indicates that Jognakhera may have functioned as an important centre for ceramic production during the Bara phase (IAR 2003–04; Malik et al., 2003–05).

Evidence of a later occupation belonging to the Painted Grey Ware cultural horizon was also identified at the site. PGW pottery was found mainly in the southern portion of the mound and occasionally occurs in association with Bara pottery in certain trenches. However, the stratigraphic relationship between the two assemblages is not always clearly defined due to disturbances in the deposits (IAR 2004–05). The PGW assemblage consists of fine grey pottery decorated with black painted geometric designs, typical of the early Iron Age cultural horizon of northern India.

A significant structural feature discovered during excavation is a V-shaped channel approximately 2.25 m wide and more than 2 m deep that had been cut into the natural soil around the settlement. Archaeological evidence suggests that this channel was constructed during the Bara phase, possibly as a defensive feature or for drainage purposes. During the subsequent PGW occupation the channel appears to have gone out of use, and later inhabitants settled above or outside this earlier feature (IAR 2004–05).

### *7.6. Thanesar*

Thanesar is an important archaeological site located in Kurukshetra district, Haryana. The site lies at approximately  $29^{\circ}59'$  N latitude and  $76^{\circ}50'$  E longitude. Archaeological excavations at Thanesar were undertaken by the Institute of Archaeology of the Archaeological Survey of India with the objective of providing field training to students and to investigate the nature of occupation at the site. The excavations were conducted under the direction of B. M. Pande in cooperation with J. P. Srivastava of the Excavations Branch-II, Delhi, along with other members of the Archaeological Survey of India (Indian Archaeology – A Review 1987–88: 28).

The archaeological mound at Thanesar, locally known as Harsh-ka-Tila, measures approximately  $900 \times 500$  metres and rises to a height between 15 and 23 metres. On the basis of surface features, the mound was divided into three sectors designated as TSR-1, TSR-2 and TSR-3 from north to south. Excavation trenches were laid out in different parts of the mound in order to obtain representative archaeological evidence from various areas of the site.

The excavations revealed an occupational deposit of nearly 16 metres and brought to light a long cultural sequence ranging from the Kushana period to the Mughal period. However, in one of the trenches a limited number of grey ware sherds belonging to the Painted Grey Ware (PGW) tradition and bearing painted designs were recovered. Although these remains were found only in a restricted area, they provide evidence of an earlier protohistoric occupation at the site (Indian Archaeology – A Review 1987–88: 29).

In addition to the excavated sites discussed above, archaeological explorations in the Kurukshetra district have reported several other protohistoric settlements. Among these, Bahni Theh represents an

Early Harappan (Siswal) settlement with evidence of later Harappan occupation, while Kandholi and Kanoli have yielded Late Harappan and Bara cultural materials respectively (Suraj Bhan & Shaffer 1978; Kumar 1978). Similarly, the mound at Amin, located about 8 km south-east of Kurukshetra at latitude 29°00'54" N and longitude 76°00'59" E, has yielded Painted Grey Ware (PGW) along with later pottery during surface explorations, indicating the presence of early Iron Age cultural activity in the region (Tripathi, 1976, p. 32; Singh et al., 2024). These sites are known primarily from surface explorations and have not yet been excavated; nevertheless, they suggest that the Kurukshetra region contained a wider distribution of protohistoric settlements beyond the excavated mounds.

## 8. Protohistoric Cultural Sequence of Kurukshetra District

The protohistoric cultural sequence of Kurukshetra district must be understood within the wider archaeological landscape of Haryana and the Sarasvati–Drishadvati basin. Archaeological investigations conducted across Haryana have revealed a long cultural sequence beginning with the Pre-Harappan phase and continuing through the Early and Mature Harappan stages into the Late Harappan and Painted Grey Ware cultural horizons. Survey and excavation data demonstrate that the Ghaggar–Chautang river system and its associated palaeochannels formed one of the major settlement corridors of the Indus tradition in north-western India. Sites such as Kunal, Bhirrana, Banawali, Rakhigarhi and Siswal illustrate the development of this cultural sequence in different parts of the region.

The distribution of protohistoric settlements in Haryana shows a clear relationship with the palaeochannels of the Sarasvati river system. Numerous settlements were established along these ancient river courses, which provided fertile alluvial soils and reliable water resources for agricultural communities. Archaeological surveys have demonstrated that the Sarasvati–Drishadvati basin constituted an important cultural zone where settlements continued even after the decline of the urban Harappan centres. In this region the Late Harappan phase is characterised by smaller settlements and ceramic assemblages that display both continuity with earlier Harappan traditions and the emergence of regional stylistic developments.

In the eastern Sarasvati basin, particularly in Haryana, the Late Harappan phase gradually developed into the Bara cultural tradition. Archaeological evidence from sites such as Siswal and other settlements in the Ghaggar plains suggests that Bara pottery represents a regional development of the Late Harappan ceramic tradition. This phase reflects the persistence of post-urban Harappan communities that adapted to changing environmental and socio-economic conditions in the Sarasvati basin (Suraj Bhan, 1973).

“During the early first millennium BCE, the archaeological record of northern India is marked by the widespread appearance of Painted Grey Ware pottery, which constitutes one of the most distinctive ceramic traditions of the early Iron Age. PGW pottery is characterized by fine grey vessels decorated with black painted geometric designs and is widely distributed across the Sutlej–Yamuna interfluvium and the upper Gangetic plains. Archaeological investigations in Haryana have reported PGW remains from several sites situated along river valleys and fertile alluvial plains, suggesting that the distribution of these settlements was closely related to ecological and environmental factors.

Within this broader regional framework, the archaeological record of Kurukshetra district reflects primarily the later stages of protohistoric cultural development in the Sarasvati–Drishadvati basin. The

excavated sites of Bhagwanpura, Jognakhera, Daulatpur, Kasital, Mirzapur and Thanesar collectively illustrate the cultural sequence of the district and provide valuable evidence for understanding settlement continuity and cultural transformation during the second and early first millennium BCE.

Among these sites, Bhagwanpura occupies a particularly significant position in the archaeological discourse on the Late Harappan–Painted Grey Ware transition. Excavations at the site revealed stratified deposits in which Late Harappan levels are overlain by deposits containing Painted Grey Ware pottery. This stratigraphic relationship suggests a gradual cultural transformation rather than an abrupt cultural break between the two traditions. The evidence from Bhagwanpura has therefore been frequently cited in discussions concerning the continuity of settlement traditions in the Sarasvati basin during the transition from the Late Harappan phase to the early Iron Age cultural horizon represented by Painted Grey Ware (Joshi 1977; Joshi 1993).

Evidence from other sites in Kurukshetra district complements this pattern. Jognakhera and Daulatpur have yielded material remains associated with the Late Harappan and Bara traditions, while Kasital, Mirzapur and Thanesar have produced Painted Grey Ware ceramics and related cultural material. The presence of these cultural phases within a relatively limited geographical area suggests that Kurukshetra formed part of an active settlement zone within the Sarasvati–Drishadvati basin during the later stages of protohistoric cultural development.

Taken together, the archaeological evidence from these sites indicates that the protohistoric sequence of Kurukshetra district reflects broader regional processes of cultural continuity, transformation and adaptation that characterised north-western India during the transition from the second to the first millennium BCE. The settlement pattern along the palaeochannels of the Sarasvati system and the stratigraphic evidence from sites such as Bhagwanpura demonstrate that the region played a significant role in the cultural developments that linked the Late Harappan tradition with the Painted Grey Ware horizon.

## 9. Conclusion

The present study has examined the protohistoric cultural sequence of excavated archaeological sites in Kurukshetra district, Haryana, with the objective of understanding the cultural developments that followed the decline of the urban Harappan civilization in the Sarasvati–Drishadvati basin. Archaeological evidence from the sites of Bhagwanpura, Jognakhera, Daulatpur, Kasital, Mirzapur and Thanesar demonstrates that the region played an important role in the later stages of protohistoric cultural development in north-western India.

The archaeological data indicate that the protohistoric cultural landscape of Kurukshetra district is primarily associated with the Late Harappan, Bara and Painted Grey Ware cultural phases. Unlike several other regions of Haryana where Early and Mature Harappan settlements are more prominently represented, the archaeological record of Kurukshetra reflects cultural developments that occurred during the post-urban phase of the Indus tradition. The evidence suggests that settlement activity in the region continued even after the decline of the Harappan urban centres, indicating cultural continuity and regional adaptation in the Sarasvati–Drishadvati basin.

Among the sites examined in this study, Bhagwanpura occupies a particularly significant position because it provides clear stratigraphic evidence for the transition between the Late Harappan and

Painted Grey Ware cultural traditions. The coexistence of Late Harappan pottery with early PGW assemblages at this site indicates a gradual cultural transformation rather than an abrupt break between the two traditions. This evidence has important implications for understanding the cultural continuity between the late phases of the Indus Civilization and the early Iron Age cultural developments of northern India.

Other sites such as Jognakhera and Daulatpur further illustrate the persistence of Late Harappan cultural traditions and their regional transformation into the Bara cultural horizon. The presence of Bara pottery and associated material culture at these sites suggests that post-urban Harappan communities continued to inhabit the Ghaggar–Sarasvati plains and adapted their cultural practices to changing environmental and socio-economic conditions. Evidence from Mirzapur, particularly the faunal remains, highlights the importance of cattle-based pastoralism and mixed agro-pastoral subsistence strategies among Late Harappan communities in the region.

The distribution of these settlements along the palaeochannels of the Sarasvati river system also demonstrates the strong relationship between protohistoric settlement patterns and environmental factors. Fertile alluvial soils, seasonal river systems and access to water resources provided favourable ecological conditions that supported agricultural and pastoral activities, thereby encouraging the continued occupation of the region during the second and early first millennium BCE.

Taken together, the archaeological evidence from Kurukshetra district suggests that the region formed an important settlement zone within the eastern domain of the Sarasvati–Drishadvati basin during the later phases of protohistoric cultural development. The stratigraphic sequences and material culture recovered from the excavated sites illustrate processes of cultural continuity, regional transformation and adaptation that linked the Late Harappan tradition with the Painted Grey Ware cultural horizon. Therefore, the study contributes to a better understanding of the cultural developments that characterized north-western India during the transition from the second to the first millennium BCE and highlights the significance of Kurukshetra as an important archaeological landscape within the broader Indus–Sarasvati cultural sphere.

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### References

- Archaeological Survey of India. (1979). *Indian archaeology 1975–76: A review* (B. K. Thapar, Ed.). New Delhi: Archaeological Survey of India.
- Archaeological Survey of India. (1980). *Indian archaeology 1976–77: A review* (B. K. Thapar, Ed.). New Delhi: Archaeological Survey of India.

- Archaeological Survey of India. (1980). *Indian archaeology 1977–78: A review* (B. K. Thapar, Ed.). New Delhi: Archaeological Survey of India.
- Archaeological Survey of India. (1993). *Indian archaeology 1987–88: A review*. New Delhi: Archaeological Survey of India.
- Archaeological Survey of India. (2009). *Indian archaeology 2002–03: A review*. New Delhi: Archaeological Survey of India.
- Archaeological Survey of India. (2011). *Indian archaeology 2003–04: A review*. New Delhi: Archaeological Survey of India.
- Archaeological Survey of India. (2014). *Indian archaeology 2004–05: A review*. New Delhi: Archaeological Survey of India.
- Bhan, S. (1973). The sequence and spread of protohistoric cultures in the Upper Saraswati Basin. In D. P. Agrawal & A. Ghosh (Eds.), *Radiocarbon and Indian archaeology* (pp. 252–263). Bombay: Tata Institute of Fundamental Research.
- Bhan, S., & Shaffer, J. G. (1978). New discoveries in northern Haryana. *Man and Environment*, 2, 59–68.
- Bhardwaj, A. (2016). *Archaeology of the Ghaggar Basin*. New Delhi: Aryan Books.
- Dangi, V. (2018). Indus (Harappan) civilization in the Ghaggar Basin. In A. Uesugi (Ed.), *Current research on Indus archaeology* (pp. 56–86). Osaka: Research Group for South Asian Archaeology, Archaeological Research Institute, Kansai University.
- Dixit, Y., Hodell, D. A., Petrie, C. A., & Singh, R. N. (2018). Abrupt weakening of the summer monsoon in northwest India ~4100 yr ago. *Geology*, 46(4), 339–342.
- Dutt, B. (1986). The stages of expansion and growth of the Painted Grey Ware culture in the light of fresh investigations in Haryana. *Proceedings of the Indian History Congress*, 47, 161–165.
- Giosan, L., Clift, P. D., Macklin, M. G., Fuller, D. Q., Constantinescu, S., Durcan, J. A., Stevens, T., Duller, G. A. T., Tabrez, A. R., Gangal, K., Adhikari, R., Alizai, A., Filip, F., VanLaningham, S., & Syvitski, J. P. M. (2012). Fluvial landscapes of the Harappan civilization. *Proceedings of the National Academy of Sciences of the United States of America (PNAS)*, 109(26), E1688–E1694. <https://doi.org/10.1073/pnas.1112743109>
- Grover, R., & Rajpal. (2025). Faunal remains reported from the excavated Harappan sites of the region of Haryana (India): Zooarchaeological perspective. *Journal of History, Archaeology and Cultural Heritage*, 2(1), 43–69.
- Gupta, V. K., & Mani, B. R. (2017). Painted Grey Ware culture: Changing perspectives. *Heritage: Journal of Multidisciplinary Studies in Archaeology*, 5, 370–379.
- Jafri, N. H. A. (1998). Territory, artefact assemblage and culture: A study of Painted Grey Ware. *Proceedings of the Indian History Congress*, 59.
- Joglekar, P. P., Sharada, C. V., & Abhayan, G. S. (2013). Faunal diversity during the Harappan period in Haryana: A review. *Heritage: Journal of Multidisciplinary Studies in Archaeology*, 1, 262–287.
- Joshi, J. P. (1976). A note on the excavation at Bhagwanpura. *Puratattva*, 8, 178–180.
- Joshi, J. P. (1977). Overlap of the Late Harappan culture and Painted Grey Ware culture in the light of recent excavations in Haryana, Panjab and Jammu. Paper presented at the seminar *Indus Civilization: Problems and Issues*, Indian Institute of Advanced Study, Shimla.

- Joshi, J. P. (1993). Excavation at Bhagwanpura 1975–76 and other explorations and excavations 1975–81 in Haryana, Jammu and Kashmir and Punjab (Memoirs of the Archaeological Survey of India No. 81). New Delhi: Archaeological Survey of India.
- Kenoyer, J. M. (1998). Ancient cities of the Indus Valley civilization. Karachi: Oxford University Press.
- Kumar, Manmohan. (2009). Harappan settlements in the Ghaggar–Yamuna divide. In T. Osada & A. Uesugi (Eds.), *Linguistics, archaeology and the human past (Occasional Paper 7)*. Kyoto: Research Institute for Humanity and Nature.
- Malik, D. S., Acharya, M., & Dahiya, R. S. (2007). A brief note on the excavation at Jognakhera (Kurukshetra). In S. P. Shukla, R. S. Bisht, M. P. Joshi, & P. Srivastava (Eds.), *History and heritage: In honour of Prof. Kiran Kumar Thaplyal (Vol. 1, pp. 85–90)*. New Delhi: Agam Kala Prakashan.
- Mughal, M. R. (1988). Genesis of the Indus Valley civilization. *Lahore Museum Bulletin*, 1(1), 45–54.
- Parmar, N. (2014). Origin, development and decline of the first urbanization in the Upper Saraswati Basin. *Heritage: Journal of Multidisciplinary Studies in Archaeology*, 2, 865–882.
- Sharma, A. K. (1996). Animal skeletal remains from Mirzapur, Kurukshetra. *Puratattva*, 26, 96–104.
- Shinde, V., Dangi, V., & Uesugi, A. (2012). The Bara culture and Late Harappan cultural developments in the Sarasvati basin. In V. Shinde, T. Osada, & M. Kumar (Eds.), *Issues in the Protohistory of India and Pakistan II: The Sarasvati (pp. 1–25)*. Kyoto: Research Institute for Humanity and Nature.
- Singh, C. S., & Mohi-ud-Din, A. (2021). Preliminary studies on exploration in middle reaches of the Ghaggar River basin. *Ancient Asia*, 12(5), 1–19. <https://doi.org/10.5334/aa.214>
- Singh, D., Vikrama, B., & Kushwaha, D. K. (2014). Painted Grey Ware settlements: Spatial analysis and interpretation of inter-site behaviour. *Man and Environment*, 39(2), 78–90.
- Singh, D., & Tribedy, E. (2018). On pots and patterns: Stylistic analysis of Painted Grey Ware from Madina and Bhagwanpura. *Heritage: Journal of Multidisciplinary Studies in Archaeology*, 6, 397–418.
- Singh, J., Kumar, V., Rawat, B., & Singh, U. K. (2024). A preliminary report of newly discovered Kushan stupa at Amin village, district Kurukshetra, Haryana. *Puratattva*, 54.
- Singh, R. N., Petrie, C. A., Pawar, V., Pandey, A. K., & Parikh, D. (2011). New insights into settlement along the Ghaggar and its hinterland: A preliminary report on the Ghaggar Hinterland Survey 2010. *Man and Environment*, 36(2), 89–106.
- Singh, R. V. (2023). Settlement pattern of Painted Grey Ware sites of the Yamuna–Hindon Doab. *Bodhi International Journal of Research in Humanities, Arts and Science*, 7(4), 86–92.
- Tripathi, V. (1976). *The Painted Grey Ware: An Iron Age culture of northern India*. Delhi: Concept Publishing Company.
- Uesugi, A. (Ed.). (2018). *Current research on Indus archaeology (South Asian Archaeology Series 4)*. Osaka: Research Group for South Asian Archaeology, Archaeological Research Institute, Kansai University.
- Uesugi, A. (2017). Ceramic sequence in the Ghaggar plains from Pre-Indus to Post-urban Indus periods. *South Asian Archaeology and Art*, 1.
- Uesugi, A. (2018). A study on the Painted Grey Ware. *Heritage: Journal of Multidisciplinary Studies in Archaeology*, 6, 1–29.
- Uesugi, A. (2018). Current state of research and issues of Indus archaeology. In A. Uesugi (Ed.), *Current research on Indus archaeology (pp. 1–55)*. Osaka: Research Group for South Asian Archaeology, Archaeological Research Institute, Kansai University.