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Origin and Development of Settlement Pattern: Study of Urbanization in Pakistan

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ABSTRACT

The archaeological history of urbanization in present-day Pakistan highlights the region's rich heritage of cultural exchange, innovation, and resilience over millennia. Early evidence of human activity in areas such as the Soan Valley demonstrates the deep roots of settlement and societal development. Significant ancient cities like Mehrgarh, Harappa, and Mohenjo-Daro showcase the emergence of complex urban planning, trade networks, and technological advancements, reflecting the sophistication of the Indus Valley Civilization. These centers illustrate how early communities adapted to their environment while fostering social, economic, and cultural growth. Beyond the Indus Valley, the region continued to serve as a hub of spiritual and cultural activity. The Buddhist centers of Gandhara, including Pushkalavati and Taxila, exemplify the religious devotion, artistic achievements, and intellectual exchange that flourished over centuries. These urban landscapes acted as conduits for ideas, traditions, and innovations, shaping the trajectory of South Asian civilization. Collectively, the archaeological record of these ancient cities underscores a continuous interplay of cultural and technological developments that have profoundly influenced the modern identity of present-day Pakistan.

Keywords: Chronological history, settlement pattern, Indus civilization, Soan valley, urbanization

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Introduction

One of the most significant perceptions in Anthropology, Archaeology, and human Geography is the study of settlement patterns. Also known as non-site Archaeology, settlement pattern studies focus on examining entire regions or areas rather than individual sites. These patterns provide valuable understandings into how a particular civilization utilized and managed the resources available within its environment (Hirst, 2020).

A settlement pattern is defined by the distribution of human activities across a landscape and by how these activities spatially interact with natural and social features. By studying settlement patterns provided these relationships exhibit identifiable regularities we can reconstruct and explain how human societies were organized and how they related to their environments. Research can be carried out at multiple scales, from large-scale examinations of regional habitation to fine-grained spatial analyses of individual activity locations. spatial analysis of individual activity locations. The distribution of communities throughout the landscape has been historically focused of settlement pattern study, and this scale of analysis will be the subject of the discussion that follows. So far majority of the methods utilized here and can be applied at every level of settlement pattern examination (J. Rank, 2020). The establishment of hamlets that developed into cities and villages is referred to as settlement. Urbanization, or the emergence of metropolitan counties, is defined as the history and evolution of settlement. Urbanization is the modification of society's economic, social, and cultural characteristics, which includes the migration of individuals and members to cities as well as the increase in population. Urbanization refers to the physical expansion of towns and cities caused due to regional or by local development (Hussain, M., & Imitiyaz, I. 2018). A process known as "urbanization" occurs when a growing percentage of a population resides in cities and their surrounding suburbs. The urban area is a relatively new type of social structure. Three key factors are involved in the cyclical process of urbanization that a country typically goes through as it transitions from an agricultural to an industrial culture. These three are behavior, structure, and demography (Stark, O. (1978).

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Methodology

Moher et al. (2009) adopted a systematic approach to conducting a comprehensive literature search using the "title/abstract/keyword" method. This approach aimed to identify relevant studies that explored the connection between key themes in the field. The search strategy incorporated a diverse set of keywords and phrases, including *"prehistory," "archaeology," "ancient settlement,"* and *"archaeology of Pakistan."* Multiple combinations of these terms were used to ensure a broad and inclusive search. Relevant publications were primarily thoroughly studied and also consulted the Google Scholar database, which provided access to a wide range of academic sources.

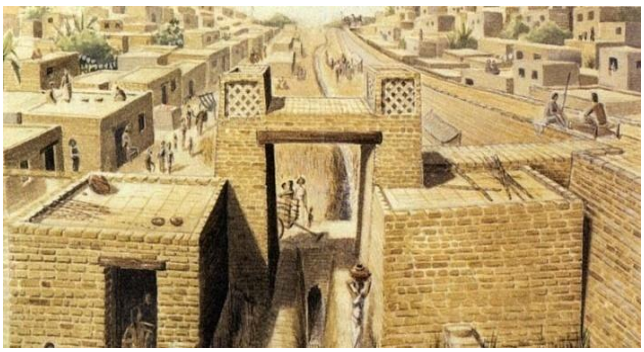

Figure 1 An artist's reconstruction of the gateway and drain at Harappa.

Historical Background

Facts:

- ☑ Homo sapiens, the current form of humanity, have been on Earth for approximately two million years, although cities have only been for less than ten thousand years.
- ☑ Around about 7000 years ago, Jericho expanded from a village to a "city" of around 3,000 residents.
- ☑ 3,500-4,000 B.C. Mesopotamian saw the establishment of the earliest great cities just like Ur, Uruk etc (with inhabitants of around 25,000 people).

While going through historical events to establish an authentic order, in this regard the cultural activities of earth have been classified into 3 important zones (Qazi1998). These major time blocks are called zones and are further subdivided into two phases, and the phases are classified into periods. The sequences are as follows.

I. Prehistoric Zone

1. **Paleolithic Period (2m BC to 10,000BC)**
   a. *Lower Paleolithic (2mYBP-70,000BP)*
   b. *Middle Paleolithic (70,000BP-35,000BP)*

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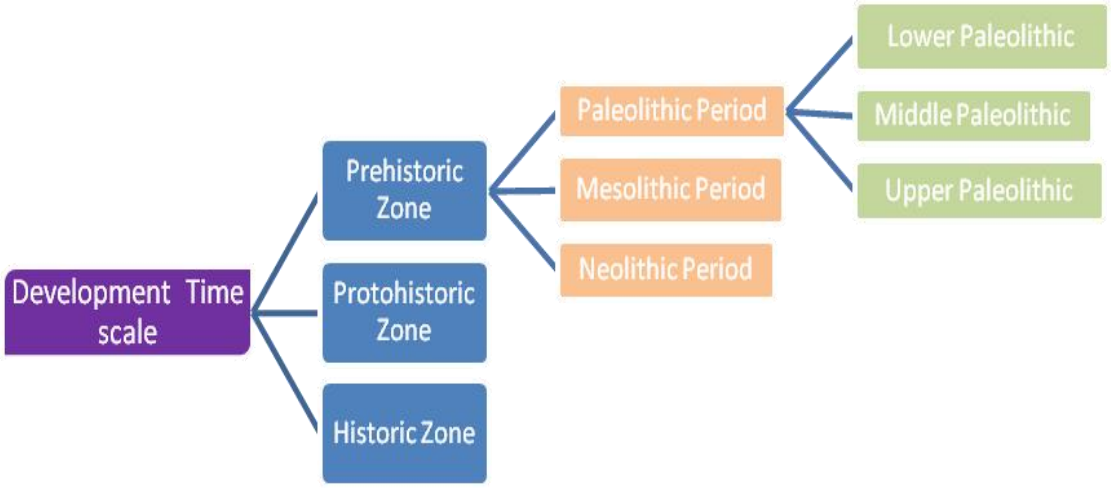
c. *Upper Paleolithic (35,000 BP- 10,000 BC)*

2. Mesolithic Period (10,000BC-8000BC)
3. Neolithic Period (8000BC-4000BC)

II. Proto-historic Zone

III. Historic Zone



Prehistoric Archaeology in Pakistan

Some of the world's oldest civilizations have always had their headquarters on the area that is now the Islamic Republic of Pakistan. This claim is supported by an array of prehistoric and historical data, such as the discovery of Ape fossils from Potohar that date back about circa 14 million years. They are members of a species called "Sivapithecus[1] Pakininsis" which is considered as Man's progenitor (Madar, S. I, et al., 2002).

1. Paleolithic Period (2 my BP to 10,000 BC)

1.1. Lower Palaeolithic (2my BP -70,000 BP)

Distinctive Features

Settlement Pattern: It was open air.

Economy: Hunting animals and gathering wild fruits and seeds.

Fire: Fire was known to them and used for cooking, heating and light.

Tools: Stone tools as rough and massive.

[1] Sivapithecus is a genus of extinct primates. Fossil skeletons of creatures presently attributed to this genus, dating from 12.5 mn to 8.5 mn years ago in the Miocene

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Techniques: The tools were made by direct percussion methods.

Authors:

- ***Zinjanthropas,*** the remains of the human subspecies were reported from Great Rift Valley Tanzania. Dated 1.750 BC recovered from Bones fragment and stones tools in volcanic ashes by Pottassium Argon dating method.
- ***Java Man:*** Teeth and parts of a cranium belong to the Java Man from Java, Indonesia, who lived 50,000 BC. One of the earliest known examples known as Java Man (Homo erectus), was given that name after fossils discovered in 1891 near Trinil - Ngawi Regency on the Solo River in East Java, Indonesia. Pithecanthropus erectus is the scientific name given to it by its discoverer, Eugène Dubois. The word is drawn from Greek- Latin origins and means upright ape-man.
- ***Peking, China:*** C14 dating on skull fragments places the date about 50,000 BC. The renowned Peking man (H. erectus) site at Zhoukoudian in north China is home to the oldest convincing proof of human usage of fire, which is roughly dated to 500,000–240,000 years ago.

Site: Soan valley between Rawalpindi and Islamabad, Rohri Hills, Thar desert. The remains of lower Paleolithic man have been reported from various sites in Pakistan i.e. Soan valley, Rohri hills, Morgah, reported by De Terra and Peterson in 1939.

1.1.1 Soan Valley Culture

The world's oldest stone tools date back 2.2 million years, and they are found in the Potwar district of Pakistan's Soan Valley. Because of their abundance in quartzite, flint, and stone fragments, the Rohri hills and Soan Valley are an important source of prehistoric technology. A significant aspect of the history of the region is the Soan, a tributary of the Indus that meets the Indus north of Jhelum.

In 1935 Yale and Cambridge universities joint expedition traces the formation of Soan valley, when they claimed interglacial, and interpluvials climatic condition gave birth to the development of human activates in this region. The joint expedition classified the Soan valley by super imposed stratigraphy[2] by river Soan into 5 terrace formation.

[2] Stratigraphy, a branch of geology, studies rock layers and layering (stratification).

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The Chopper and Chopping tools are the two primary sub-types of Pebble tools used in Sohan industries. The Sohan complex is also known as the Chopper Chopping Complex because of the prevalence of choppers and chopping implements[i] (Ashfaq 2004:5). The after 1975 discoveries by B.Allchin, M.Salim, R.Denell, Rendell made a valuable contribution. These distinguished scholars suggest that pre-soan is a part of early Stone Age cultural activates in the region (Qazi 1998:5). In 1987, the Department of Archaeology and Museums, Govt of Pakistan, conducted research work at Pabbi Hills near Jehlum. Dr. Ashfaq dated the reported tools to lower Stone Age. (Ashfaq, M,1987). In 1988, R.W. Dennell and H. Rendell claimed to have uncovered 2 mybp, stone tools from the boulder conglomerate near Gurhra Shahan in Soan valley. (Qazi 1998). The British archaeological mission also reported stone tool of lower Stone Age at Pabbi hills near Jehlum, dated to 1.4-1.2 my BP.

1.1.2 Rohrhi Hills

In 1988, Two Italian, Paulo Biagi and Mauro Creamaschi discovered early Paleolithic sites in Rohrhi Hills. The early Paleolithic tools have been found on the top of terrace having a thick red patina. They have also found middle and upper Stone Age tools in the same region having polished surface (Paulo Biag 2006).

1.1.3 Thar Desert

The Shah Abdul Latif University in Khairpur, Sindh, contains a Department of Archaeology where the documented archaeological evidence is kept under curation. Based on interpretative models created by continuous ethno-archaeological data from the Thar region, the archaeological interpretations are made. Until now more than 60 prehistoric sites have been reported by the said department which needs further investigation to authenticate the archaeological profile of the region (Kenoyer, M., Wright, R (***2005***).

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1.2 Middle Palaeolithic (70,000 BP-35,000 BP)

The lower Palaeolithic culture as followed by the middle Palaeolithic culture in the region. Following are the features of this culture.

Distinctive Features

Settlement Pattern: Rock shelter/Rock caves

Economy: Hunting animals and gathering wild fruits and seeds.

Fire: Fire was known to them and used for cooking, heating and light.

Tools: Stone tools as Fine and smaller.

Techniques: The tools were made by indirect percussion methods along with the tools.

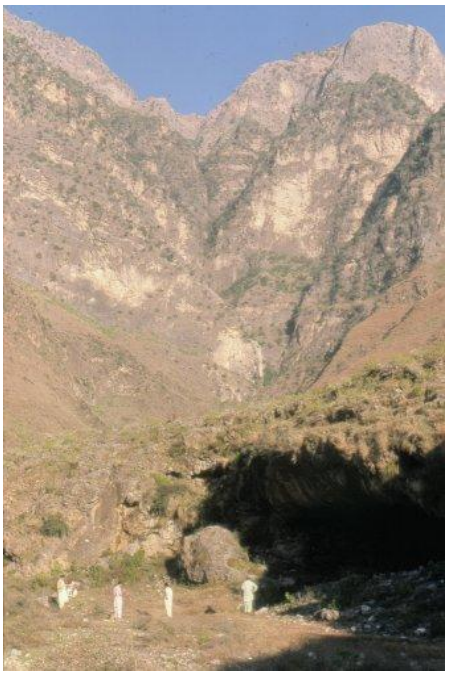

Figure 3 Sangho cave.

Buries: for the first time burial practice were observed

Authors: **Neantherthal man** in the Neanther Valley around 70,000 BP

Named for the German valley of Neanderthal, where the first specimen was discovered, Neandertal man 4'5" is a subspecies of Homo sapiens, the species to which modern humans belong. Because Homeo sapiens and Neanderthals differ greatly anatomically, many scientists categorize Neanderthal as a separate species (H. neandertalensis).

When a German entomologist by mistake discovered some fossils and bones in Tanzania's Olduvai Gorge in 1910, they provided proof of the existence of humans. The investigation of Professor Leakey and his spouse began in 1931, but it wasn't until 1959 that Mary Leakey discovered tooth pieces and a skull belonging to a male hominid, they named Zinjanthropus, or Nutcracker Man, because of his enormous teeth. The skull, which was dated to be between 1.75 and 2 million years old, demonstrated that hominids lived in the region and moved the center of human evolution from Asia to Africa. Twenty years later, footprints found at Laetoli, south of Olduvai, further supported the theory that hominids lived there between 3.5 and 4 million years ago.

Sites: Sanghao cave I, Mardan excavated by AH Dani, Soan valley, Mohmand

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Agency, Ghaligai cave Swat valley, Rohri, Bajawer.

1.2.1 Sangho Cave

Mankind developed the ability to operate on quartz around 50,000 B.C. at Sangho Cave in the Mardan District, enabling them to hunt the animals across enclosed valleys.

Dr. A.H. Dani's 1962–1963 discoveries and excavation of the Sanghao Cave in District Mardan propelled human history in Khyber Pakhtunkhwa back 40,000 years. The Middle Stone Age is its first phase. Twelve stratified layers were uncovered in three meters of deposit; the first two levels include Buddhist remnants, disturbed levels 4-5 have microliths, and levels 12–5 belong to the Palaeolithic period.

Quartz made up the lithic artefacts, however, the Palaeolithic stages produced prepared cores and flakes using the *Levallois* method, along with a tiny handaxe, scrapers, awls, and burins. Regarding Sanghao Cave, there are no precise dates known A.H. Dani,1963; B. Allchin, 1973; Shaw, 1999). In Pakistan the most important site of Gila Kalan is one of the most important sites of Stone Age. The middle stone age is also reported from Rohrhi hills and milestone 101, Hyderabad.

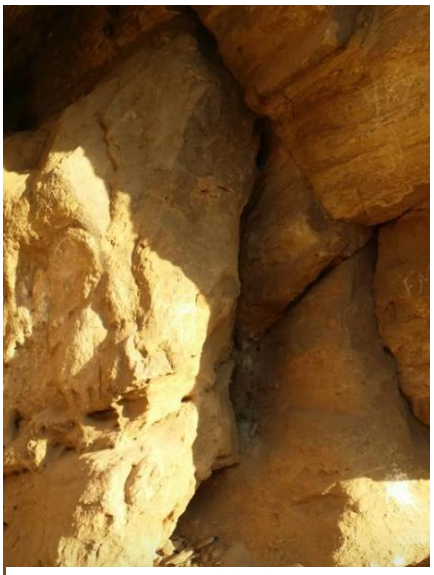

Figure 4: Ghaligai cave

1.2.2. Ghaligai Rock Shelter Swat

The Ghaligai Rock Shelter in Swat is located at the foot of a limestone hill, near the route that connects Mingora and Barikot. The rock shelter excavation has yielded important information on the prehistoric cultures in the southwest and northwest regions of the subcontinent. There have been up to seven different eras recognized; the Neolithic age is believed to have begun with the pre-ceramic level, which is the oldest.

The cultural features on the bottom level are made of pebbles and flakes. This ancient period is covered in a layer of earthenware. Each piece of pottery is created by hand, tempered with gritty sand, and has a surface hue that usually varies from reddish-brown to grey, brown.

Some of the shapes are like frequent types discovered in Chalcolithic period sites in

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Soviet Turkmenistan. Three dates from C14 indicate 2970–2930 B.C. Furthermore, tools made of animal bones are available. Among the animal remains that indicate hunters frequented the protected region during this period are antlers and boar tusks (Danni et al., 1999).

1.3. Upper Palaeolithic (35,000 BP-10,000 BP)

Distinctive Features

Settlement Pattern: It was caves.

Economy: Hunting animals and gathering wild fruits and seeds.
Clothing started to woven animal skin.

Fire: Fire was known to them and used for cooking, heating and lighting.

Tools: Stone tools as blades, flakes and bone, needle, fishhook, and it was very fine, sophisticated, and smaller.

Techniques: The tools were made by indirect percussion methods.

Rock Art: Painting and carving, and rock painting of animals and hunting scene, animals were curding.

Authors: Cro magnon from cavromagnon cave France.

Sites: Altamira in Spain, Lascaux in France, 22000BP-10000BP)
Sanghoo cave II, Lora lai caves 7 in no's in Balochistan excavated by FD Kakar, Angogat kai in Bajawar.

In the late Stone Age, people tended to shelter themselves. It is generally regarded as blade industry, besides some microlithic tools, barbed harpoons, and bone implements were also introduced. This phase is generally dated from 35000 BP to 10000 BP (Qazi 1998 :9).

In the Loralai region at Musakhel in Baluchistan, the department of archaeology, Govt of Baluchistan has discovered about 9 caves, under the leadership of Dr. F. D. Kakar (Qazi 1998:9). In the adornment, both engravings and *fresco painting*[3] are executed, dated back to 22000 BP to 12000 BP.

The Dhok Pathan site, which belongs to the fourth glacial era, is connected to the

[3] Water-based pigments are painted onto freshly laid plaster, typically on the exterior of walls. The colors, which are created by grinding dry-powder pigments in pure water, dry and solidify with the plaster to form a permanent component to the wall.

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evolved Soan. The upper Stone Age is assigned to the second phase of Sangao Cave, which dates to 27000 BP. The other discovery from this time frame comes from the Rohrhi Hills region and Rivat, milestone 101, which is close to Hyderabad. At the southernmost point of the Rohri Hills, close to the town of Chancha Baloch and about four km from the pre-Harappan settlement of Kot-Diji, was the most distinctly characterized Paleolithic site. Between the dunes, on a mostly sand-free expanse of 5,000 square meters, are scattered Middle and Upper Paleolithic artefacts as well as industrial waste (Shah, Sajid 2022).[ii] The site of Kund can also be placed in the late stone age of Pakistan. Stone tools of the stones age also uncovered from the famous site of Morgah (Qazi 1998).

2. Mesolithic Period (10,000BC-8000BC)

Distinctive Features

Settlement Pattern: Caves

Economy: Hunting animals and gathering wild fruits and seeds.
Clothing started to woven animal skin.

Fire: Fire was known to them and used for cooking, heating and lighting.

Rock Art: painting and carving, and rock painting of animals. And hunting scenes, animals were curding.

Tools: Microlith (smaller tools)

Sites in Pakistan; Khanpur cave excavated by Eden Jonson and Fareed Khan, Sango cave Period III, Shahbaz Ghari in Mardan.

The Mesolithic phase is the beginning of true microlithic[4] culture. The Nala lai deposited are placed in the Mesolithic era. Dr. Salim reported Meolithic Period chert tools during the surface collection from Soan valley.

Col. Garden reported Mesolithic period sites in 1950, s in Jamal Ghari, known as Jamal Ghari cave, Mardan. (Qazi 1998). In 1968, Elden Johanson excavated the Khanpur cave located in Khanpur valley near Taxila. This site is excavated by this site and similar site in 1973, the department of archaeology, university of Peshawar. Prof. A.H. Dani at Sanghao cave makes the most convincing

[4] Small flint blade, or fraction of blade, often defined as less than 5 mm long and 4 mm thick. Microliths are regarded as the archetypal tool technology of the MESOLITHIC.

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discovery of this phase. Its 3rd period dates to Mesolithic time which is dated back to 10000 BP. The true microlithic tools made of quartz are the salient feature of this period (Qazi 1998:10). In the Bannu area, two very important sites near river Gumbela known as Kot Kashmir Takhti Khel Tup and Gulshah Tup are sand dunes sites. Typical geometric microlithic tools were reported. In 1990's, the Italian archaeological Mission discovered about 103 caves in the Lasbila Region, these caves are assigned to the neolithic phase and are dated back to the 5th or 4th millennium BC. In 1993-94, M. Salim of Quaid –e-Azam University, Islamabad discovered a Neolithic site near Thakot Bridge in the Alai area of Hazara.

The world famous Microlithic site is in Khanpur, District Haripur. The site was excavated by Elden Ghonson from Temple University USA and Prof. Frid Khan from the University of Peshawar in 1968. The excavations conducted at the site have revealed a good collection of microliths dated to Mesolithic period. In addition, Shanghao cave period II is also dated Mesolithic period.

3. Neolithic Period (8000BC-4000BC)

Settlements: first start to build houses from sundried mud break, settlement life started for first time.

Distinctive Features

Economy: Domestication of animals and cultivation of plants are started as produced. Dogs for protection, hunting, cows, sheep, goat and pig were domesticated. Plants were wheat and cereals. Barley and maize. The vegetables grown were potatoes, beans and squash.

Tools: stone tools, sickle blades for agriculture purpose, pestles, Querns, blades etc. Bones tools were also in use.

Pottery: Pottery introduced for the first time, used for storage, house objects made through different techniques. Handmade which was rough & thick. Basket makes are fine and thinner and molded. Wheel turned were the finest with design on the pottery.

Introduction of Tools: first time boats appear, for trade and transportation. The population was in increasing because; More food available, Climatic condition are favorable, Trade relation was improved, Polygamy and monogamy were practiced

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Jewelry: Women starts jewelries of various stones as well as copper

Burial: Burial continued

Sites: Earliest settlement was Jariko in Israel.

Sites in Pakistan :Mehergarh in Sibi district of Balochistan excavated by the French Archaeology Mission Headed by J.F Jerige. Seven major occupational levels were exposed from Mehegarh. Period I & II is assigned to the Neolithic period. Period I is further divided into 2 groups, Period A, dated back to 8000 BC when no ceramic Neolithic pottery was found and Period B: dared back to Neolithic ceramic where pottery Ere found for cereal storage.

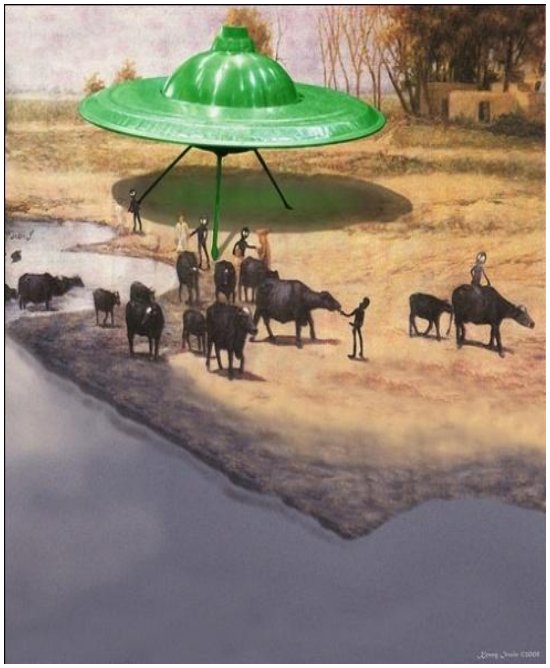

Figure 5. The 14,338 BC Mehrgarh UFO Landing (Allien theory)

The last period of prehistoric era is known as Neolithic or the new Stone Age. In 1950 Gorden Childe called this era a Neolithic revolution because onward settled life started. The new discoveries after independence from the sites of Amri, Mehergagh, Gumla, Rehman Dheri and Kot-Diji prove the claim that Indus Valley civilization was locally developed.

3.1 The Beginning of Settled Life

The earliest known hamlet, Mehrgarh, was established in the Sibi district of Balochistan in the ninth millennium B.C., marking the beginning of settled life in the area that is now Pakistan. This ancient site represents an important turning point in the evolution of human civilization in South Asia, on par with some of the oldest communities found in Jarmo, Iraq, and Jericho, Palestine.

Excavations at Mehrgarh have revealed mud-brick homes and proof of prehistoric agricultural activities, such as the growing of wheat and maize. Around this time, individuals started to live in stable groups with formalized social systems instead of leading nomadic lives. Humanity achieved great technological and artistic advances during this period; they started employing polished stone tools, making pottery, and making diverse ornaments like beads. Another development was the quest for aesthetic appeal, as shown by the painted dishes, plates, drinking glasses, jars, and

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other decorative pottery.

During this time, metals were also first used, revolutionizing daily life and the creation of tools. Particularly, the Bronze found widespread usage, signifying a substantial advancement in technology. The people of Mehrgarh did not live in isolation; rather, they developed trading connections with other prehistoric societies in areas like Iran, Turkmenistan, Uzbekistan, and portions of the Arab world. Through the facilitation of the exchange of goods, concepts, and cultural practices, this network of trade helped these early cultures evolve socially, culturally, and economically.

As the first significant revolution in human social, cultural, and economic life in the area, the events at Mehrgarh laid the groundwork for the sophisticated civilizations that would eventually arise in the Indus Valley and beyond. Understanding the development of human habitation, technological advancement, and cross-cultural contact in ancient periods requires an understanding of this early town.

This early Bronze Age culture expanded throughout Sindh, Balochistan, Punjab, and Khyber Pakhtunkhwa (Danni et al. 1999). This early commencement resulted in the concentration of the people in small settlements. Such as Kot-Diji in Sindh and Rehman Dheri in KPK's Dera Ismail Khan area. This social and cultural shift resulted in the creation of the famed towns of Mohenjo-Daro and Harappa, which had the highest concentration of inhabitants, including artisans, craftsmen, businessmen, and monarchs (Ul Ain, Q. 2021)

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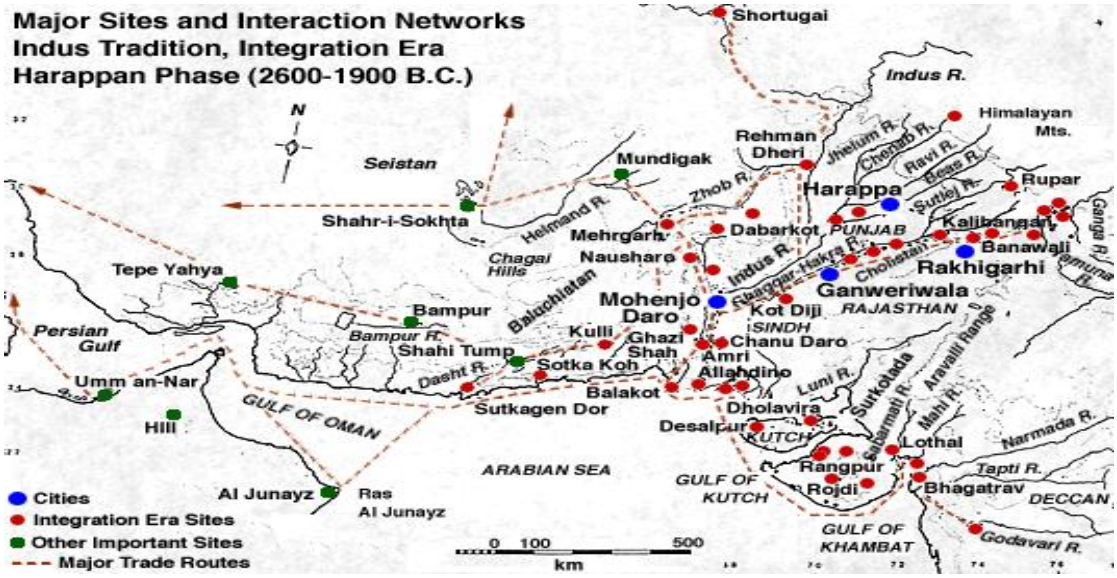

Figure 6: Major cities of Harappan phase

3.2 Discussion

I. Indus Valley Civilization

Most modern-day India's states of Gujarat, Rajasthan, Haryana, and Punjab, as well as Rupar on the upper Sutlej, were formerly part of the Indus Valley Civilization, which also covered most of Pakistan, from Balochistan to Sindh. Rich agricultural areas encircled by mountains, deserts, and oceans characterized the topography of the Indus Valley, placing the civilizations that emerged there in a scenario very similar to that of Egypt and Peru. Recently, sites from the Indus civilization have also been found in Pakistan's northwest Frontier Province.

Dry riverbanks have been observed to overlap with the seasonal Ghaggar River in India and the Hakra waterway in Pakistan. Numerous Harappan or Indus Valley settlements have been found along the Ghaggar-Hakra beds. Some archaeologists claim that more than 500 Harappan sites have been found along the dried-upriver beds of the Ghaggar-Hakra River and its tributaries, compared to only about 100 along the Indus and its tributaries. The Indus Valley Civilization (IVC) was a Bronze Age civilization that flourished in the western part of the Indian Subcontinent between 3300 and 1300 BCE and 2600 and 1900 BCE. The civilization that flourished around the Indus River basin was mainly concentrated along the Indus and the Punjab region. It also extended into the Ghaggar-Hakra River valley and the Ganges-Yamuna Doab, covering most of what is now Pakistan,

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the western states of modern-day India, and the southeastern part of Afghanistan. The mature stage of this civilization is referred to as the Harappan Civilization since the city of Harappa was the first to be discovered, having been dug up in the 1920s in what was then the Punjab region.

Table 1: Indus Valley Civilization Development

Date range	Phase	Era
7000 - 5500 BCE	Mehrgarh= I (aceramic Neolithic)	Early Food Producing Era
5500-3300	Mehrgarh II-VI (ceramic Neolithic)	Regionalisation Era
3300-2600	Early Harappan	5500-2600
3300-2800	Harappan 1 (Ravi Phase)	
2800-2600	Harappan 2 (Kot-Diji Phase, Nausharo I, Mehrgarh VII)	
2600-1900	Mature Harappan (Indus Valley Civilization)	Integration Era
2600-2450	Harappan 3A (Nausharo II)	
2450-2200	Harappan 3B	
2200-1900	Harappan 3C	
1900-1300	Late Harappan (Cemetery H); Ochre Coloured Pottery	Localisation Era
1900-1700	Harappan 4	
1700-1300	Harappan 5	
1300-300	Painted Gray Ware, Northern Black Polished Ware (Iron Age)	Indo-Gangetic Tradition

Although locals said of an ancient city extending "thirteen Koss" (about 25 miles) away, the ruins of Harappa were first mentioned in 1842 by Charles Masson in his Narrative of Various Journeys in Balochistan, Afghanistan, and the Punjab. However, this information would not pique archaeological curiosity for almost a century. John and William Brunton, two British engineers, were building the East Indian Railway Company line that connected Karachi and Lahore in 1856. They were informed of Brahminabad, an old, abandoned city close to the lines.

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Figure 7: Early farming village in Mehrgarh, c. 7000 BC, with houses built with mud bricks.

The first Harappan seal was published by Alexander Cunningham in 1872–1875, although it was mistakenly identified as Brahmi letters. More Harappan seals were found by J. Fleet fifty years later in 1912, which sparked an excavation campaign led by Sir John Hubert Marshall in 1921–1922. As a result, the civilizations at Mohenjo-daro, Rai Bahadur Daya Ram Sahni, Madho Sarup Vats, and Sir John Marshall discovered it, as did Rakhal Das Banerjee, E. J. H. MacKay, and Sir John Marshall. A large portion of Mohenjo-Daro had been excavated by 1931, although work was still done, as demonstrated by the 1944 excavations directed by Sir Mortimer Wheeler, the director of the Archaeological Survey of India. Before the Indian subcontinent separated in 1947, Ahmad Hasan Dani, Brij Basi Lal, Nani Gopal Majumdar, and Sir Marc Aurel Stein were among the archaeologists who worked on the IVC sites. Most of the archaeological discoveries were passed down to Pakistan after India was divided, which is also where the majority of the IVC was located. Excavations from this era include those conducted in 1949 under the direction of Sir Mortimer Wheeler, an archaeologist and adviser to the Pakistani government. Excavations have revealed remnants of the Indus Valley civilization as far north as Shortugai on the Amudarya or Oxus River in modern-day Afghanistan and as far west as Sutkagan Dor in Balochistan.

The Harappan civilization reached its peak between 2600 and 1900 BCE. When the Early Harappan and Late Harappan cultures are considered, the entire Indus Valley Civilization can be estimated to have existed between the 33rd and 14th centuries BCE. Phases and Eras are the two names used to periodize the IVC. The Regionalization, Integration, and Localization eras are other names for the Early Harappan, Mature Harappan, and Late Harappan stages, respectively. The Regionalization era dates to the Neolithic Mehrgarh II period. "The entire idea of

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the Indus civilization was altered by discoveries at Mehrgarh," says Ahmad Hasan Dani, an emeritus professor at Quaid-e-Azam University in Islamabad. "The entire sequence is there, starting from the first settled village.

II. Early Harappan: The Early Harappan Ravi Phase, called after the Ravi River that runs through the area, spanned approximately 3300 BCE to 2800 BCE. The Hakra Phase, located in the Ghaggar-Hakra River Valley to the west, is associated with it. It precedes the Kot=Diji Phase (2800-2600 BCE, Harappan 2), which is called after a location in northern Sindh, Pakistan, close to Mohenjo Daro. Around 3000 BCE are the earliest known instances of the Indus script. Rehman Dheri and Amri in Pakistan symbolize the developed stage of past rural traditions. The citadel in Kot-Diji (Harappan 2) symbolizes centralized authority and an increasingly urban way of life, while the era before Mature Harappan is represented by it. On the Hakra River near Kalibangan, India, there was another town of this stage. Trade networks connected this society to other nearby cultures and far-off suppliers of raw materials, such as lapis lazuli and other materials used to make beads. By this point, the villagers had tamed a wide range of animals, including the water buffalo, as well as several crops, including cotton, dates, sesame seeds, and peas. By 2600 BCE, the early Harappan villages developed into sizable urban centers, marking the beginning of the mature Harappan phase.

III. Mature Harappan: The Early Harappan societies had developed into sizable urban centers by 2600 BCE. These urban centers are in modern-day Pakistan at Harappa, Ganeriwala, and Mohenjo-daro, and in modern-day India at Dholavira, Kalibangan, Rakhigarhi, Rupar, and Lothal. More than 1,052 cities and towns overall, mostly in the general area of the Indus Rivers and their tributaries.

IV. Late Harappan"The first signs of a progressive collapse came around 1800 BCE, and by 1700 BCE, most of the cities had been abandoned. Based on Sir Mortimer Wheeler's (1953) theory, the "Aryans" are a Central Asian Indo-European tribe that conquered the Indus Valley Civilization. He used passages of the Vedas that described forts and warfare, as well as a group of 37 skeletons recovered in various areas surrounding Mohenjo-Daro, provided evidence. Experts rapidly began to question Wheeler's theory because none of the skeletons were discovered near the citadel and all day after the city was abandoned. Kenneth Kennedy's (1994) skeleton

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research found that the marks on the skulls were caused by weathering rather than violent aggressiveness. Many academics now conclude that a decline in commerce with Egypt and Mesopotamia, combined with dryness, was the fundamental cause of the Indus Civilization's demise.

Recent archaeological findings show that the demise of Harappa forced people east. Around 1900 BCE, the total number of sites in India rose from 218 to 853. The excavations in the banks of the Ganges reveal that urban development commenced approximately 1200 BCE, just a few decades after Harappa's demise and considerably sooner than generally thought. Scholars have stressed that, similarly to other parts of the world, there existed a continuous cycle of cultural evolution. These connect "the so-called two major stages of urbanization in South Asia."

IMPORTANT ARCHAEOLOGICAL SITES

3.2.1 Mehrgarh

The Mehrgarh archaeological site is made up of several modest archaeological mounds in the Kachi plain, at the mouth of the Bolan Pass, at 29° 12' 45" N and 67° 40' 15". Situated approximately thirty kilometers away from the town of Sibi, they are adjacent to the west bank of the Bolan River. Encompassing around 250 hectares, the majority of the archaeological deposits are submerged beneath layers of alluvium; nevertheless, in certain regions, "in situ" buildings remain discernible as they erode at the surface.

Presently visible unearthed remnants at the location consist of an intricate network of sizable, divided mud-brick constructions. Although the purpose of these partitioned apartments, which were made of hand-formed plano-convex mud bricks, is still unknown, it is believed that many of them were used for storage rather than as homes. Formal cemeteries are also located in mounds MR3 and MR1, some of which have been partially excavated.

Figure 12 figurines from Mehrgarh, c. 3000 BCE.

At Mehrgarh, there is an over 11-meter-deep archeological series that dates from the third to the seventh millennium BC. The site, an artificial mound made of successive generations of mud-brick structures layered on top of one another, is an

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example of a classic archaeological tell site. The chronology that its excavators have suggested is as follows:

IA A ceramic Neolithic c.6500-6000 BC Mound MR3

IB Ceramic Neolithic c.6000-5500 BC Mound MR3

II c.5500-4500 BC Mound MR4

III Early Chalcolithic c.4500-3500 BC Mound MR2

IV-VII Chalcolithic c.3500-2500 BC Mound MR1

Mound MR3 has the earliest Neolithic evidence of settlement at the site; nevertheless, mound MR4 became more important during the Neolithic-Chalcolithic period. The focus kept changing locations at the site, moving to the site of Naushero about six kilometers to the south by 2600 BC. During this time, the settlement changed from a collection of isolated mudbrick storage buildings with signs of ongoing livestock and barley husbandry to a sizable Bronze Age village in the middle of its own unique craft zone. Some have interpreted the lack of early residential structures as additional proof of the site's early use by nomadic or transhumant groups, who may have traveled via the neighboring pass on a seasonal basis. Even though Mehrgarh was abandoned by the time the literate urbanized phase of the Indus Civilization emerged, its evolution shows how the civilization's patterns of subsistence and specialization in crafts and trade developed. After it was abandoned, alluvial sediments buried it until a flash flood in the 1970s revealed it. Between 1974 and 1986, the French Archaeological Mission to Pakistan excavated the site for thirteen years. They then started up again in 1996. The remarkably well-preserved remnants of mud brick constructions can be found in the most recent trenches.[iii]

3.2.2 Kile-Gul Mohammad

Kile-Gul Mohammad, near Quetta, was excavated in the 1950s. The site contained evidence of a pre-pottery Neolithic culture, including hut fragments, wild and tamed animals, but no pottery. However, the site received little interest from scholars at first because imprecise radiocarbon dating gave it a date of 4000BC, and scholars assumed that Neolithism did not develop locally in the region but rather originated in northern Iran, where it flourished in the seventh millennium BC. The subsequent discovery of the Mehrgarh site, with a revised radiocarbon dating ranging from the

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11-17th millennium BC, revived archaeologists' curiosity about these sites. Archaeologists realized that agricultural methods and animal domestication, which are hallmarks of neolithism, evolved in Balochistan independently of their development in the Zagros hills of northern Iran. Painted pottery and geometric designs were discovered at Kile-Gul Mohammad levels II and III. Similar themes have also been discovered at Mehrgarh, Damb Sadat, Togau, a Neolithic/Chalcolithic site in Balochistan, and Mundigal, in southern Afghanistan. The presence of similar Neolithic pottery across all sites demonstrates cultural and economic links between the locations.

3.2.3 Amri

Amri is the site of a pre-Harappan walled city that existed between 3600 and 3300 BC. The location is situated south of Mohenjo Daro on the Hyderabad-Dadu Road, some 110 kilometers north of Hyderabad in Pakistan's Sindh province. This was an important former urban hub in Lower Sindh, located on the foothills of the Kirthar Mountain Range. Amri is near to Balochistan, where the growth of earlier agrarian villages between 6000BC and 4000BC eventually led to urbanization. According to the timetable, Amri is born after Rehman Dheri. The ancient mounds measuring 8 hectares on the west bank of the Indus River have been thoroughly excavated. The pottery recovered here had unique qualities and was known as Amri Ware. This site, like other pre-Harappan settlements, contained no writing. There is proof of a catastrophic fire in the town around 2500 BC. (Pa)

3.2.4 Kot-Diji

The ancient location of Kot-Diji was the predecessor of the Indus Civilisation. The inhabitants of this place lived around 3000 BCE. The remains are divided into two parts: the citadel region on high ground (approximately 12 m) and the surrounding area. The Pakistan Department of Archaeology conducted excavations at Kot-Diji in 1955 and 1957. It is located around 22 kilometers south of Khairpur in Sindh province, Pakistan. The site is located at the foot of the Rohri Hills, where a fort (Kot Diji Fort) was built in 1790 by Mir Suhrab, the Talpur dynasty ruler of Upper Sindh who flourished from 1783 to 1830. This fort, erected on the ridge of a very narrow hill, is excellently preserved.

The early Harappan site at Kot Diji is divided into two distinct regions. The

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privileged ave their citadel on high land, separated by a defensive wall with bastions at regular intervals. This area covers around 500x 350 feet. The outer section, often known as the city proper, was made out of mud brick homes built on foundations made of stone. Designs on the pottery of this site are horizontal and wavy lines, loops, and simple triangular motifs. Other antiquities are pots, pans, storage jars, toy carts, balls, bangles, and beads, terracotta figures of the mother goddess and animals, and bronze arrowheads. Stone utensils were also reported.

The most interesting object I found at Kot-Diji was a toy cart that demonstrated how potter's wheels led to wheels for bullock carts. There are also apparent signs of enormous flaming throughout the site, including both the lower habitation area and the high mound (the fortified town), as seen at other Early Harappan sites: Period III at Gumla, Period II at Amri, and Period ID at Naushero. Cleavage was discovered at Kalibangan during the Early Harappan phase Period I. The exact reason of the interruptions and/or abandonment of these sites around the end of the Early Harappan period is yet unknown.

3.2.5 Rehman Dheri

Rehman Dheri is a pre-Harappan archaeological site in Pakistan's Khyber Pukhtunkhwa province, in Dera Ismail Khan. This important proto- historic site was discovered by Prof. A.H. Dani in1971, and later on it was excavated by Prof. F.A Durrani, from 1976 to 1982 with the assistance of faculty and students from the Department of Archaeology at the University of Peshawar. It is among the earliest urbanized centers discovered in South Asia which is dated about 4000 BCE through

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Radiocarbon dating system. Except for the development outside the city in the south, the entire habitation area has been surrounded by a large defensive wall built from prepared clay slabs and blocks. The modest mound of this fortified settlement is seen from Bannu Road. This rectangular mound encompasses around 22 hectares and stands 4.5 metres above the surrounding field. The fortified settlement of ten to fifteen thousand people demonstrates evidence of town planning. Pottery, stone, and metal tools were discovered. A unique Ivory seal have discovered having o one side mountain goats with wavy horn and "T" and arrow symbol, while on the side two scropions and flanking frog and "T" symbol showed the continuity of seal making idea from proto-Harappan to mature Harappan phase. But in this important site we do not have writing some engraving or *grafftti* on the pottery can be seen. Rehman Dheri provides evidence about the local development of Indus Valley civilization in the subcontinent; to summarize, the "iron grid" that governed town layout seen at Mohenjodaro and Harappa, which are hallmarks of Harapan towns, have their origins at Rehman Dheri. The final occupational phase of the site is vividly apparent on the mound's surface, both visually and through aerial pictures. It was a big walled rectangular area surrounded by a grid iron network of streets and lanes that divided the settlement into regular units. In the early morning dew or after rain, walls designating individual houses and street frontages are plainly visible, and a variety of small-scale industrial sectors within the site can be

Neolithic Revolution in Balochistan

The Neolithic Revolution occurred between 8500 and 6000 BCE in the Fertile Crescent, transforming the lifestyle of people from nomadic to settled life in permanent homes. Balochistan, the first region in South Asia, was influenced by this revolution, with the earliest evidence of sedentary lifestyle found at Mehrgarh.

Village Culture (6000-4000 BCE): By 4000 BCE, farming communities spread further east in Balochistan and Lower Sind, represented by Nal, Zhob, and Kulli cultures. These cultures developed in isolation, with Nal Culture making red pottery and practicing dead burial, while Kulli Culture burned their dead and made soft stone boxes with engraved patterns.

Early Harappan Towns (4000-3000 BCE): The development of farming communities led to urbanization, with the earliest fortified town found at Rehman Dheri, dated 4000 BCE in NWFP near the River Zhob Valley. Other fortified towns include Amri, Kot Diji, and Kalibangan, India, but no writing was found at these sites.

Source: http://en.wikipedia.org/wiki/Kot_Diji

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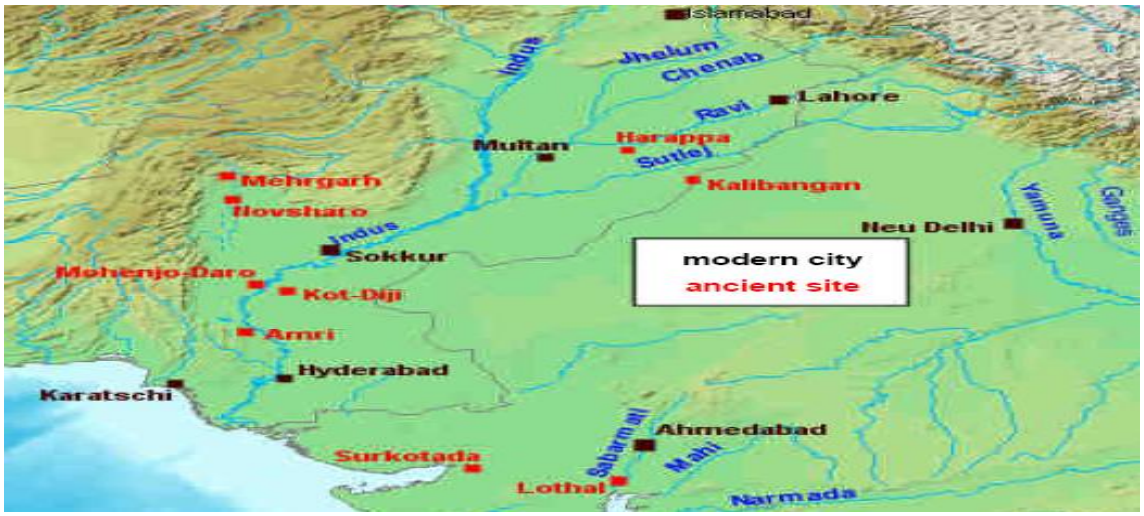
identified by eroding kilns and slag scatters. The mound's surface is strewn with thousands of shreds and artifacts that are slowly disintegrating from the chamber fills. The archeological sequence at Rehman Dheri is more than 4.5 meters deep and extends over 1,400 years, commencing around 3,300 BC. The site represents the following periods:

Period-I 3300-3850 BCE

Period-II 2850-2500 BCE

Period-III 2500-1900 BCE



It is widely believed that the settlement received its official layout in its early stages, and that subsequent phases largely replicated this plan over time. Although excavators have dug several deep trenches or soundings into the lower levels, the exposed areas have been too limited to allow a thorough study of changes in layout and the spatial distribution of craft activities. The site was abandoned at the beginning of the Mature Indus phase, around the mid third millennium BCE, and later activity much reduced in scale is recorded only on the nearby archaeological mound of Hisam Dheri. Because the design of the Early Harappan settlement remained largely untouched by later modifications, it provides one of the best-preserved examples of the origins of urbanization in South Asia.

3.2.5 Decay of the Pre-Harappan Farming Culture

The decline of the pre-Harappan farming tradition in Balochistan is widely attributed to harsh climatic conditions. It appears that Mehrgarh was no longer suitable for settlement during the Mature Phase of the Indus Civilization, possibly

Figure 10: Ancient/Modern cities

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due to hydrological factors such as unexpected flooding and subsequent land degradation. As a result, the site was abandoned sometime between 2800 and 2700 BCE. By around 2600 BCE, several pre-Harappan villages had developed into towns with populations numbering in the thousands, many of whose inhabitants were no longer primarily dependent on agriculture. This development led to the emergence of a unified cultural tradition across the region, integrating settlements separated by as much as 1,000 km and diminishing regional distinctions. The sudden appearance of this shared culture initially led early researchers to suggest that it resulted from external conquest or large-scale migration. However,

Archaeological evidence now indicates that it evolved from indigenous pre-Harappan traditions. However, there is no indication that the Harappans were responsible for the devastation of pre-Harappan sites. Natural calamities destroyed the prior communities, allowing for the formation of a richer and more complicated urban structure (Giri & V. N. 1984).

Harappa

The archaeological site of Harappa consists of a series of low mounds and cemeteries situated to the south of the now-dry bed of the Ravi River. Covering a total area of about 150 hectares, the site and its buffer zone include eight mounds and two cemeteries, while the remaining portions lie buried beneath surrounding agricultural fields and the modern village of Harappa. Most of the mounds are linked by a modern network of concrete walkways with informational signposts. The occupational sequence of the site spans from the fourth to the second millennium BCE. Although only a few sections remain open, the exposed architectural remains located primarily on Mounds AB and F date to the third century BCE. Scattered across the area are a number of historical structures, including the remains of an un-conserved Gupta-period temple, a partially preserved mosque, the recently discovered foundations of a Mughal Sarai, and the ruins of a colonial-era police station. Modern visitor facilities are situated near Mound E, adjacent to the main access road.

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In addition to the complex that accommodates the Harappa Archaeological Research Project, the site features several modern facilities, including an expanding museum, a rest house, a police post, public restrooms, a snack bar, a children's playground area, and storage buildings. To the east of Mound AB lies a small cemetery. On the southern edge of Mounds E and ET, beside the access road, a modern reconstruction of a Bronze Age city wall and gateway has been erected. The archaeological deposits at Harappa extend to a depth of over thirteen meters, representing a continuous sequence of occupation from the fourth to the second millennium BCE.

Indus Valley Civilization Artefacts

Situated beside an ancient course of the Ravi River, the settlement's inhabitants benefited from convenient access to trade routes, aquatic resources, and water for both drinking and agriculture factors that likely contributed to its long-term occupation. The site itself is a textbook example of an archaeological mound, built up over centuries through successive layers of mud-brick construction. Jonathan Mark Kenoyer (1998) provides the following chronological sequence for the Indus Valley Civilization

i. Ravi and Hakra phase 3300-2800 BCE
ii. Kot Dijian (Early Harappan) phase 2800-2600 BCE
iii. MHarappan Phase 2600-1900 BCE
iv. Transitional Phase.1900-1800 BCE
v. Late Harappan Phase 1800-1300 BCE

The earliest evidence of occupation at the site, consisting of a small agricultural settlement, has been discovered at the base of the northwestern corner of Mound AB. By the third millennium BCE, however, the entirety of Mound AB and a large portion of Mound E were already inhabited. During the Harappan period, from approximately 2600 to 1900 BCE, the settlement expanded to its present size of over

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100 hectares. Harappa's distinctive urban layout is most evident in this period, featuring at least four self-contained, walled settlements situated atop elevated mounds. Cemetery H reflects the eventual transformation of this urban, literate society into a collection of nomadic communities with limited socioeconomic cohesion. After the site was abandoned in the second millennium BCE, the upper portions of the mud-brick structures deteriorated, inadvertently preserving the lower layers. Later historical use of the area, often involving the reuse of Bronze Age bricks, had minimal effect on the underlying archaeological deposits. However, three recent developments have had a notable impact on the site.

- The first major impact came in the 1850s, when large quantities of bricks were removed for use as railway ballast, destroying many of the later occupation layers.
- Second, the expansion of irrigation-based agriculture led to severe soil salinization, further affecting the site.
- Third, archaeological excavations exposed structures to the harmful effects of salinity.
- Consequently many of the buildings documented and preserved by Wheeler in the 1940s have since been lost

By around 1700 BC, Harappan society was in decline due to frequent flooding of riverfront settlements and ecological shifts that drove cultivation to succumb to the expanding desert. Some historians believe that invasions by barbarian tribes from the northwest contributed to the Harappan civilization's demise. When the first Aryan migration into India occurred around 1500 BC, the sophisticated Harappan society had already been nearly eradicated.

3.10 Mohenjo-Daro

This formed one of the major city complexes of the Indus Valley Civilization. Mohenjo-daro is situated in the Larkana district of Sindh, Pakistan. The city was one of the world's earliest urban cities, existing alongside ancient Egypt, Mesopotamia, and Crete. The archeological remains of the city have been recognized a UNESCO World Heritage Site. It has been dubbed a "ancient Indus Valley metropolis"

Mohenjo-daro was built around 2600 BCE and abandoned around 1500 BCE. The

Figure 12: Great Bath

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site was discovered in 1922 by Rakhaldas Bandyopadhyay, an Archaeological Survey of India officer. A Buddhist monk brought him to the mound, which he thought was a stupa. John Marshall, K. N. Dikshit, Ernest Mackay, and others led large excavations in the 1930s. Ahmad Hasan Dani and Mortimer Wheeler continued their excavations in 1945. Dr. George F. Dales conducted the last significant excavations from 1964 to 1965. despite the prohibition on major archaeological projects, in the 1980s, teams of German and Italian survey groups, led by Dr. Michael Jansen and Dr. Maurizio Tosi, used techniques such as architectural documentation, surface surveys, surface scraping, and examining to identify additional details regarding the ancient civilization. Mohenjo-daro is a remarkable structure given its age. It features a planned layout based on a grid of streets that were set out in precise patterns. At its peak, the city likely had roughly 35,000 residents. The city's buildings were advanced, made of sun-dried bricks made of baked mud and burned wood in uniform sizes.

Mohenjo-Daro, a civilization in the Indus River Valley, traded with other Indus River Valley and Mesopotamian communities. They possessed a well-organized commerce system, which included regulated weights, measures, and scales found in the Mohenjo- Traded services included construction and artisan work. Seals, sculptures, and other items from Mohenjo-Daro have been discovered in Mesopotamia, indicating trade between the two civilizations. Cotton was most likely exported by the people of Mohenjo-Daro in exchange for minerals, tools, or other items.

Mohenjo-daro conservation efforts were halted in December 1996 because of a lack of government and international organization financing. Site restoration work resumed in April 1997, with funds supplied by the United Nations Educational, Scientific, and Cultural Organization (UNESCO). The investment includes $10 million over two decades to protect the existing structures and the property from

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floods.

The seals and other artifacts found in Mohenjo-Daro point to a polytheistic region in Mohenjo-Daro. Certain plants and animals were sacred to them – the bull, the rhinoceros, trees, etc. This is yet another connection to Hinduism (Brahman, the creator and sacred bull). Cleanliness was also sacred to the citizens of Mohenjo-Daro as indicated by the Great Bath and the sophisticated plumbing and sewage system. Political systems in Mohenjo-Daro are unknown, although they were sophisticated, with running water, a below-ground sewer system, and potentially a forerunner to the modern bank. The ruins of Mohenjo-Daro, located in modern-day Pakistan, shed light on the culture of the Indus Valley people. The city's remains provide insight into their advanced lifestyle and the complicated interaction between the Indus River Valley and Mesopotamia.

The people of Mohenjo-Daro, a region in Mesopotamia, had a large granary for grain storage and preservation, which may have served as a community bank for harvested grains. Houses in Mohenjo-Daro were similar to those of Mesopotamia and ancient Egypt, with two stories, a cistern for holding water, and clay pipes for delivering water to different rooms. A central patio or open-air courtyard provided ventilation, and sewage flowed into a sewer line that followed the street grid. The houses were built on a street grid like modern cities, with many streets covered with mud brick and wide enough for an oxcart to drive down the middle. It is possible that the people of Mohenjo-Daro have shops on the lower levels of their houses or set up shops in front of their homes daily. Artifacts from Mohenjo-Daro include the 4500-year-old "Dancing girl" bronze statue, and the 17.5 cm tall "Priest King" statue, which has become a symbol for the Indus valley civilization. Both artifacts were discovered in 1927 in Lower town at Mohenjo-Daro.

- **The Great Bath of Mohenjo-Daro**

The people of Mohenjo-Daro appear to have undertaken ritual bathing. One of Mohenjo-Daro's most memorable images is the Great Bath, which demonstrates this. The Great Bath is a pool made of mud bricks that is 39 feet long, 23 feet broad, and approximately 8 feet deep. It was sealed with tar and had a drain so the bath could be drained and cleaned as needed. Although there is no documented evidence that the Indus People undertook bathing rites, given the significance of the Great Bath at

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Mohenjo-Daro, it is not unreasonable to speculate.

Bathing stones (used for scrubbing) and cups (perhaps used to contain ceremonial oils or refreshments) were discovered near the ruins of the Great Bath. Ritual bathing is an important aspect of Hinduism, the most widely practiced religion in modern India. Perhaps the Indus People's ritual bathing was preserved as a Hindu custom.

- **Current UNESCO Status**

Mohenjo-daro preservation efforts were halted in December 1996 because to a lack of government and international organization financing. Site restoration work resumed in April 1997, with funds supplied by the United Nations Educational, Scientific, and Cultural Organization (UNESCO). The investment includes $10 million over two decades to protect the existing structures and the property from floods.

- **Decline and Legacy**

Mohenjo-Daro, a city of the Indus Valley Civilization, continues to be an archaeological enigma. The ruins were uncovered beneath layers of silt during railway construction, suggesting that the city experienced multiple cycles of destruction and reconstruction, likely caused by flooding from the Indus River. Some scholars propose that frequent floods prompted the inhabitants to abandon the city. Another theory suggests that tectonic activity altered the course of the Indus River, contributing to the settlement's decline. It is also possible that the city was overtaken or displaced by another group, potentially the Aryans. The river's current course, now several miles away from the site, may have influenced the decision of the residents to leave. Despite extensive research, the fate of Mohenjo-Daro remains unresolved.

- **Mohenjo-Daro's Legacy**

The people of Mohenjo-Daro, a prosperous and advanced society, left behind a distinctive culture in the Indus River Valley. Their way of life shares similarities with other ancient cultures, and ongoing archaeological and anthropological research continues to reveal more about their history. As new discoveries are made, we can continue to study their legacy and explore the many mysteries they left

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behind.

- **Evidence of interlinking among the sites.**

By 4000 BCE, pottery from Balochistan and Mehrgarh showed remarkable similarity in both style and design, with little to no regional variation. The distinction between the 'Kili Gul-Mohammad' and 'Togau' painting styles is minimal and often considered negligible. Early settlements emerged along the Indus River and its tributaries, where Kili Gul-Mohammad/Togau painted pottery has been found in the lowest occupational layers. During the early fourth millennium BCE, extensive trade networks developed, linking distant regions such as the Baluchistan highlands, the plains of Gujarat, and the river basins of the Indus and Saraswati. This period laid the foundation for what later became the "Initial Phase" of the Developed Urban Phase of the Indus-Saraswati Civilization in the third millennium BCE. The roots of this civilization were firmly established in the Neolithic and Chalcolithic village cultures, which gradually expanded from the Balochistan foothills into the plains at sites like Amri, Jalilpur, Harappa, and various Hakra Culture settlements in the Bahawalpur region of Pakistan. Terms such as the Indus Valley Culture (IVC), Indus Civilization, Indus-Saraswati Civilization, and Harappan Civilization all refer to this same cultural tradition.

Conclusion

Archaeological settlement theories such as Central Place Theory, Urbanization Models, Ecological Approaches, Social Network Analysis, Transhumance Patterns, Cultural Evolutionary Models, and GIS techniques—provide insights into how human populations interacted with their environments, engaged in trade, migrated, and developed cultural practices. While prehistoric and historic periods in South Asia show evidence of some population mobility and interaction, the region's past is best understood as a complex mosaic, marked by significant diversity in ethnic groups, lifestyles, and the pace and nature of cultural and technological change. Key geographical features shaping these patterns include the Himalayas, the extensive alluvial plains of the Indus River and its tributaries, the Ganges and Yamuna Rivers, the now-dry Ghaggar-Hakra River east of the Indus, the Vindhya and Aravalli ranges crossed by the Narmada and Tapti Rivers, and peninsular India with its

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plateau and narrow coastal plains.

Research on the South Asian Palaeolithic has been limited by the scarcity of major sites, requiring scholars to construct chronologies based on surface finds and comparisons with stone tool traditions in Africa and Europe. Nevertheless, recent studies at key locations such as Riwat, Sanghao, and the Potwar Plateau in Pakistan have revealed a continuous sequence of occupation from the Lower Palaeolithic to the Mesolithic. The village of Mehrgarh, dating back to the seventh millennium BCE, represents the earliest known agricultural community in the region, with evidence of domesticated wheat, barley, sheep, goats, and cattle.

The emergence of Pre-Harappan settlements like Rehman Dheri, Amri, and Kot Diji demonstrates that what is now Pakistan was home to some of the most organized early urban communities in the world. These early developments culminated in the Indus Civilization, exemplified by the major urban centers of Harappa and Mohenjo-Daro, which reached their peak between 2600 and 1900 BCE and rivaled contemporary civilizations in complexity and scale.

[iii] http://whc.unesco.org/en/tentativelists/1876/

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Important Sites for Further Studies

i. http://www.faculty.fairfield.edu/faculty/hodgson/Courses/so11/population/urbanization.htm
ii. http://www.answers.com/topic/paleolithic
iii. http://www.answers.com/topic/neandertal
iv. http://www.ntz.info/gen/n00696.html
v. http://www.aerobiologicalengineering.com/wxk116/StoneAge/Handaxes/
vi. http://www.heritage.gov.pk/html_Pages/culture.heri.html
vii. http://www.oocities.com/in2ourpast/palaeolithic.htm
viii. http://www.oocities.com/in2ourpast/humanevolution.htm
ix. http://www.jstor.org/page/registrationConfirm.jsp
x. http://webspace.webring.com/people/ml/look4harappan/origin.htm
xi. http://sympweb.tripod.com/IndusValleyhistory.htm#urban