



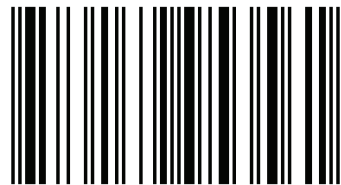
This study tries to identify the significant features of the religion and culture of the people of the Indus Valley Civilization (7000 BCE – 1500 BCE). This is done by examining relationships with past and later cultures found in the Indus River basin. Starting with prehistoric man the writer develops cultural markers (for example, non-violence and Karma) that seem to differentiate Indus inhabitants from its contemporary civilizations. In order to understand the mindset of the Indus man, the parameters of the study has been extended and thus includes, the study of the evolution of human thought with respect to the “Divine Force”, through the study of contemporary religions and mythologies of this civilization, the post-dated religions of this land and last but not the least the whole archaeological material of this civilization, which can be our major tool in finding answers, in the absence of a deciphered Indus script. The whole purpose of this study was to identify the long forgotten religious beliefs of the Indus people and to relive their glory. As, this civilization is appreciated for a lot of things besides its rich religious values.

Sarah Umer

Religious beliefs of the Indus Valley civilization



Sarah Umer is an assistant professor in the Institute of Visual Arts & Design at Lahore College for Women, the largest women’s university in Pakistan and one of the largest in South Asia. Her research interests include the study of ancient civilizations and religions, predominantly in the South Asian region.



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**REVIEW OF THE INDUS VALLEY RELIGIOUS BELIEFS -
THROUGH ANALYTICAL STUDY OF SEALS & ARTIFACTS
AND COMPARATIVE STUDY OF CONTEMPORARY
RELIGIONS**

DEDICATION

To my loving and ever supportive parents, husband and children

ACKNOWLEDGEMENTS

There are many people who in the course of this study helped me in different ways. Some were there to guide me, some supported me, some encouraged me, some cared, some understood, and some were there just to hold my hand when things got a little out of hand. First in the list of acknowledgements is my father, who is more like a mentor. I look up to him with respect and admiration for his integrity, positive approach and vision. My mother is the loveliest creature in this world and who in time of need is just a phone call away. My adorable children who tolerated my long hours at work and my ever-supportive husband, without whose support this would not have been possible. My deceased father-in-law and mother-in-law, who believed that I could do it. After family the most important person who has always stood by me, who was there to help and guide me through this long journey is Dr. Musarrat Hasan, without whose contribution it would have been impossible. Her positive manner, facilitating nature and encouraging remarks were enough to boost my moral even on the dullest of days. I would like to thank Dr. Barbara Schmitz for teaching me research methodology, without her efforts and corrections it would not have been possible either. I would like to thank Dr. Rita Wright and Dr. Jonathan Mark Kenoyer for their support and prompt replies at times of need. I would like to thank the ever-supportive Dr. Rifaat Saif Dar, for been there as a mentor. Dr. Ashraf Khan, director Taxila Institute, Quaid-e-Azam University, Islamabad for his guidance and support. Mr. Mazhar Ali, Deputy Librarian HEC, Islamabad for his support. It is impossible to thank everyone, but I would like to mention all the librarians, resource persons, international and national scholars, my domestic staff and whoever has helped me in any way. Knowing that this is not the right forum to address Allah, but I want to thank you for blessing me with countless bounties, both in the form of people and things.

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ABSTRACT

This study tries to identify the significant features of the religion and culture of the people of the Indus Valley Civilization (7000 BCE – 1500 BCE). This is done by examining relationships with past and later cultures found in the Indus River basin. My quest is made difficult by the absence of a readable Indus script.

Starting with prehistoric man the writer develops cultural markers (for example, non-violence and *Karma*) that seem to differentiate Indus inhabitants from its contemporary civilizations. While it is also true that these cultural markers are pretty evident in the three post-dated religions of the land (Hinduism, Buddhism and Jainism), who own it in one way or the other, through the various icons and objects that they have adopted, which might not have travelled genetically but through their culture that was transmitted generation by generation.

Therefore in order to understand the mindset of the Indus man, the parameters of the study has been extended and thus includes, the study of the evolution of human thought with respect to the “Divine Force”, through the study of contemporary religions and mythologies of this civilization, the post-dated religions of this land and last but not the least the whole archaeological material of this civilization, which can be our major tool in finding answers and that also in the absence of deciphered Indus script. The whole purpose of this study was to identify the long forgotten religious beliefs of the Indus people and to relive their glory. A civilization, which is known to the world for its excellent town planning and “public works”, a civilization that invented the toilet and bathing platforms, a civilization whose sanitary works and waste disposable system were the envy of contemporary civilization, a civilization double the size of its contemporaries, a civilization known for its lack of weaponry and armaments, a civilization known for its peace, a civilization known for its trade and gateway cities, a civilization known for its equidistant settlements, a civilization known for its distribution and procurement techniques, a civilization known for its agriculture, a civilization known for its weights and measures, a civilization known for its “unicorn”, a civilization known for “the mediating yogi”, a civilization known for its seals, a civilization known for its “priest king”, a civilization known for its “dancing girl”, a civilization known for its modest burial customs, but the one thing it is not known for are its religious beliefs.

Religion, Indus, Civilization, South Asia, Contemporary.s

Chapter I

Introduction

The Indus civilization along with the Mesopotamian and Egyptian civilizations is considered to be the cradle of early civilization (see Map I.1). Of the three the Indus is the only one that has expanded over a very large area, extending from northeastern Afghanistan and including present day Pakistan and India (see Map I.2). Unfortunately, out of the three it is the one that has been poorly investigated.¹

A stirring and fascinating fact about prehistory and history is that it keeps on changing. It is directly dependent upon archaeological findings, as new discoveries come to light; all previous discoveries, analyses and hypotheses are compulsorily revised. This is what has happened and is still happening with the Indus Valley Civilization. Though, the one discovery that all Indus historians await is with regard to its script, which despite many efforts still remains undeciphered and the other is the religious beliefs of these people, which unfortunately no scholar has ever taken seriously.

Therefore, in order to seek answers about the religious beliefs of the Indus people, I would be analysing diverse factors, which would help me to build my argument, and as I proceed you shall find the relevance. These factors include the geological statics of earth, the location and importance of continents, the geographical importance of the regions under consideration, the role of climate, the origin of the human race, the role of Holocene period in the lives of humans, the first villages, towns and cities, the first civilization and empire, the first consciousness of man about the divine, the first reason for dispute, etc. All these facts will be established step by step to understand the religious beliefs of the Indus People under the head of literature review.

The narrative of the Indus civilization begins only in the twentieth century. Charles Masson (see Figure I.1), a British Army deserter whose real name was James Lewis, came upon the Harappan ruins in 1826, while travelling through the marshy woodlands of what is today the Punjab region of Pakistan. The account he wrote for a journal said it was a “ruinous brick castle” and had an “irregular rocky height, crowned with remains of buildings in fragments of walls with niches after the eastern manner. The walls and towers of the castle are

¹ Rita P. Wright, *The Ancient Indus: Urbanization, Economy, and Society* (New Delhi: Cambridge University Press, 2010), 1-3.

remarkably high, though, from having been long deserted, they exhibit in some parts the ravages of time and decay.”² A. Burnes who visited there in 1831 saw there “a ruined citadel on the river-side of the town”. Sir Alexander Cunningham (see Figure I.2), director general of the newly formed Archaeological Survey of India, revisited the ruins of this site in the winter of 1873. He had viewed the site some twenty years before, after reading about it in Mason’s journal account, and he then had found the site largely as Masson had described, but by 1873 he could not find any trace of the castle. The workers laying the Lahore-Multan railway track had pillaged Harappa’s finely prepared bricks for track-bed ballast. On Cunningham inspection of the railway line it was evident to him that the bricks had been filched from the site. Soon after that Cunningham initiated excavations in the hope to save what remained of this site. Only one square seal, with a bull, or zebu framed by six characters of an unknown script was found (see Seal I.1). The alien appearance of the animal and the strange writing, so unlike the prevalent Sanskrit of India, led Cunningham to propose that the seal was foreign. As his efforts did not yield any further spoils, Cunningham soon discontinued the excavations and eventually retired in 1885.³ In an account that he published he wrote, “the ruins of Harappa are the most extensive of all the old sites along the banks of the Ravi”. He published the size of the site in addition to the site-plan. His site-plan is remarkable different from the site-plan that was later published by S. M. Vats (see Figure I.3), and the seal that Cunningham claimed was of foreign origin was also proven otherwise.

In 1912, J. F. Fleet published two more seals.⁴ It was in 1914 that Sir John Marshall (see Figure I.4), who was a classical scholar and archaeologist who succeeded Cunningham, ordered a formal survey of Harappa. World War I intervened, and it was not until 1920 that work started on the site again. Like before the rewards were meager as only two seals were found by Rai Bahadur Daya Ram Sahni (first Indian to be appointed Director-General of the Archaeological Survey of India), by the end of the season (see Figure I.5). Marshall’s interest in Harappa might have ended had it not been for the accidental discovery of Mohenjo-Daro in 1919, by one of Marshall’s Indian staffers R. D. Banerji, who was exploring along the southern portion of the Indus River, when he encountered an ancient Buddhist stupa. Clustered

² John L. Papanek, *Ancient India: Land of Mystery* (Alexandria, Virginia: Time-Life Books, 1994), 9-10.

³ John L. Papanek, *Ancient India: Land of Mystery* (Alexandria, Virginia: Time-Life Books, 1994), 9-10.

⁴ Lakshmi Chatterjee, *Heritage of Harappa*, Vol. I (New Delhi: Global Vision Publishing, 2005), 14.

around the stupa were mounds of crumbling brick, remains of a once flourishing metropolis, as surmised by Banerji.

A trail dig was initiated which disclosed four settlement layers beneath the stupa. The coins found in the upper layers fixed its date to the second century CE. In the remaining levels, Banerji uncovered bits of engraved copper and three fired soapstone seals, one of the seals bore the image of a unicorn, and all three had been inscribed with an odd pictograph. These seals were quickly compared by Marshall with seals found from Harappa, and he later wrote, “that the finds from the two sites belonged to the same stage of culture and approximately to the same age”, “and that they were totally distinct from anything previously known to us in India was at once evident.”⁵ In order to solve the mystery of their ages, Marshall submitted pictures of the artefacts to the *Illustrated London News* (see Figure I.6), an important bulletin board for British archaeologists of that day. Marshall believed that it was an important discovery, as in an accompanying report he wrote,

“Not often has it been given to archaeologists, as it was given to Schliemann at Tiryns and Mycenae, to light upon the remains of a long forgotten civilization. It looks, however, at this moment, as if we are on the threshold of such a discovery in the plains of the Indus. Up to the present our knowledge of Indian antiquities has carried us back hardly further than the third century before Christ. Now, however, there has unexpectedly been unearthed an entirely new class of objects which have nothing in common with those previously known to us.”

Marshall was right about the importance of this discovery as in the next issue of the *Illustrated London News* there was a letter from A. H. Sayce, an Assyriologist at Oxford University, describing the close affinity between the Indus seals and others known from excavations of ancient Mesopotamian sites in Iraq. Dr. Ernest Mackay (see Figure I.7), director of the American Expedition at the Mesopotamian Kingdom of Kish, following Sayce’s letter made a more remarkable revelation, disclosing that a seal identical stylistically to those from Mohenjo-Daro and Harappa had been found beneath a temple dedicated to the war god Illbaba, datable to approximately 2300 BCE. On the bases of this disclosure Mohenjo-Daro and Harappa were assigned to the mid third millennium BCE, and trade links between the sites obviously had existed.

Marshall could no longer contain his excitement and in order to find more answers initiated a massive excavation campaign in 1925. As Harappa had been badly plundered by the railway contractors, therefore excavation efforts remained relatively low at that site, as

⁵ John L. Papanek, *Ancient India: Land of Mystery* (Alexandria, Virginia: Time-Life Books, 1994), 11.

compared with the relatively better-preserved Mohenjo-Daro. Excavations continued for six years, with 800 labourers, a crew of technical assistants, and six officials of the Archaeological Survey of India, including Marshall. Detailed and thorough digging soon yielded the basic layout of the town, which showed signs of urbanization in the sub-continent - something totally unheard of in the third millennium BCE.⁶ Architecture and artefacts unearthed from both cities displayed signs of their kinship. However, Marshall was unable to find any indisputable proof of a ruling elite, as structures such as palaces, temples or bureaucratic offices could not be positively associated with any buildings unearthed.⁷

A question that cropped up even in Marshall's time was to the origin of the people of this civilization. Where did they come from and where did they disappear after its decline? For years after the discovery of this civilization, scholars have presented various hypotheses. Even Marshall initially proposed a "close cultural connection" with Sumer, but later asserted that the Indus culture was uniquely Indian, founded in the soil of the Indian subcontinent.⁸ Marshall conducted excavations at Mohenjo-Daro in 1922-1927, and Vats, conducted excavations at Harappa in 1920-21 and again in 1933-34, concluded that the civilization was a distinct cultural entity.⁹ Marshall in his summary remarks regarding the excavations at both sites wrote,

"Hitherto it has commonly been supposed that the pre-Aryan peoples of India were on an altogether lower plane of civilization than their Aryan conquerors; that to the latter they were much what the Helots were to the Spartans, or the Slavs to their Byzantine overlords - a race so servile and degraded, that they were commonly known as Dasas or slaves. The picture of them gleaned from the Hymns of the Rigveda was that of black skinned, flat-nosed barbarians, as different from the fair Aryans in physical aspect as they were in speech and religion, though at the same time it was evident that they must have been rich in cattle, good fighters, and possessed of many forts in which they defended themselves against the invaders."¹⁰

However, the last fifty years of research in this region has completely revolutionised not only our thinking but have also refuted all previous theories and hypotheses. According to the hymns the Aryans were still in the village state and their society was still primitive when they supposedly came into interaction with the *dasas* of the Indus civilization, who, on the other hand, were already living in well-built cities or fortresses and had attained a higher state of culture in which no characteristics of Indo - Aryan influence could be traced. It was not

⁶ Details of this urbanization would be discussed in the chapter on 'Growth, Development and Expansion of Indus Valley Civilization', Chapter 3.1.

⁷ This point will be elaborated as we proceed.

⁸ John L. Papanek, *Ancient India: Land of Mystery* (Alexandria, Virginia: Time-Life Books, 1994), 12-4.

John Marshall, *Mohenjo-Daro and the Indus Civilization* (London: Arthur Probsthain, 1931).

⁹ Madho Sarup Vats, *Excavations at Harappa*, Vol. 2 (New Delhi: Government of India, 1940), Pl. I.

¹⁰ John Marshall, *Mohenjo-Daro and the Indus Civilization* (London: Arthur Probsthain, 1931), 5-6.

imagined that prior to the Aryans had existed a civilization that enjoyed a culture that was almost 5,000 years old and was as advanced as the cultures of Mesopotamia and Egypt, and in some cases even superior to them.¹¹

Since the day it was discovered researchers have set themselves the difficult task of determining the origins and legacy of this great civilization. What they have found in the last fifty years has pushed the dawn of this civilization deep into the past, back to the remote Neolithic Age of 8,000 to 7,000 BCE.¹² When it was first discovered, and for many years afterwards, eminent scholars and archaeologists like Mortimer Wheeler and S. Piggott puzzled over its sudden emergence. But explorations and the excavations of the last fifty years have completely revolutionized our understanding of this great civilization. There was no such “sudden emergence”; new discoveries have securely documented a long sequence of development preceding the appearance of the Indus cities.¹³ It is essential that we investigate the settlements that predate the Indus cities and also when, how, and why these areas were inhabited first by hominids and later by Humans. Therefore, let us begin our journey.

¹¹ Lakshmi Chatterjee, *Heritage of Harappa*, Vol. I (New Delhi: Global Vision Publishing, 2005), 14-5.

¹² John L. Papanek, *Ancient India: Land of Mystery* (Alexandria, Virginia: Time-Life Books, 1994), 15-6.

¹³ Rita P. Wright, *The Ancient Indus: Urbanization, Economy, and Society* (New Delhi: Cambridge University Press, 2010), 21-2.

Chapter 2.1

Geographical Picture of Earth with Special Reference to the Indus Valley Area and Contemporary Asian Rivers

History and geography go hand in hand; they are like railway tracks that go parallel to one another, are incomplete without each other yet have their own stories. In order to understand the history and beliefs of man it is important that we understand the geography of the land where he once lived. My reason for starting with the creation of earth and the birth of man will come to be understood as I proceed.

Scholars have described the interrelationship between history and geography in special ways. While history gives a dialogue between past and present,¹⁴ geography teaches us about the land in which we live and about other lands too. It tells us what the country looks like, its mountains, its rivers, and where they flow, and how they reach the sea. It also tells us, about the kinds of trees and plants that grow there, why they grow there, and how the people use them. It describes the people, and tells us about their living and livelihood, and how they go from one place to another.¹⁵ In short geography may be seen as a blueprint for history and can be an important influence on it.

Geographical features of the earth have undergone a series of changes since its creation, in the movement of the continents, the climate, or the formation of the mountain ranges. For example, Earth has undergone a series of “Ice Ages” interspersed with warmer periods (the most recent glacial period was at its height about 20,000 years ago). Using the radiometric dating methods, geologists have verified that the Earth was created about 4.6 billion years ago. Earth is man’s home, but man has not been living on it since its creation. Life on Earth started only some 3,400 million years ago; the first known life forms were bacteria and blue-green algae. About 700 million years ago more complex plants and animals began to develop. Over a period of time many plant and animal species evolved; some, such as dinosaurs, survived for many millions of years, while the life span of others was longer or shorter. Paleanthropologists today are only interested in a small fraction of that geological time, possibly only the last 65

¹⁴ Edward Hallett Carr, *What is History?* (New York: Random House, 1961), 30.

¹⁵ Elsa C. Stamp, *A First Geography of Pakistan And India* (London: Orient Longmans, 1929), 1.

million years, when the primates evolved. Archaeologists focus on an even lesser time period of 2.5 million years.¹⁶

Geologists have divided the diverse life forms found on Earth into special periods, for example Ordovician Period, Devonian Period, Carboniferous Period and many more to follow.¹⁷ Each period witnessed the birth of new specie, the death of existing specie, and the fight of specie for supremacy. The first vertebrates appeared about 470 million years ago, during the Ordovician Period; the first land plants appeared around 400 million years ago during the Devonian Period; and the first land animals about 300 million years ago. The Carboniferous Period (363-290 million years ago) witnessed many changes that have had a lasting effect on present day life.

Geoscientists are beginning to understand the evolution of the Earth's landmasses. The Earth's continents Laurasia and Gondwanaland collided (see Map II.1.1), resulting in the formation of one land- mass called Pangaea two hundred million years ago (see Map II.1.2). Richard Monastersky writes that;

“On the basis of paleomagnetic evidence, scientists believe Pangaea was probably centred where Africa lies today. At that time, the giant continent was sitting over a hot area in the mantle, a region where partially molten rock rises upward from the depths. Since Pangaea's breakup, some 65 million years ago, almost all of the individual continents have centred themselves over relatively cool spots in the upper mantle, which are believed to correspond to the down flows of mantle rock”.¹⁸

The theory that the continents are in motion was given by a German meteorologist named Alfred Wegener some fifty years ago. It is believed by some that the continents might come together once more to form a super continent again (see Map II.1.3).¹⁹

Another important development of the Carboniferous period was the covering of the southern hemisphere with glaciers, included Antarctica, parts of Australia, and much of South America, Africa and India. Much of the world's water was locked up as ice, which resulted in a drop of sea level in the Northern Hemisphere - much lower than today. Deserts and hot

¹⁶ Emily A. Schultz and Robert H. Lavenda, *Anthropology: A Perspective on the Human Condition* (California: Mayfield Publishing, 1998), 106.

¹⁷ Eldridge M. Moores and Rhodes W. Fairbridge, *Encyclopaedia of European and Asian Regional Geology* (London: Chapman and Hall, 1997).

Also see, *Visual Encyclopaedia of Science* (London: Page One, 2000), 140-9.

¹⁸ Richard Monastersky, “The Whole Earth Syndrome”, *Science News*, Vol. 133, no. 24 (Jun, 11, 1988): 378-80.

¹⁹ Cheryl Simon, “The Great Earth Debate”, *Science News*, Vol. 121, no. 11 (Mar, 1982): 178-9.

climate predominated in areas that were away from the poles. This resulted in the greatest mass extinction of life on Earth ever.²⁰

The Triassic Period (245-208 million years ago), marked the beginning of what is now commonly known as the Age of Dinosaurs. During this period the continents were still massed together. By the end of this period dinosaurs dominated the Earth and were a major cause for the extinction of many other reptiles. The Triassic Period was followed by the famous Jurassic Period (208 to 146 million years ago); during this time Pangaea broke up again into continents of Gondwanaland and Laurasia (see Map II.1.4), sea-levels rose, flooding areas of lower land. The climate during this time was warm and moist, which resulted in the growth of many plants. The abundance in plant food became a reason for the life of many herbivorous dinosaurs, shrew-like mammals, marine reptiles and flying reptiles. The significance of the Cretaceous Period (146 to 65 million years ago) was the breaking up of Gondwanaland and Laurasia into smaller land-masses (see Map II.1.5). These land-masses resembled the present-day continents. Another important development that took place at the end of this time period is the extinction of dinosaurs. "The reason for this mass extinction is unknown but it is thought to have been caused by climatic changes due to either a catastrophic meteor impact with the Earth or extensive volcanic eruptions."²¹

During the Tertiary Period (65-1.6 million years ago); the continents had almost reached their present positions and there was an increase in the variety of mammals, with an emphasis on the placental mammals that nourished and maintained the young in the mother's uterus. Only three orders of these mammals existed during the Cretaceous Period, compared with twenty-five during the Tertiary Period. Scientists believe that one of these twenty-five was the first hominid, *Australopithecus*, who first appeared in Africa. It was also during this time period that the Tethys Sea, which had separated the northern continents from Africa and India, began to close, forming the Mediterranean Sea (see Map II.1.6). This resulted in the migration of terrestrial animals between Africa and Western Europe. It was also during this time that the Himalaya Mountains were formed by the collision of the two crustal plates of Asia and India (see Map II.1.7).²²

²⁰ Ted Smart, *Visual Encyclopedia* (Ballyclare: Arcade Books, 1998), 64-6.

²¹ *Ibid.*, 72.

²² Claude Allegre and Vincent Courtillot, "Revolution in the Earth Sciences", *Philosophical Transactions: Biological Sciences*, vol. 354, no. 1392 (Dec., 1999): 1915-19.

The period that followed is called the Quaternary Period (1.6 million – 10,000 years ago). It was during this time that the cold weather, which had started in the previous period, resulted in the migration of many life forms towards the equator. Humans developed throughout the Pleistocene period (1.6 million-10,000 years ago) in Africa and migrated northward into both Europe and Asia. Modern humans, *Homo sapiens*, were living under harsh weather conditions in the European continent 30,000 years ago and were hunting mammals. The end of the last ice age and the climatic changes that occurred about 40,000 years ago brought extinction to many Pleistocene mammals (for example, mammoths),²³ but enabled humans to flourish and live.²⁴

Asia being the largest continent is considered to be the eastern section of the former landmass called Eurasia (see Map II.1.8). The Ural Mountains in the north are the chief natural boundary between Asia and Europe; other natural boundaries are the Black Sea, Bosphorus Strait and the Mediterranean Sea. Asia itself is full of different types of land formations. The most prominent are the mountain ranges that start in the Pamir highlands of Central Asia and extends eastward through China and westward as far as Turkey. The highest mountains are the Himalayas in Nepal and Tibet, Mount Everest being the highest at 28,000 feet. Asia includes deserts, steppes, dark forests and frozen tundra. Siberia which is almost one third of the Asian continent lies towards the north. As Asia spreads from the Arctic Ocean to the equator every major climate zone falls within it. It is estimated that only ten percent of Asia is capable of supporting crops as regions towards the north and centre are not friendly to human life. Thus, canals, dams and other devices began to be used for irrigation to utilize the abundant river water. Asia has more than one third of the earth's rivers: Yangtze and Yellow rivers in China towards the east of the continent are among the longest; Ob, Yenisei, Irtysh, Amur and Lena are in North; Mekong and Irrawaddy are in the Southeast; Brahmaputra, Indus and Ganges in South Asia; and Tigris-Euphrates in Southwest Asia. It is the abundance of river water in this region that led not only to the birth of civilizations but also where they flourished and turned into Empires.

²³ For more see Anthony D. Barnosky "Effects of Quaternary Climatic Change on Speciation in Mammals", *Journal of Mammalian Evolution*, vol. 12, no. 1/2 (June, 2005): 247-60.

²⁴ Smart, 76.

For more details on the evolution of Humans see section on 'The Evolution of Mankind', chapter-below.

Asia as a whole divides into six regions on the base of its geographical land formation that developed in distinct cultural and religious traditions. These regions are Southwest Asia, South Asia, Southeast Asia, East Asia, Central and North Asia (see Map II.1.9).²⁵

The first known human civilization emerged in Southwest Asia (see Map II.1.10).²⁶ Today its boundary includes eighteen nations: Turkey, Cyprus, Syria, Lebanon, Israel, Jordan, Saudi Arabia, Yemen, Iraq, Iran, Oman, the United Arab Emirates, Bahrain, Qatar, Kuwait, Armenia, Azerbaijan and Georgia. Geographically it can be further divided into four major areas: the mountain and plateaus of Turkey, Transcaucasia and Iran are included in the first area. The fertile coastal strip along the Mediterranean falls into a second area. The delta and floodplains of the Tigris-Euphrates is the third area. The fourth area comprises of the dessert that extends southwards from Syria through the Arabian Peninsula. Since the 20th century the importance of the region lies in the fact that it produces one third of the world's oil but it was also the birth place of the world's unique monotheist religions. This region forms a natural land bridge between Asia, Europe and Africa, making this junction for trade a stopover for merchants. The area is variously called the Middle East, Near East, Levant, Mesopotamia and Orient.²⁷

The second region South Asia is Indian, a peninsula triangular in shape; the massive Himalaya Mountains in the north form a natural barrier and divide it from the rest of the continent (see Map II.1.11). To the west it is bounded by the Arabian Sea; the Indian Ocean is towards the south and towards the east is the Bay of Bengal. India, which has the second largest population in the world, dominates over a major part of South Asia. Other countries included in this region are Pakistan and the Indus Valley Civilization (the region of my dissertation), Afghanistan, Nepal, Bhutan, Bangladesh, Sri Lanka and Maldives. Geographically Pakistan holds an important place in South Asia. It is in the northwestern part of the Indian Sub-continent. Afghanistan is to the northwest, Iran to the west, China towards the northeast and India is to the east. The Arabian Sea and the Indian Ocean are towards the south. The life line of Pakistan is the River Indus and its five tributary rivers, Ravi, Sutlej, Chenab, Beas and Jhelum. These rivers have fostered the birth of civilization in our part of the world. Their waters have fed our ancestors for many thousands of years and are still feeding us today. The moderate

²⁵ *Lands and Peoples*, Vol. 2 (Danbury, CN: Grolier Educational, 2001), 1-10.

²⁶ For further details on the region see *Ibid.*, 34

²⁷ *Ibid.*, 41-164.

climate and fertile watered land have attracted many invaders from cold countries in the north and northwest, who entered our land through the two passes or gateways (Khyber and Bolan Pass) in the mountains.²⁸

This third region Southeast Asia embraces the peninsula of Myanmar (formerly Burma), Thailand, Laos, Cambodia, Vietnam, Malaysia and Singapore, and several major island nations of, Indonesia, Brunei and the Philippines (see Map II.1.12).

East Asia, which is the fourth region, includes China, Japan, Taiwan, North Korea and South Korea. The impact of this region is enormous as more than 1.2 billion people the highest for any country on Earth, are living in China (see Map II.1.13).

The fifth and sixth region, the Central and North Asian parts of what was Russia became in 1991, five new independent countries: Kazakhstan, Uzbekistan, Turkmenistan, Kyrgyzstan and Tajikistan. Another country included in the region is Mongolia (see Map II.1.14).

Asia is home to the first civilizations on Earth.²⁹ It is believed that tens, or hundreds of thousands of years ago people migrated from Africa to Asia. These Stone Age hunter-gathers initially settled in the mountain caves of Asia. For food they hunted wild game with the help of weapons made from stone tools. For reasons still unknown, about 10,000 years ago the supply of wild animals in Asia began to be reduce.³⁰ This drove Stone Age hunters out of the mountains and into the lower lands near the river waters. According to Andre Wink, they moved to the great variety and abundance of river landscapes along an immense coastline, running from Zambezi in East Africa to Euphrates and the Tigris, to Indus and its tributaries, the Ganges and Yamuna, the Brahmaputra, the rivers of the Indian peninsula, and, beyond, to Irrawaddy, Chao Phraya, Mekong, the Solo, and Brantas and the other rivers in its eastern parts. The most striking feature about many of these rivers is the extraordinary magnitude that, help them to reach deeply inland. Unlike the Mediterranean region, most of the civilization that arose in the Indian Ocean area from protohistoric and ancient times onwards were typically alluvial river-plain and delta civilizations.³¹ A recent excavation in a place called Tell Abu

²⁸ *Lands and Peoples*, 165-422.

²⁹ John Haywood, *The Atlas of Past Times*, 13-25.

³⁰ 'Ever since V. Gordon Childe (1928) first proposed a climatic explanation for the origins of agriculture, some version of climatic determinism has been a pervasive force in explanations of culture change in the Near East during the late Pleistocene and early Holocene. Despite early and later attempts to discredit either Childe's 'oasis theory' specifically (Braidwood 1951; 1960) or climatic explanations more generally (Bar-Yosef 1996), climate change has persisted as a 'prime mover' in explanations of culture change, ...', states, Lisa A. Maher, E.B. Banning & Michael Chazan, (2011).

³¹ Andre Wink, "From the Mediterranean to the Indian Ocean: Medieval History in Geographic Perspective", *Society for Comparative Study of Society and History* (2002): 417.

Hureyra in northern Syria supports the theory that such societies in Southwest Asia were inhabited for thousands of years. For example, the people of Tell Abu Hureyra, near the Euphrates, were engaged in farming as early as 9500 BCE.³² They learned to grow crops, domesticate animals and developed technologies that were essential for their livelihood. A most important technology was the potter's wheel, because it enabled man to store water and food. The development of communication, through trade, helped the people to grow and develop linkages.³³ These developments helped the civilizations to grow into proper states and empires.

'The history of Southwest Asia is a tale of the rise and fall of one great civilization after another. First on the scene was Sumeria (see Map II.1.15).'³⁴ It was in this region on the banks of the Euphrates and Tigris rivers (present day Iraq) that the first civilization of the earth emerged, better known as Sumerian Civilization with their capital at Sumer. These Sumerians are considered to be hunter-gathers who arrived from the Iranian Plateau in the 6th or 5th millennium BCE. They were not the first inhabitants of this land but they were the first ones to develop a state and also the first ones to develop a system of canals for irrigation. Their achievement was the development of a cuneiform (wedge-shaped) writing around 3500 BCE. Although the Sumerians were the first to establish an empire in the fertile Euphrates-Tigris valleys, they were soon followed by others: Babylonians and Assyrians, Medes, Persians, Greeks, Romans, Arabs and Turks. 'The Greeks gave the Tigris-Euphrates valley a name – Mesopotamia meaning, "land between rivers." ' ³⁵ It is also considered to be the legendary site of the biblical Garden of Eden.

An Egyptian civilization (see Map II.1.16) emerged on the banks of the river Nile in Egypt sometime after the emergence of the Sumerian civilization around 5000 BCE. An Indo-European tribe the Hittites³⁶ entered Southwest Asia and settled in the area now known as Turkey (1400 and 1200 BCE). They were the first to use horses and work with iron.

The Phoenicians, another Semitic people from the Arabian Peninsula settled in what is now Lebanon and Syria around 3000 BCE (see Map II.1.17). They concentrated on maritime

³² *Lands and Peoples*, 51.

³³ Also see, Tim Ingold, *Companion Encyclopaedia of Anthropology* (New York: Routledge, 1994).

³⁴ *Lands and Peoples*, 47.

³⁵ *Ibid.*, 12.

³⁶ Also see Erdal Yavuz, *Anatolian Civilizations*: In the series, ed. C. Scarre and B. M. Fagan, *Ancient Civilizations* (Pearson, 2008).

trade along the Mediterranean coasts. Around 800 BCE they set up trading colonies in Cyprus. The Phoenicians developed the first alphabetical system of writing.

Another Semitic people emerged in history around 2000 BCE on the eastern coast of the Mediterranean known as the Hebrews (see Map II.1.18). According to historians and biblical accounts it was the Hebrews who developed the first religion based on the concept of one God with his prophet Abraham who led his family from Ur to Canaan, the land that is now Israel 4000 years ago. Present day Jordan contains the Semitic kingdoms of Moab, Edom, Ammon and Gilead during Biblical times (see Map II.1.19). Saudi Arabia another important area of the region both historically and geographically was the birthplace of the Prophet Muhammad. Today archaeologists believe that civilizations flourished in this region around 7000 BCE when the land was fertile, but by 3000 BCE the climate had changed and much of the interior had turned into desert. Another country of this region Bahrain flourished as a trading centre by 2000 BCE; it had trading links with both Mesopotamia and Indus Valley Civilization.

The history of East Asia begins along the Yellow River (in Chinese, called the Huang He), which has been called China's Sorrow (see Map II.1.20). This civilization also is among the oldest. Humans settled here long before any kind of historical records were maintained. Archaeologists believe that there were many villages on the banks of Yellow River long before the Egyptians built their Pyramids. Another important aspect of this civilization is its continuity. "The language, philosophy, and cultural outlook of Chinese people can be traced back, uninterrupted, to ancestors who lived thousands of years ago."³⁷ During the rule of the Shang Dynasty in 1600 BCE written documents were first kept.

South Asia, the region of my dissertation topic (The Religion of Indus Valley Civilization), and the land of my ancestors is among the oldest on Earth.³⁸ According to Andre Wink it "...is an area of environmentally disrupted human settlement, of 'lost' rivers, 'lost' civilizations, and 'lost' cities,"³⁹ where environmental change was largely beyond the control of man. Geographers often refer to it as the Indian Subcontinent because of its isolation by mountains and seas. However, history records that despite of the natural barriers invaders -

³⁷ *Lands and Peoples*, 15.

³⁸ Also see V. N. Misra, "Human Adaptations to the Changing Landscape of the Indian Arid Zone During the Quaternary Period," in, J. M. Kenoyer, ed., *Old Problems and New Perspectives in the Archaeology of South Asia* (Madison: 1989), 3–20.

³⁹ Andre Wink, "From the Mediterranean to the Indian Ocean: Medieval History in Geographic Perspective", *Society for Comparative Study of Society and History* (2002): 439.

Aryans, Mongols, Moghuls or the East India Company- have been successful in penetrating into this land for thousands of years. Today, genetic research⁴⁰ tells us that the earliest inhabitants of this land migrated from Africa,⁴¹ which is considered to be the birth place of all humanity.⁴² Some scholars believe that this region has a mysterious past, but those who have worked on this region disagree with them on the grounds that the reason behind the mystery is not lack of evidence but lack of proper research and documentation.⁴³ Unfortunately, among the greatest and oldest civilizations on Earth, the Indus is the most poorly documented because their language has not been deciphered. Despite this we know today that the founders of this civilization were far beyond their times in many aspects.⁴⁴ This civilization flourished from 3000 to 1500 BCE, its empire stretched as far north as Kabul, in present day Afghanistan, to the eastern borders of Iran and to the Gulf of Cambay in present day India (see Map II.1.21). The two major cities of this civilization, Harappa and Mohenjo-Daro are known for their advance urban planning, which cannot be sudden. Modern archaeology has proved that the roots of this civilization are far deeper than what was considered even a decade ago, and its area of influence continues to expand.

As civilizations developed in Asia, different languages developed too. These different languages are grouped or classified as ‘families’ according to their common ancestry, ‘...as distinct tongues that are native to specific places.’⁴⁵ The major language group of Asia includes **Sino-Tibetan**. The languages belonging to this group are mostly spoken in China and Southeast Asia. The second largest group is **Indo-European**; the languages of this group are mostly spoken in India, Pakistan⁴⁶ and countries in Europe, and in Russia. **Hamito-Semitic** languages such as Arabic and Hebrew are spoken in Southwest Asia. **Malayo-Polynesian** is spoken throughout Southeast and East Asia. In southern India and Sri Lanka **Dravidian** languages are widespread.

All the great religions of the modern world evolved in Asia – Judaism, Christianity, Islam, Hinduism, Buddhism, Jainism and Confucianism.⁴⁷ But the question in this dissertation

⁴⁰ For further elaboration see Chapter 3.

⁴¹ Ibid

⁴² The details will be discussed in detail in Chapter on “The Origin and Migration of Populations/ Birth of Indus Civilization and its Contemporaries”.

⁴³ See the dissertation of Gregory L. Possehl, “Variation and Change in the Indus Civilization: A Study of Prehistoric Gujarat with Special Reference to the Post Urban Harappan” (Chicago: University of Chicago, 1974).

⁴⁴ See Chapter 3.1 and 3.2 on Indus Civilization for details.

⁴⁵ *Lands and Peoples*, 27.

⁴⁶ For more see Chapter 3.1 and 3.2 on Indus Civilization.

⁴⁷ *Lands and Peoples*, 18.

is why and when man became conscious of religion? Why did his need for religion become apparent? What was the driving force behind this awareness? What role did religion play in his life? Why was the Indus Valley chosen for the development of religious consciousness? One obvious reason was: because this land along the rivers was the hunter-gathers first home, long before foundations for civilizations were laid. As man started to live in groups, civilizations grew and developed. As a result, the religious consciousness and beliefs of the people also evolved. We will examine these problems more in the following chapters.

Chapter 2.2

Birth of Man/Theories of Evolution of Mankind Climatic Changes that Resulted in the Birth and Development of Humans

Prehistory simply means the time before written history began. More than ninety-nine percent of man's story is prehistory. The general consensus by the historians is that man is about one million years old, but he did not write anything, until 5000 years ago. Although, prehistoric man did not leave us any written records he unintentionally left us information on his way of life, which is interpreted by different kinds of scientists. These scientists are specialist in physical anthropologists, human palaeontologists, archaeologist and other fields. It is their job to find out what happened before written history began.⁴⁸ Some historians believe that it is their duty to bring together various facts given by these scientists and put them together in such a way as to reach objective conclusions. E. H. Carr has two ideas on what an objective historian is: one is that he "... has the capacity to rise above the limited vision of his own situation in society and in history – a capacity which... is partly dependent on his capacity to recognise the extent of his involvement in that situation, to recognise, that is to say, the impossibility of total objectivity", and his other idea is "...simply that he gets his facts right, but rather that he chooses the right facts, or, in other words, that he applies the right standard of significance".⁴⁹

Man has been blessed with the best attributes and qualities among all living species. It is one, specie that can control all other species with its intelligence and wisdom. It is the one specie that has the ability to reason and think rationally. C. M. Bowra says, "based on the humanistic faith that man is worth studying for his own sake", that "Human beings are the element in our environment which is of most consequence to every child of man".⁵⁰ Therefore we should not be surprised when we see many theories and counter theories with regard to the dates of the origin, the evolution or the different phases of this development.

An enormous span of human history needs to be covered in order to have answers to these questions. Robert J. Braidwood, in the preface to his book, *Prehistoric Men*, states,

"New discoveries and new techniques for the interpretation of the evidence of mankind's past appear almost daily. The newer finds and techniques necessitate reconsideration of older evidence. Slowly but

⁴⁸ Robert J. Braidwood, *Prehistoric Men* (Chicago: Chicago History Museum, 1964), 1-9.

⁴⁹ Arthur Marwick, *The Nature of History* (London: Palgrave Macmillan, 1970), 192-3.

⁵⁰ Micheal Grant, *Ancient History* (New York: Harper and Row, 1965), 5.

surely we move toward fuller understandings of those beings whose history holds the greatest fascination for all of mankind-men themselves.”

Whatever, material I have put together in this dissertation and whatever hypothesis, assumptions or conclusions, I shall make will be based on the work done up until this time. What the future discoveries behold is still unknown and mysterious to all of us. The people of the Indus Valley left us only a very simple form of writing in the form of pictographs on seals and even those have not yet been deciphered. Therefore, whatever conclusions historians reach must be solely based on the way the people of the Indus led their lives.

There are many different ways and views about how to understand prehistory and history. Pre-historians have given two main ways to accomplish this task. One is either to go down the ladder of time, whereas the other is to climb up the ladder. I will follow the first path for this dissertation.

There is a general consensus among evolutionists today that man first appeared in Africa approximately four million years ago. Others counter this theory saying, “... when shall we speak of man as man”? The timeline they give is approximately one million years. Even to fully understand one million years is very difficult task. For example, if we compare this whole time period to one day, it would be something like this:

“The present time is midnight, and Jesus was born just two minutes and fifty seconds ago. Earliest history began about seven minutes ago. Everything before 11:53 P.M. was in prehistoric time”.⁵¹

Another, even better way to understand time is to study it in terms of generations. So, keeping in mind that primitive people married and had children early, twenty years will make an average generation. According to this there would be 50,000 generations in a million years. Keeping this in mind if we calculate generations we find that 250 generations back take us to the time when written history began,

“...David was king of Israel less than 150 generations ago, Julius Caesar was alive just 100 generations ago, Columbus was there 25 generations ago and the United States is just 10 generations old. So the current scenario is that there were 49,750 generations of men before written history began!”⁵²

And another 250 generations back would take us to the time (10,000 years ago), when cultivation began and man started settled life. Now we are left with 49,500 generations of men, plus a time span of 990,000 years. Keeping these statistics in mind let us ask the question once

⁵¹ Robert J. Braidwood, *Prehistoric Men* (Chicago: Chicago History Museum, 1964), 10-11

⁵² *Ibid.*, 10-11.

more, when should we speak of man as man? Can the human mind accept this fact that for such a long period of time and for so many generations, man did not make any effort to change either his surrounding or his life style? Why was he only a hunter and a gatherer for thousands and thousands of years? Why did it take him such a long time to change himself and his way of life? Or would it not be wrong to say here that it was not really man who was roaming the earth at that time, but some other species, with fewer qualities than what man has been blessed with. Some human evolutionists have tried to call these species man's ancestors and they believe that man eventually evolved out of these species, whereas others have refuted this concept. According to them, man did not evolve out of any other species: man was born a man with the best of qualities among all living species.

Let us briefly review human evolution, in order to understand this concept and to try to find answers to questions that are still confusing us today. Let us begin with the evolution of animals. Zoologists have classified the members of the animal kingdom according to their differences and similarities. We humans fall under this kingdom because we move and eat with our mouth; we are vertebrates because of our backbone, and we are mammals because we are warm blooded and we breast-feed our offspring. We are primates because we have grasping hands, flexible limbs, and a highly developed sense of vision. We are also members of the family *Hominoidea*, the taxonomic group which includes both humans and apes, because of the absence of a tail, swinging arms, and the shape of our teeth. The term hominoid refers to all present and past apes and humans, while hominid refers specifically to present and past humans.⁵³ Hominids are known as walking creatures with comparatively large brains; humans today are the sole living representation of this group. According to some evolutionists, fossil bones and genetic studies indicate that the hominids shared an ancestor with the great African ape. It is at this point that the record becomes more complex, when the study of primate evolution turns into the study of hominid evolution. According to Richard Klein of Stanford University, determining the genus and species of the fossil bones of early humans is a very difficult task. The fragmentary pieces of the early fossil finds represent only a few hundred separate individuals. Determining the age of the fossils is also very difficult. He says paleo-anthropology is more like a court of law than a physics laboratory, where we reassess and even redraw the whole family tree on finding a new fragment.⁵⁴

⁵³ T. Douglas Price and Gary M. Feinman, *Images of The Past* (Houston: Mayfield Publishing, 1997), 10.

⁵⁴ *Ibid.*, 16

Although we humans differ considerably from apes, genetically we are closest to them of all hominoids. As far as our genetic composition is concerned we share 98.4% of our genetic material with chimpanzees, while gorillas are only 2.3% different from us genetically. These statistics show great similarities and suggests that the last ancestor shared by the great ape and human lines was probably a chimpanzee-like creature. Thus, changes in genetic regulatory mechanism play an important role in the evolution of different lineages.

As we have seen in chapter 2.1, geography had quite an important influence in shaping the development of humanity. It was in the middle of the Tertiary period (5-25 million of years ago) when the climate was much warmer and wetter than what it is today, and tropical forests grew across much of Africa, Europe and Asia that an increase in the variety of mammals occurred. Many species of apes lived in these forests, including one that is considered by some to be the ancestor of modern humans.

Then sometime around 5 million years ago, towards the end of the Tertiary time, the global temperatures began to cool, ice caps formed at the poles, and the climate grew drier. As a result, the area of the tropical forests grew smaller, giving way to expanses of open woodland and grasslands. These developments did not occur all at once but evolved slowly. In East Africa the hominoids groups were trapped in shrinking patches of forest. Before this they had lived in the trees and moved on four feet when travelling around the forest bed. Now in order to cross wide stretches of open land quickly, some hominoids began walking on two feet, like modern humans. It was under these conditions that the hominids split from this ape or the hominoid group. It is believed that this whole process of hominization began in Africa, which is the only continent where fossils of early hominids dating back to four - five million years are found today. The distinction was made due to their new mode of locomotion, known as “bipedalism” (walking on two feet rather than on four). These early hominids are called australopithecines: specialist believe in addition to walking upright with two feet, they had comparatively larger brains and they depended on tools for their survival.⁵⁵

While studying the fossils we also need to study how these beings modified objects and landscapes, thus creating an archaeological record. It is important to study both, as it helps us to understand how human beings evolved into what they are today. Some of the best evidence comes from sites at Hadar, Swartkrans, Olduvai, Laetoli and Koobi Fora. Some new fossil finds

⁵⁵ Paul G. Bahn, ed., *The Atlas of World Archaeology* (Oxfordshire: Andromeda, 2002), 16.

from Ethiopia, Kenya and Tanzania have pushed back the age of the earliest known hominids and have modified our understanding of their appearance and behaviour.⁵⁶

The oldest known *Australopithecus* species is *A. Anamensis*, which dates approximately four million years ago. The remaining early hominid fossils have been assigned to the species *A. Afarensis*, which includes the famous *Lucy* from Hadar (see Figure II.2.1), Ethiopia. Other direct evidence of hominid bipedalism is a fossilized trail of footprints some 3.6 million years old, found in eastern Africa at Laetoli, Tanzania (see Figure II.2.2). Another evolutionary trend that occurred during this time was the change in dental pattern. Fossils of hominids dating back to three to two million years from southern and eastern African sites have small front teeth and large cheek teeth. Some form of gracile australopithecine is thought to have evolved into the first members of the genus *homo* about two million years ago, known as *Homo habilis* (which literally means handyman). Anthropologists continue to disagree about what caused this complete transition from ape to humans. Whereas many palaeontologists believe that more than one species belonging to the genus *homo* may have co-existed in eastern Africa during the early Pleistocene, along with the robust australopithecines (species with massive teeth and jaws). It is also during this time that we find the oldest undisputed stone tools from Ethiopia, classified under the Oldowan tradition. By 1.8 million years ago the early *homos* had either disappeared or they evolved into *H. Erectus* (upright man), the first member of the genus *homo* to spread out of Africa into Asia and Europe (see Figure II.2.3). They were taller than modern humans, but were very much like us in other respects, though their brains were still much smaller. It is assumed that they were capable of using fire and speech to a certain extent, and went, to far areas like Central Asia, Southwest Asia, South Asia, Europe and China. The *Acheulean* stone-tool tradition is associated with them. Archaeologists traditionally assign the *Oldowan* and *Acheulean* traditions to a single period known as the Lower Palaeolithic in Europe and the Early Stone Age in Africa. But in recent years archaeologists have concluded that it is quite misleading to associate any Stone Age traditions uniquely to a single hominid species. Traditions can vary due to the availability of particular resources in different areas. Keeping all the above details in mind, paleoanthropologists consider a logical link between *H. Erectus*, the more primitive hominids and our own species. They believe that the *Acheulean* stone – tool making ability was a determinant factor in the migration of early hominids out of Africa into new environments. The earliest handaxes found from outside of Africa are in Ubeidiya, Israel.

⁵⁶ T. Douglas Price and Gary M. Feinman, *Images of The Past* (Houston: Mayfield, 1997), 12.

While the punctuationists and gradualists continue to debate about the fate of *H. Erectus* and the origin of the *H. Sapiens*, up to this time indicates that our own species issued from *H. erectus*.⁵⁷

Towards the end of the Tertiary Period the global climate had started to cool down and this continued into the next Quaternary Period, also known as the Ice Age (see Map II.2.1). In spite of its name the climate was not cold all the time: there were frequent warm intervals interglacial periods, separate from the cold, dry glacial periods. As these changes were quite rapid, the animals and plants sometimes found it difficult and sometimes impossible to adapt and to survive under the new climatic changes. *H. erectus* responded to these changes by developing a bigger brain. This meant that greater intelligence was available now for problem solving. One million years ago the brain of *H. erectus* was approximately three - quarters the size of the modern human brain.⁵⁸ But recent studies have shown that stone tools found in association with animal bones were not used for slaughtering animals but for cleaning the skins and cutting up the meat. Plants probably formed a large part of their diet. No ornaments or art work is found and neither is there any evidence of them burying their dead.⁵⁹ So the question remains, was *H. erectus* man's ancestor?

It was sometime between 500,000 and 200,000 years ago that the fossils of *H. erectus* start to disappear from the fossil records and were replaced by fossils that show a mosaic of features found in *H. erectus* and *H. sapiens* (literally wise men). Though these fossils differ considerably from one another they collectively are known as archaic *H. sapiens*. They are poorly dated and paleoanthropologists find them difficult to classify and to relate specifically to *H. sapiens*. There are two major interpretations of the evidence of these fossil records. Punctuationists favour the "replacement model": according to them *H. erectus* was a single, long- lived, geographically dispersed species, and had only one sub-population most probably located in Africa around 200,000 to 130,000 years ago that underwent evolutionary changes there to produce *H. sapiens*. Their descendants then later migrated to other regions. Whereas, the gradualists favour the "regional continuity model". According to it *H. erectus* eventually evolved into *H. sapiens* gradually throughout the entire regions, retaining regionally distinct

⁵⁷ Emily A. Schultz and Robert H. Lavenda, *Anthropology- A Perspective on the Human Condition* (California: Mayfield 1998), 128-52.

⁵⁸ John Haywood, *The Atlas of Past Times*, 12-3.

⁵⁹ Paul G. Bahn, ed., *The Atlas of World Archaeology* (Oxfordshire: Andromeda, 2002), 22.

physical characteristics.⁶⁰ However, archaeologists have found no record to back the claim that either *H. erectus* or archaic *H. sapiens* was truly our ancestor. There is no evidence of personal ornamentation - jewellery, beads, or any kinds of art form, exists, nor are there paintings, sculptures or engravings that show that use of more than basic instincts. The ability to think and reason is still missing.⁶¹ Therefore, whether they were really our ancestor, might be questioned.

In Europe a specie known as *Neanderthals* flourished between 130,000 and 35,000 years ago, they are considered by some to be the descendant of archaic *H. sapiens*. A large collection of fossils remains, tells us that they were shorter and more robust than modern *H. sapiens* with bulbous noses that helped them to survive cold conditions by reducing heat loss. But during the 1980s, new evidence revealed that *Neanderthals* appeared in Europe and western Asia at the same time anatomically modern *H. sapiens* appeared in Africa. These dates and the new evidence have made paleoanthropologists revise their traditional understanding of the relationship between *Neanderthals* and modern peoples. The archaic *H. sapiens* could no longer be considered the ancestors of the *Neanderthals* as data found in Israel suggests that the *Neanderthals* and the moderns lived side by side in south-western Asia for at least 45,000 years without losing their anatomical distinctiveness. Even more puzzling is the fact that both were using tools made in the same way. *Mousterian* experts disagree whether *Neanderthals* created a religion and whether hunting was important to them, but there is compelling fossil evidence from many sites and regions that they buried their dead and looked after their sick and old. Moreover, it seems probable, given the scant evidence for any form of art or ornamentation, that they did not make use of symbols, which is a critical element in the development of human language. Another thing that concerns us today is whether the *Neanderthals* and the moderns interbred, and whether the modern human populations today contain any *Neanderthal* genes. This situation creates a dispute among historians today.⁶² There are many questions that come to mind. Why did the *Neanderthals* look after their sick and old? Why did they start to bury their dead? Why were they using tools? Some believe that all these actions can be related to basic instincts. Tool use is not a distinctive characteristic of humans but; animals too may use or even make simple tools; however, using tools to make other tools does distinguish humans

⁶⁰ Emily A. Schultz and Robert H. Lavenda, *Anthropology- A Perspective on the Human Condition* (California: Mayfield, 1998), 175.

⁶¹ Tim Ingold, ed., *Companion Encyclopedia of Anthropology* (New York: Routledge, 1994), 87-8.

⁶² Emily A. Schultz and Robert H. Lavenda, *Anthropology- A Perspective on the Human Condition* (California: Mayfield, 1998), 176.

from animals. For example, the sea otter wields a rock to break open the shell of an abalone. And the anthropologist Jane Goodall has observed chimpanzees using a variety of tools in their daily life: thrashing about with branches for display, using clubs and missiles for defence, selecting a twig and stripping its bark to probe the nests of termites and attract them to the stick, then to be eaten by the wise chimp. West African chimps even use stone and wooden hammers to crack and open nutshells.⁶³

So, the question becomes was the *Neanderthal* man's ancestor? Because when it came to something like creating symbols for speech they were unable to do so, since it required more brain capacity, reasoning and intelligence that they unfortunately lacked. The question whether the *Neanderthals* and modern humans interbred was recently addressed by paleoanthropologists who claim, that there was no interbreeding between the two. Mitochondrial DNA studies suggest that all humans living today are part of a relatively homogeneous population that originated in Africa within the last few hundred thousand years. In 1997, genetic researchers extracted and decoded a mitochondrial DNA fragment for the original Neander Valley specimen. The analysis revealed significant differences in its DNA from all living humans, suggesting that there was an ancient split between the two lineages, perhaps more than 500,000 years ago. Although, *Neanderthals* did not disappear from Western Europe until 30,000 years ago, possibly later, it is a common belief that modern *H. sapiens* may have forced them into extinction.⁶⁴

Now let's enter the last and the most important phase of human evolution. This phase is further divided into two phases. During the first phase, there is a general consensus among paleoanthropologists today that modern human (*H. sapiens*) evolved in Africa sometime between 100,000 to 150,000 years ago and spread around the globe. Recent studies in genetic evolution also support the view that Africa was the home of the original human population. However, debate continues about the nature of their dispersal. Most believe that a spreading wave of modern humans replaced existing populations of archaic *H. sapiens* entirely. This process of dispersal was complex and involved multiple movements of people and genes. In the caves of Qafzeh and Skhul in Israel remains of modern humans similar to found in Ethiopia and Tanzania, (150,000-100,000 years ago), and in South Africa (100,000-90,000 years ago) have been found. This is the first evidence that we have of modern humans (if they were)

⁶³ T. Douglas Price and Gary M. Feinman, *Images of The Past* (Houston, Mayfield, 1997), 39-40.

⁶⁴ Paul G. Bahn, ed., *The Atlas of World Archaeology* (Oxfordshire: Andromeda, 2002), 27

outside of Africa. Though, the fossils of these modern humans are still associated with the archaic stone tool traditions (like those of the *Neanderthals*), and like the ones also associated with the race of modern Africans.⁶⁵

According to paleoanthropologists a second phase began roughly around 40,000 years ago, when “a behavioural revolution” took place: whether it was the continuity of the race or whether the race of the: “so called out of Africa *H. Sapiens*” was totally replaced by the current human race are two questions that are under continuing discussion. But no one can disregard or refute the dramatic changes of many both in anatomy and in behaviour, that have taken place over the last 40,000 years when compared with the previous million years. Recent evidence from molecular biology has added support to this picture of rapid and recent change, resulting in the current humans that are not only genetically but also behaviourally and anatomically modern. Evidence also points to an African centre for the origin of modern humans. As they moved out of Africa they very soon replaced the variety of other *Homo geneses* roaming the world.⁶⁶

Modern humans besides having many biological differences from other homo species are according to some “closer to the angles”. We possess many attributes that differentiate us from other species. Our large brain and intelligence enable us to think rationally and make decisions rather than to follow basic instincts like other species. We as humans have moved from purely instinctual behaviour to reason and thought. We, in a given situation may flee from a fire, but we can also turn back into the same fire to save someone else.⁶⁷ It is during this phase, that we see fully developed linguistic and modern technological skills which appear to have developed in the modern man. There is general disagreement as to when this really happened, as the evidence found in this regard is both uncertain and open to doubt. Some believe it was 100,000 years ago, whereas others say it was as recent as 50,000 to 40,000 years ago. However, according to the archaeological record, it is only after 50,000 years that we find abundant examples of art and advanced technology. The first uncontested ritual behaviour evidence that we have are the ostrich eggshells beads found from Enkapune ya Muto (Kenya) dating to 46,000 years ago. Beside these archaeologists also witness the appearance of ornaments, engravings, sculptures, and other form of symbolism, which unmistakably confirm

⁶⁵ Paul G. Bahn, ed., *The Atlas of World Archaeology* (Oxfordshire: Andromeda, 2002), 28-9.

⁶⁶ Tim Ingold, ed., *Companion Encyclopedia of Anthropology* (New York, Routledge, 1994), 88-92.

⁶⁷ T. Douglas Price and Gary M. Feinman, *Images of The Past* (Houston: Mayfield, 1997), 39.

the presence of modern human language. But the fossils of this time remain ambiguous, because they lack any anatomical evidence for linguistic abilities. Despite lack of evidence found in the fossils, the archaeological record speaks louder than words. The manipulation of these symbols (ornaments, engravings, etc.) are linked with the fundamental improvements that occurred in technical abilities, which undoubtedly played an important role in the global spread of the modern human species. Their ability to invent new technologies and cope with different environments helped them to colonize the globe at a rapid speed.⁶⁸

So, it would not be wrong to presume at this stage, that it was the abilities to talk, think, reason and communicate that differentiated modern humans from all other creatures before him. Clifford Geertz of Princeton University, has described humans as,

“...toolmaking, talking, symbolizing animals: Only they laugh; only they know when they will die; only they disdain to mate with family members; only they contrive those visions of other worlds called art. They have not just mentality but consciousness, not just needs but values, not just fears but conscience, not just a past but a history. Only they have culture.”

According to the famous anthropologist Leslie White, culture is our “extrasomatic” means of survival, it is the nonbiological, nongenetic behaviour and sociability that have carried us through the millennia and spread us into diverse environments across the planet. So, in short, culture is a group of ideas and actions that are learned and transmitted from one generation to the next generation. Human culture embodies our experiences and behaviours which are summarized in our language and are transferred to us through our parents and peers. It is as impossible to have human identity without social contact as it is to have biological existence without parents. There is a famous story that Tarzan of the comic book and movie was an ape before he met Jane. It is only culture that enables us to find our place on earth, to create Gods, to anticipate death, to travel to the worlds beyond, and last but not the least to study archaeology, in order to find answers about our past.⁶⁹ It was this cultural development, which was both very rapid and at an alarming speed, that until today evolutionists, biological scientist, paleoanthropologist and many more have been unable to understand. For example, if we can believe the evolutionist man’s ancestor first appeared on earth four million years ago and then slowly evolved into Modern Human only around 40,000 years ago. While keeping this in mind we witness, that after 40,000 to 10,000 years age man not only developed new technologies, but he also modified his environment. And only 10,000 years have taken him

⁶⁸ Paul G. Bahn, ed., *The Atlas of World Archaeology* (Oxfordshire, 2002), 28-9.

⁶⁹ T. Douglas Price and Gary M. Feinman, *Images of The Past* (Houston: Mayfield, 1997), 41.

from bows and arrows to thermonuclear weapons, and the production of the latter has taken only twenty more years.⁷⁰

Another important fact that seems to refute the claim of the evolutionists today is that, there are no signs of any intermediate forms found in the fossil records. Charles Darwin, who is known as the father of the theory of evolution, as state in his book, *The Origins of Species* claims,

“If my theory be true, numberless intermediate varieties, linking most closely all of the species of the same group together must assuredly have existed... Consequently, evidence of their former existence could be found only amongst fossil remains.”⁷¹

The fossil records today show few intermediate forms; on the other hand, we see fully-formed living species seem to emerge suddenly without any evolutionary transitional form between them. This lack of factual evidence is enough to back their claim that all living species are created separately, and that life appeared on earth all of a sudden and fully-formed. Derek V. Ager, a famous British evolutionist admits this fact by saying;

“The point emerges that if we examine the fossil record in detail, whether at the level of Orders or of Species, we find – over and over again – not gradual evolution, but the sudden explosion of one group at the expense of another.”⁷²

The fact that all living species were created separately, suddenly and fully-formed without any evolutionary ancestor is yet again backed by evolutionist biologist Douglas Futuyma, who claimed,

“Creation and evolution, between them, exhaust the possible explanations for the origin of living things. Organisms either appeared on the earth fully developed or they did not. If they did not, they must have developed from pre-existing species by some process of modification. If they did appear in a fully developed state, they must indeed have been created by some omnipotent intelligence.”⁷³

Fossil records today back this claim that all living species emerged fully developed and in a perfect state on earth.

Let’s counter Charles Darwin’s claim about the ‘origin of man’, that he evolved from some ape-like creatures. The evolutionists who back him claim, that during the 5 million years of man’s evolution, man evolved from one stage of species to another. How these different

⁷⁰ *The New Encyclopedia Britannica*, 15th ed., 995.

⁷¹ Charles Darwin, *The Origin of Species: A Facsimile of the First Edition* (Boston: Harvard University Press, 1964), 184.

⁷² Derek A. Ager, “The Nature of the Fossil Record”, *Proceedings of the British Geological Association*, Vol. 87 (London: 1976), 133.

⁷³ Douglas J. Futuyma, *Science on Trail* (New York: Pantheon Books, 1983), 197.

stages evolved one after the other have already been discussed in detail. So in short, according to evolutionists who give counter arguments claiming that, the first stage that is, *Australopithecus* also known as South African ape is nothing but an old ape that has become extinct. Extensive research was carried out by anatomists from both England and America, namely, Lord Solly Zuckerman and Prof. Charles Oxnard, have showed that they belonged to an ordinary ape species that became extinct and bore no resemblance to humans.⁷⁴

The next stage of evolution is *Homo*, which is further divided into *Homo habilis*, *Homo erectus* and *Homo sapiens*. Each of these is considered to be one another's ancestor. However recent fossil findings by the paleoanthropologist have revealed that *Australopithecus*, *Homo habilis*, and *Homo erectus* lived in different parts of the world at the same time.⁷⁵ And certain groups of *Homo erectus* lived until modern times. *Homo sapiens* and *Neanderthals* have also co-existed at the same time and also in the same region.⁷⁶ The invalidity of this claim becomes more obvious when palaeontologist fail to find any evolutionary trends in these so called ancestors of man. Stephen Jay Gould a palaeontologist from Harvard University explains this deadlock:

"What has become of our ladder if there are three coexisting lineages of hominids (*A. africanus*, the robust *australopithecines*, and *H. habilis*), none clearly derived from another? Moreover, none of the three display any evolutionary trends during their tenure on earth."⁷⁷

This claim was also backed by Lord Solly Zuckerman, who studied *Australopithecus* fossils for fifteen years, finally concluded that there is, in fact, no such family tree branching out from ape-like creatures to man.

He also formed a 'spectrum of science', in which sciences ranging from those he considered scientific to those he considered unscientific were put together. According to him, the most scientific, that is, depending on the concrete data-fields are chemistry and physics. After these are the biological sciences and then the social sciences. The most unscientific

⁷⁴ Solly Zuckerman, *Beyond The Ivory Tower* (New York: Toplinger Publications, 1970), 75-94.

⁷⁴ Charles E. Oxnard, "The Place of Australopithecines in Human Evolution: Grounds of Doubt", *Nature*, Vol. 258 (1970): 389.

⁷⁵ Alan Walker, *Science*, Vol. 207 (7th March, 1980): 1103.

A. J. Kesol, *Physical Anthropology*, 1st ed. (1970): 221.

M. D. Leakey, *Olduvai Gorge*, Vol. 3 (1971): 272.

⁷⁶ Jeffrey Kluger, "Not So Extinct After All: The Primitive Homo Erectus May Have Survived Long Enough To Coexist With Modern Humans", *Time* (December, 23rd, 1996).

⁷⁷ S. J. Gould, *Natural History*, Vol. 85 (1976): 30

sciences which are at the far end of the spectrum include the extra-sensory perception, telepathy, sixth sense and finally human evolution. He explains this formation;

“We then move right off the register of objective truth into those fields of presumed biological science, like extrasensory perception or the interpretation of man’s fossil history, where to the faithful [evolutionist] anything is possible – and where the ardent believer [in evolution] is sometimes able to believe several contradictory things at the same time.”⁷⁸

Keeping all the arguments and counter arguments in mind with respect to the theory of man’s evolution, I shall conclude by quoting a few sentences from Harun Yahya’s book, *‘Fascism: The Bloody Ideology of Darwinism’*,

“...the theory of evolution is a claim evidently at variance with scientific findings. The theory’s claim on the origin of life is inconsistent with science, the evolutionary mechanisms it proposes have no evolutionary power, and fossils demonstrate that the intermediate forms required by the theory never existed. So, it certainly follows that the theory of evolution should be pushed aside as an unscientific idea.”⁷⁹

Richard C. Lewontin who is a well known geneticist and an evolutionist from Harvard University claims that he is first and foremost a materialist and then a scientist. He confesses;

“It is not that the methods and institutions of science somehow compel us to accept a material explanation of the phenomenal world, but, on the contrary, that we are forced by our a priori adherence to material causes to create an apparatus of investigation and a set of concepts that produce material explanations, no matter how counter-intuitive, no matter how mystifying to the uninitiated. Moreover, that materialism is absolute, so we cannot allow a Divine Foot in the door.”⁸⁰

So in short the evolutionists who give materialist answers to the hundreds of questions that arise in the conscious thinking mind of the modern man today, are not only further creating confusions but have in a way failed to satisfy the logical and rational human mind. How can one believe that an unconscious matter can create life? How can one believe that matter created thousands and thousands of living things and living species with their own distinct attributes, qualities, and characteristics when scientist until today are not sure even how a small thing such as a simple cell can be formed? They know that it is formed when proteins come together, but how they come together, in what ratios and form a cell is a process that they have failed to understand.⁸¹ For many years now engineers from around the world have been trying to make a three-dimensional television that can match the quality of the human eye. Yes, they have being successful in making a three dimensional television screen, but you cannot watch it

⁷⁸ Solly Zuckerman, *Beyond The Ivory Tower* (New York: Toplinger Publications, 1970), 19.

⁷⁹ Harun Yahya, *Fascism: The Bloody Ideology of Darwinism* (Ankara: Global Publishing, 2002), 234.

⁸⁰ Richard Lewontin, “The Demon-Haunted World”, *The New York Review of Books* (January 9th, 1997), 28.

⁸¹ *The Usborne Internet Linked Encyclopedia of World History*, s.v., “human cell”.

without putting on special glasses; moreover it only creates artificial three dimension. Similarly, ears, engineers have failed to produce a device that can ensure the same quality and clarity of sound that the human ear perceives. Another thing which is even more important than seeing and hearing abilities is the ‘consciousness’ that man has been blessed with.⁸² It is this consciousness that creates the major difference between man and all other living species. It is this that takes man one step ahead of all others. It is this ability that makes us flee from a fire, but we can go back in the same fire to save someone. It is this ability that helps us to understand and comprehend, that despite of the best of qualities given to us in this world, there are certain things that are still beyond our reach, control and comprehension. Even we humans have limitations, and this concept was well taken and understood even by early man since antiquity. He also knew that he had no control over the elements and there was some “Divine Force” somewhere, which had everything under its control. Hence it would not be wrong to presume here, that it was at this point in time around approximately 50,000 to 40,000 years ago, that the modern man entered the scene, and all the other species predating him were not actually ‘man’, or his ancestors. Hence, man was born a man with the best of qualities and a consciousness to understand the ‘Divine’ which has helped him not only to conquer but also to rule the world.⁸³

⁸² Harun Yahya, *Fascism: The Bloody Ideology of Darwinism* (Turkey: Global Publishing, 2002), 232-34

⁸³ How man was born with religious consciousness. This point will be further elaborated in the Chapter 3.3.

Chapter 2.3

The Origin and Migration of Populations/ Birth of the Indus Civilization and its Contemporaries

Fossils records show that anatomically “Modern Humans” originated in Africa approximately 130,000 years ago or perhaps longer. But fossil records are only related to anatomy. A different kind of evidence about them is provided by archaeology, which deals with the behavioural changes that are established by unearthing artefacts they left behind. A behavioural change occurred some 40,000 to 50,000 years ago and is perhaps linked to some stage in the evolution of language (which is not evident from the fossil records). The archaeological record showing the cultural development of man after this time becomes significantly richer than anything previously attested.⁸⁴ So as mentioned previously we can say that man only can be called man at this point in time. This change was witnessed through the things that he left us in the form of culture.

What is culture? Culture is a word with many meanings. According to anthropologist every human being is part of a culture. Various human groups can be differentiated on the bases of their cultural affinities. Professor Robert Redfield said that “culture is an organised or formalized body of conventional understandings”. Conventional understandings is a whole set of rules, beliefs and standards that a particular group of people follow. These understandings can be witnessed through their art, religious beliefs or their life style. These understandings are passed on from one generation to the next. People die but their culture lives on. Culture is not transmitted genetically from one generation to the other. It is imparted as a child grows up in a particular environment. We can learn about early cultures through the things that they have left behind in the form of tools, places where they once lived, the graves in which they buried their dead, sometimes with grave goods and sometimes without them, their jewellery and artefacts. All these things have symbolic significance, and hence culture is a combination of various symbols.⁸⁵

As mentioned earlier “Modern Man” and the entire hominid line originated in Africa. It was debated for years as to why man was born there; what was so special about Africa that it became the birth place of the entire hominid line. We know that the climate of Africa at that

⁸⁴ Michael Cook, *A Brief History of The Human Race* (New York: W. W. Norton, 2003), 8-9.

⁸⁵ Robert J. Braidwood, *Prehistoric Men* (Toledo, OH: Scott, Foresman and Company, 1967), 30-1.

time was much moist and wetter than it is today, as it is situated in the tropics. This matters because it is in the tropics that the input of energy from sunlight is greatest. Therefore, we find the highest density of species near the equator, and as we move towards the south or north from the tropics this density automatically declines.⁸⁶ Today genetics have also shown that anatomically modern humans originated in Africa and then spread to the rest of the world. Anthropologists believe that all modern, non-African humans are descendants of a single ancestral strain that migrated from Africa between 80,000 and 100,000 years ago (see Figure II.3.1). It is suggested that a tribe of belligerent people, possibly warriors, spread out of Africa and populated the earth. It is further suggested that the original human population outside Africa is descended from only two closely related sub-branches of L3; both are supposed to have practised ritual fighting. These tribes probably had a higher propensity towards warfare and the use of murder for conflict resolution. A vast majority of hunter-gatherers around the earth are descendants of this mitochondrial haplogroup L3.⁸⁷ The reason for this is that the modern man that migrated from Africa to Eurasia, Oceania and then to America within the last 80,000, 70,000, 60,000⁸⁸ and 30,000⁸⁹ years respectively belonged to this one tiny branch. According to mtDNA studies all non-Africans are bearers of haplotypes 'M' and 'N', which is closely related to the L3 sub-branch, and indicates that the entire human population outside Africa is descended from only two closely related sub-branches of L3 (see Figure II.3.2).⁹⁰

Two main routes out of Africa are proposed as their migration routes: The Northern Route and the Southern Coastal Route (see Map II.3.1). The northern route of migration begins in North Africa, then to the Nile Valley into the Levant, and then from there into Asia and Europe.⁹¹ About 90,000 years ago we find the first evidence of anatomically modern humans outside Africa in Israel, but we lack evidence for them being behaviourally modern. It

⁸⁶ Michael Cook, *A Brief History of The Human Race* (New York: W. W. Norton and Company, 2003), 13-5.

⁸⁷ C. Renfrew, "Archaeogenetics—towards a 'new synthesis'?", *Current Biology*, Vol. 20 (2010): 162-5.

⁸⁸ *Ibid.*, 162-5.

M. Stoneking F. Delfin, "The Human Genetic History of East Asia: Weaving a Complex Tapestry", *Current Biology*, Vol. 20 (2010): 188-3.

⁸⁹ D.H. O'Rourke and J.A. Raff, "The Human Genetic History of the Americas: The Final Frontier", *Current Biology*, Vol. 20 (2010): 202-7.

⁹⁰ M.C. Campbell and S. A. Tishkoff, "African Genetic Diversity: Implications for Human Demographic History, Modern Human Origins and Complex Disease Mapping", *Annual Reviews Genomics Hum*, Vol. 9 (Genet, 2008): 403-33.

L. Vigilant, M. Stoneking, H. Harpending, K. Hawkes and A. C. Wilson, "African Populations and the Evolution of Human Mitochondrial DNA", *Science*, Vol. 253 (1991): 1503-7.

C. Renfrew, "Archaeogenetics—towards a 'new synthesis'?", *Current Biology*, Vol. 20 (2010): 162-5.

⁹¹ Eduardo Moreno, "The Society of our 'out of Africa' Ancestors (I) The Migrant Warriors that Colonized the World", *Communicative and Integrative Biology*, Vol. 4, Issue No. 2 (Mar/Apr, 2011): 1-9.

P. Mellars, "Why did modern human populations disperse from Africa ca. 60,000 years ago? A new model", *Proc Natl Acad Science*, Vol. 103 (USA, 2006): 9381-6.

is only after 50,000 years ago that various examples of art and advanced technology begin to appear in the archaeological record. Although anatomical evidence for linguistic abilities still remains uncertain, the appearance of ornaments, engravings, sculptures, and other forms of symbolism unmistakably confirms the presence of a modern human language. The oldest uncontested evidence of ritualized behaviour is the ostrich eggshell beads found in Enkapune ya Muto (Kenya) of 46,000 years ago. It is believed that the linguistic abilities of man played a vital role in his rapid successful global colonization.⁹²

Taking the Southern route, man left Africa by crossing the Bab-el-Mandeb Strait at the mouth of the Red Sea, then along the coast of Arabia, South Asia to Australia/Melanesia, where evidence of human settlement dating back 60,000 years is found.⁹³ Recent genetic studies provide strong support for an East African origin for this second group, who centred on the Red Sea; this is further supported by sampling the geographic dispersal waypoint of these populations.⁹⁴ Keeping the prior genetic haplotype analysis in mind, it is suggested that only one tribe moved out of Africa via this route and then spread to the rest of the world. Though it is highly unlikely still it will be difficult to completely rule out the possibility of multiple migrations out of Africa at this point in time. Despite this possibility a strong support still exists for a single successful migration out of Africa, across the Red Sea and along the east coast of Arabia some 80,000 years ago. The estimated size of this ancestral population that left Africa is either around 1000 effective founding males and females based on autosomal microsatellite loci, or around 1500 effective founding males and females based on combined mtDNA, Y-chromosome and X-chromosome re-sequencing data.⁹⁵ Unfortunately no remnant bearer of this hunter-gatherer tribe remains in East Africa today; therefore, no “M” and “N” lineage can

⁹² Michael Cook, *A Brief History of The Human Race* (New York: W. W. Norton and Company, 2003), 12-4.

Paul G. Bahn, ed., *The Atlas of World Archaeology* (Oxfordshire: Andromeda, 2002), 28-31.

Tim Ingold, ed., *Companion Encyclopedia of Anthropology* (New York, Routledge, 1994), 366.

Emily A. Schultz and Robert H. Lavenda, *Anthropology- A Perspective on the Human Condition* (California: Mayfield Publishing Company, 1998), 175-7.

John Haywood, *Atlas of World History*, 1-3.

⁹³ R. Stanyon, M. Sazzini and D. Luiselli, “Timing the First Human Migration into Eastern Asia”, *Journal Biology*, Vol. 8 (2009): 18.

L. Quintana-Murci, O. Semino, H. J. Bandelt, G. Passarino, K. McElreavey and A. S. Santachiara-Benerecetti, “Genetic evidence of an early exit of Homo sapiens from Africa through Eastern Africa”, *Nat Genet*, Vol. 23 (1999): 437-41.

⁹⁴ S. A. Tishkoff, F. A. Reed, F. R. Friedlaender, C. Ehret, A. Ranciaro, A. Froment, et al., “The Genetic Structure and History of Africans and African Americans”, *Science*, Vol. 32 (2009): 1035-44.

⁹⁵ D. Garrigan, S. B. Kingan, M. M. Pilkington, J. A. Wilder, M. P. Cox, H. Soodyall, et al., “Inferring Human Population sizes, Divergence times and rates of Gene flow from Mitochondrial, X and Y Chromosome Resequencing Data”, *Genetics*, Vol. 177 (2007): 2195-207.

be traced to the existing population of this area and it is assumed that the whole tribe migrated out of Africa. In order to trace this tribe, we have to trace their route outside Africa.⁹⁶

As already noted, the tribe that migrated from East Africa via the Red Sea practiced ritual fighting in order to resolve conflicts. It is supposed that their aggressive nature somehow made them migrate to newer places. There could be various reasons for it, maybe they were escaping from some kind of conflict with another tribe, or they might have been in search of food for a larger population. Whatever the reason, it was their aggressive nature that not only helped them in migration but also in establishing themselves in new places.

It is proposed that the people who took the southern route on reaching West Asia spread generation by generation around the coast of Arabia and Persia until they reached Pakistan and India. The proportion of the haplogroup 'M' increases as we move eastwards from Arabia to Pakistan and India.⁹⁷ There is evidence of coastal route of early settlers that extends from Pakistan and India along the coasts of Thailand and Indonesia all the way to Papua New Guinea and Australia (which was then a single landmass with New Guinea).⁹⁸ The Andamanese have long been isolated from mainland Asia, but are still considered to be the offshoots of some of the earlier inhabitants of Asia. The haplogroup 'M' is found in high frequencies in both highlanders from the Andaman Islands and Papua New Guinea. The people of these areas have dark skin and Afro-textured hair; therefore, it is believed that they are all part of the tribe that moved out of Africa via the Red Sea some 80,000 years ago. These are the modern hunter-gatherer of lineage L3. The Andamanese (Jarawa, Onge, Sentinelese) of the Andaman Islands, the Aeta of Philippines, the Batek from Malaysia, and Asmat from Papua New Guinea, all share a cultural aspect of ritual fighting that differs from the non- L3 African people. The intensity of ritual fighting differs among the various tribes of these areas (and it is also unclear what their propensity towards war), but there is no doubt that they all have had this trait. For some it was a ritual game and nothing more, whereas for others it was a method for settling a score. The other haplogroup "N" is predominant among Australian aborigines.⁹⁹ Despite this genetic

⁹⁶ Eduardo Moreno, "The society of our 'out of Africa' ancestors (I) The migrant warriors that colonized the world", *Communicative and Integrative Biology*, Vol. 4, Issue No. 2 (Mar/Apr, 2011): 1-9.

⁹⁷ P. P. Majumder, "The Human Genetic History of South Asia", *Current Biology*, Vol. 20 (2010): 184-7.

P. A. Underhill and T. Kivisild, "Use of Y Chromosome and Mitochondrial DNA Population Structure in Tracing Human Migrations", *Annual Reviews Genet*, Vol. 41 (2007): 539-64.

⁹⁸ M. Kayser, "The Human Genetic History of Oceania: Near and Remote Views of Dispersal", *Current Biology*, Vol. 20 (2010): 194-201.

⁹⁹ M. Kayser, "The Human Genetic history of Oceania: near and remote views of Dispersal", *Current Biology*, Vol. 20 (2010): 194-201.

difference most tribes in Australia practiced ritual fighting. Caves paintings dating back to 10,000 years ago depict battle scenes and people attacking one another.¹⁰⁰ From Australia some settlers moved eastwards along the coast of Sunda, eventually turning northeast to China and finally reaching Japan.¹⁰¹ The trail of this coastal migration can be judged by the evidences found from the mitochondrial haplogroups descending from haplogroup 'M' and in Y-chromosomes haplogroup 'C'. The Ainu tribe of Japan also indulged in ritual fighting and murder was not uncommon among them to resolve conflicts. So, it can be concluded that the bearers of both 'M' and 'N' lineage practiced ritual fighting to resolve conflicts, sometimes leading to murder too. In short, this tradition of warfare was spread through migration of lineage L3 from Africa to other lands mentioned.¹⁰²

At some point it became necessary to venture inland. Here the people of this tribe must have come face to face with the lesser species like the archaic *Homo sapiens* and the Neandertals (who are supposed by some to be man's ancestor) who were already roaming the world. The Middle East and Pakistan hunting parties reached deep into Central Asia, and by 20,000 - 35,000 years ago others, perhaps moving towards the north from China had entered north-eastern Siberia. Around 50,000 years ago they began spreading into Europe via the Bosphorus at the Istanbul Strait, but the extreme cold of northern - most Asia prevented them from entering North America until 15,000 years ago. South America was colonized around 11,000 years ago.

A concerning fact for paleoanthropologists and archaeologists today is how to interpret the mounting evidence that human biology and human culture evolved at different times and rates.¹⁰³ Maybe in the coming years with the help of more archaeological evidence light can be shed when man factually came to this greater world, as we already know that man came to it

P. A. Underhill and T. Kivisild, "Use of Y chromosome and mitochondrial DNA population structure in tracing human migrations", *Annual Review Genet*, Vol. 41 (2007): 539-64.

¹⁰⁰ P. Taçon and C. Chippindale, "Australia's Ancient Warriors", *Cambridge Archaeology Journal*, Vol. 4 (1994): 229-31.

¹⁰¹ M. Stoneking and F. Delfin, "The Human Genetic History of East Asia: Weaving a Complex Tapestry", *Current Biology*, Vol. 20 (2010): 188-93.

¹⁰² Eduardo Moreno, "The Society of Our 'out of Africa' Ancestors (I) The Migrant Warriors that Colonized the World", *Communicative & Integrative Biology*, Vol. 4, Issue No. 2 (Mar/Apr, 2011): 1-9.

O. Bar-Yosef and A. Belfer-Cohen, "Following Pleistocene road signs of Human dispersals across Eurasia", *Quaternary International*, (2011): 1-14.

¹⁰³ Michael Cook, *A Brief History of The Human Race* (New York: W. W. Norton and Company, 2003), 12-14.

Paul G. Bahn, ed., *The Atlas of World Archaeology* (Oxfordshire: Andromeda, 2002.), 28-31.

Tim Ingold, ed., *Companion Encyclopedia of Anthropology* (New York: Routledge, 1994), 366.

Emily A. Schultz and Robert H. Lavenda, *Anthropology- A Perspective on the Human Condition* (California: Mayfield Publishing Company, 1998).

fully developed.¹⁰⁴ Genetic research proves today that all humans belong to one specie that originated in Africa and no second origin of people can be found anywhere else. Africa is the continent that comprises the highest intra-population diversity in phenotypic measurements.¹⁰⁵ And there is no genetic difference to be found among any prevailing race of man today. Whether they are African, Asians or Americans, they all belong to one species, which is “Humans”. Extensive evidence for genetic interchange is witnessed among populations due to movements and migrations from one area to the other over thousands of years. But only one evolutionary lineage of humanity is proved and there are no subspecies or races under either the traditional or phylogenetic definitions. There is evidence for sufficient genetic contact to make all of humanity a single lineage sharing a common, long-term evolutionary fate.¹⁰⁶

There is no doubt that after 50,000 years, we would witness a change in the environment of man. Though man remains a hunter-gatherer for the next 40,000 years his attitude towards his surrounding became more aggressive. The earth at that time was facing its last severe glacial period, which started approximately around 90,000 years ago and reached its maximum around 20,000 years ago, a period better known as the Last Glacier Maximum (see Map II.3.2). But despite the severe conditions, man, due to his aggressive behavioural change not only survived but outnumbered the *Neanderthals* living in Europe and the archaic *homos* living in other parts of the world. It is believed by historians that by 28,000 years ago the humans had forced the *Neanderthals* into extinction. Evidence, such as the manufacture of bone needles to sew clothing and the building of artificial shelters, indicate that a number of survival techniques were now developed by man to survive cold weather. As previously mentioned, animals can also use tools, but it is only man who has the ability to use one tool to make other tools. Although we find evidence for *Neanderthals* burying their dead, no grave goods have been associated with them. It is only some 50,000 years that we first find evidence of grave goods - personal ornaments, tools, weapons, art objects, seashells or animal teeth - in the graves of modern man, indicating ritual burial. Sometimes the bodies were additionally painted in red ochre.

¹⁰⁴ As was previously explained.

¹⁰⁵ A. Manica, W. Amos, F. Balloux & T. Hanihara, “The Effects of Ancient Population Bottlenecks on Human Phenotypic Variation”, *Nature*, 448 (2007), 346-348.

Narendra Katkar, “The Last Glacier Maximum: The Third Migration”, *Comptes Rendus Palevol*, 10 (2011): 665-678.

¹⁰⁶ Alan R. Templeton, “A Genetic and Evolutionary Perspective”, *American Anthropologist*, New Series, Vol. 100, No. 3 (Sep, 1998): 632-50.

Historians for their convenience have divided the period starting 40,000 years ago into three ages, the Palaeolithic, Mesolithic and the Neolithic. By the upper Palaeolithic or Late Stone Age modern man had already inhabited most parts of the earth. Whether it was the tropical forest, deserts, woodlands, river valleys or frozen steppes, man was everywhere. Unlike their so-called ancestral species man was uniquely able to adapt to any environment with his cultural and better technological abilities. Paleoanthropological studies have uncovered specialized hunter-gatherer societies in many parts of the world. Some areas are better investigated than the rest. Europe so far is the best investigated area, and we find the richest archaeological evidence there. The most impressive development during the Upper Palaeolithic Period was art. The earliest dates for art forms are around 31,000 years ago. The most evident artefacts found across Europe are female figurines ‘Venus’ dating back to 25,000 years ago (see Figure II.3.3). But it only reached its peak around 17,000 to 11,000 years ago, in the of cave paintings in sites such as Lascaux (see Figure II.3.4) and Altamira (see Figure II.3.5) in Southwest France and Northern Spain, two areas particularly rich in cave art. The function of the cave art is still unknown, but it is thought to have some kind of magic or religious association.¹⁰⁷ Most scholars agree that man remained a hunter-gatherer for the next 30,000 to 20,000 years. In different parts of the world man’s presence can be demonstrated by the various tool industries that he had left behind. But it is only at the beginning of the last 10,000 years that we witness a radical change in the life style of man and have the factual beginning of history.

At the end of the Pleistocene, and the beginning of Holocene Periods, about 10,000 years ago (end of Upper Palaeolithic), the last ice sheets retreated, sea levels rose, winds shifted, and as a result the environment changed once more, but this time in the favour of man. As the climate became warmer and wetter the forests started to spread. Large animals became scarcer in many parts of the world; thus, humans were forced to find new sources for food. Both animals and humans responded to these changes in their own way. As far as humans were concerned the most striking feature of this period, one that completely revolutionised the life of man, was the beginning of domestication of both animals and plants. We find no evidence of farming in the Pleistocene period and hence a question arises in mind, that why did man wait for approximately 30,000 to 20,000 years to start domestication. The historians and geologists believe that the answer is pretty obvious as the Holocene period (warm and stable climate,

¹⁰⁷ This point will be elaborated in the Chapter number 3.3 (Birth of Religious Beliefs).

suitable for farming) was a window of opportunity in the lives of the modern humans, and humans by this time possessed a unique cultural alertness that enabled them to respond to this opportunity. Thus, the Holocene Period is considered to be a very unusual period, and there has been nothing like it in the last 100,000 years, which is most of the period during which modern man is believed to have existed.¹⁰⁸

Although the Holocene Period was a period of opportunity for man, he had to learn new ways not only to establish himself completely in the new environment but also to make his new situation suitable. First man started hunting small game including sheep and deer, gathering shellfish and edible plants, or catching birds and fish. In order to ensure a reliable food supply some men started planting wild grasses and tubers, whereas others started penning up small animals like sheep and goat for difficult times. Soon man knew which animals and plants gave better products, so only those specimens that would produce the biggest fruits or seeds, or the best meat were domesticated. The first wild grains to be domesticated were wheat, barley, oats, sorghum, millets, rice and corn, because their seeds were easiest to store. The first animals that were domesticated were cattle, sheep, goats, pigs, camels and horses that were kept for milk, wool, meat and transportation.

Hence the foundation of domestication was laid. Domestication meant more stability. Man, revolutionised his lifestyle, when he started to rely more on domesticated food and less on hunting and gathering. Man, for the first time in the total time span of his existence on earth, finally started settled life.¹⁰⁹

It is an established fact that man started his settled life at the beginning of the Holocene Period some 10,000 years ago due to favourable climatic conditions, but the question that requires further probing is *where* man started this settled life. Man, by this time had spread to every part of the world except North America and historians and archaeologists believe that farming began independently in different parts of the world, at different times, between 8,000 and 11,000 years ago. But the first area to be cultivated was in the Middle East, in the area known as the Fertile Crescent. This area includes the modern-day countries of Jordan, Palestine, Israel, Lebanon, Syria, Turkey, Iraq and Iran. Why did this area become the cradle of agriculture? The answer is “grass” this may sound strange, but according to geologists this

¹⁰⁸ Michael Cook, *A Brief History of The Human Race* (New York: W. W. Norton and Company, 2003), 4-9.
Paul G. Bahn, ed., *The Atlas of World Archaeology* (Oxfordshire: Andromeda, 2002), 30-3.

¹⁰⁹ John Haywood, *Atlas of World History*, 14-6.

was the case. For most of us, grass is the harmless stuff we see in parks and on our lawns. But in actuality grasses are the oldest and the most important form of domesticated plant that was and is still cultivated today as grain crops. They include wheat; barley, maize and many more (see Figure II.3.6). Another important feature of grass is that all herbivorous domesticated animals, like cattle, sheep and goats, depend on it for food. Though grass has a tropical origin, it grows most successfully in temperate climates. Therefore, when Africa, is considered the birth place of modern humans, became tropical it took a back seat in agricultural development, and the Middle East and Eurasia came to the fore. Grasses and herbivores spread in many parts of the world. But not all grasses and all herbivores are suitable for domestication. In fact, the species of grasses and herbivores that are ideal for domestication are unequally distributed around the world. Eurasia is the only place in the world where both domesticated grasses and such grass-eating animals are found in abundance. And within Eurasia, the Middle East, stretching from Palestine in the west to the lower Mesopotamia in the east, is by far the most privileged area.¹¹⁰

From archaeological evidence it is believed that 12,000 years ago people living around Palestine were not only using seeds of wild grasses but were also storing them. We know this from the hardware that they have left behind in the form of sickles, mortars, clay-lined storage pits and huts, which provided favourable enough environment to attract mice. How this collection of seeds turned into the deliberate growing of seeds is not precisely known. But it is assumed that this process of deliberate cultivation started approximately 11,000 years ago. From about 10,000 years ago farming villages grew up right across the Fertile Crescent. It is believed by some scholars that from this centre farming of cereals spread to the rest of the Middle East, parts of sub-Saharan Africa, Pakistan, China and Europe. Others believe that several farming processes developed independently and started in various parts of the world at different times.¹¹¹ Genetic research claims that the earth reached the third Glacier Maximum it became difficult for both man, animals and plants to survive in places that were believed to be occupied by humans by that time - Europe, the Middle East, Persia, Central Asia and North America because of the extreme cold weather and aridity. Humans had to relocate for their survival to more hospitable environments such as the Indus Valley region, Himalayan steps and Kashmir valleys.¹¹² These areas fall in South Asia, in northern Pakistan and India.

¹¹⁰ Michael Cook, *A Brief History of The Human Race* (London: Granta Books, 2003), 20-2.

¹¹¹ *Ibid.*, 22-3.

¹¹² Narendra Katkar, "The Last Glacier Maximum: The Third Migration", *Comptes Rendus Palevol*, 10 (2011): 665-78.

Extensive studies around the Indus region give us significant archaeological data that also harmonizes with forensic anthropological investigations on inhabitants of modern Pakistan (north-western India). Results show the arrival of few people into the sub-continent from the northwest during the late Pleistocene period between 12,000 to 17,000 years ago.¹¹³ Irrefutable DNA data harmonizing with archaeological data around the early Holocene Period enlighten us about a “third” migration of survivors of the Last Glacier Maximum, which occurred at this time travelling from east to west, instead of from west to east. This is known as the “Out of Asia” hypothesis.¹¹⁴ This would make the Indus Valley region and the Persian passage not only a genetic junction but also a cultural junction. This saw the beginning of the domestication of animals and the foundations of the first human civilizations were laid in the process.¹¹⁵

Our focus in this chapter is on South Asia and the Fertile Crescent and how simple farming villages in different parts of the world, in a total time span of 4,000 to 5,000 years, grew from simple settlements to become villages, then become towns, then cities and then turned into major civilizations of the world with their own distinct characteristics independent from one another. The Indus Valley Civilization shall be discussed in detail as it is the primary focus of this dissertation, but contemporary civilizations of the Fertile Crescent and the African Nile cannot be omitted.

In order to understand the history of the Fertile Crescent it is important that we must understand the geological development that led to its importance. The region was formed some fifty million years ago when the two continental plates of Africa and Eurasia collided (see Map II.3.3). This collision joined Eurasia to the northeastern edge of what was then greater Africa. Two other geological happenings further modified this region in leading to the recognizable outlines found today. The first, which occurred some twenty million years ago, opened the Gulf of Aden and the Red Sea, which partially separated the Near East from Africa we know today. The second, which occurred during the Holocene Period was when the ice sheets melted and as a result sea levels rose, and the Persian Gulf was formed. However, the collision of the two plates is of most importance: runs from the northeastern corner of the Mediterranean near the

¹¹³ K. Kennedy, *God-Apes and Fossil Men: Paleoanthropology of South Asia* (Ann Arbor: University of Michigan Press, 2000).

K. Kennedy, “Have Aryans been identified in the prehistoric skeletal record from South Asia?” in *The Indo-Aryans of Ancient South Asia*, ed.G. Erdosy (Berlin and New York: Walter de Gruyter, 1995), 54, 60.

¹¹⁴ R.W. Dennella, M. Martín-Torres and J.M. Bermúdez de Castro, “Out of Asia: the initial colonization of Europe in the Early and Middle Pleistocene”, *Quaternary International*, 10 (2009): 1016

¹¹⁵ Narendra Katkar, “The Last Glacier Maximum: The third migration”, *Comptes Rendus Palevol*, 10 (2011): 665-78.

island of Cyprus to the Gulf of Oman on the edge of the Indian Ocean. In other words, it divides the Near East into two parts and the two parts have different geological characteristics.

The southern Near East consisting of the Fertile Crescent and Arabia is predominantly flat as it was originally part of the African plate (see Map II.3.4). The areas that are mountainous in this region are due to the rifting system that extends into the southern Near East from East Africa. The Red Sea and the Gulf of Aden are extensions of this system. Yemen, the adjoining part of Arabia, is mountainous in the same way as are the Ethiopian highlands. Farther towards the north is another extension of this rift system, which runs up through the middle of Syria, forming two parallel mountain ranges. In spite of these ranges the southern Near East is largely a land of plains.

In contrast to the southern region, the northern Near East bears the scars of the intercontinental collision. The results are not as impressive as the collision that occurred between the Indian and Asian plates (forming the Himalayas), but Iran and Anatolia (roughly modern Turkey) are generally mountainous in character. The flat plateaus found in their centres are the main exceptions.

Another important difference is the climate of the two regions. The Near East is sandwiched between two major landmasses, Northern Eurasia and Africa. The African side exposes the Near East to hot air from the Sahara, of which the Arabian Desert is in effect an eastward extension. Cold air of Siberia, which is towards its north effects it from the Eurasian side. As a result, the region witnesses extremes of temperatures as the world's most effective heating and cooling systems were both at work. This region draws very little rain from the Indian Ocean due to the direction of the winds (which is why Arabia is a desert) whereas from the Mediterranean it draws a little rain and that only in the winter season. So the main sources of water in the region are the two rivers, Tigris and the Euphrates. Hence Southern Mesopotamia is the most blessed area of the Near East as it draws abundant rain in the winters and has two rivers.¹¹⁶

This land warmed after the ice sheets retreated, around the Holocene period. People living along the Mediterranean coast and in the Near East began to use many different food resources instead of relying on the limited game available. As man settled, larger living groups were formed, which resulted in the formation of villages. This was a natural development as

¹¹⁶ Michael Cook, *A Brief History of The Human Race* (London: Granta Books, 2003), 125-30.

man had to build his house near the land, which had the wild grasses. The first known villages were built by the “Natufians”, who occupied the wooded hilly corridor along the eastern coast of the Mediterranean Sea (Levant - Palestine and Syria). These people made round pit houses which could be entered from the hole on the roof and dug storage pits to store the wild grain they gathered. They still hunted but according to archaeological evidence they started to rely heavily on the harvesting of wild wheat and barley. With them we mark the beginning of agriculture not only in this region, but on all of earth.

A contemporary development was taking place towards the north, in the Taurus and Zagros mountains of eastern Turkey, northern Iraq and western Iran. The people of these areas depended less on cereals and more on herding animals. Animal bones from Zawi Chemi, Shanidar and Hallan Chemi suggest that sheep and pigs were herded around 8000 BCE.

The great prehistorian V. Gordon Childe has described both these processes of farming and herding as “the Neolithic revolution”. This revolution brought fundamental changes to the human life. For, he started settled life. Settled life meant a place where he could sustain his family. Settled life also required hard work which meant better production and with this came a greater assurance of food supply. Hence people could form larger groups. All this could happen only in a place which had abundant water, fertile land and a good variety of animals and wild grasses. So, it is no surprise that man settled in the Fertile Crescent, which offered all of these things. Crop cultivation tied people to their fields; as a result, villages developed and population became denser. Larger groups brought more safety and stability. Now the groups began to turn their energies into constructing new life structures.¹¹⁷

Farmers and herders increasingly manipulated the natural world to their advantage, although farming had many advantages it had draw backs too. The farmers had to work harder than before: sowing, harvesting, winnowing and grinding cereals made heavy physical demands. The farmers were often at the mercy of natural forces, if drought or flood destroyed their crops, they could go short of food. Therefore, “the Neolithic Revolution” completely transformed the relationship between man and the natural world.

The earliest site where we know that cereal grains were cultivated is from Abu Hureyra in (Syria), dating back to 11,000 BCE. But there were other groups in the Near East that continued to harvest wild grains for a long time after this. The groups that started to cultivate

¹¹⁷ Paul G. Bahn, ed., *The Atlas of World Archaeology* (Oxfordshire: Andromeda, 2002), 34-55.

grains firmly established themselves in various localities and became food producing economies. Jericho¹¹⁸ and Netiv Hagdud in southern Levant and Tell Aswad in Syria were among the earliest food producing economies, but according to the archaeologists they still fall under the rubric Neolithic Age due to their absence of pottery (see Map II.3.5).

Between 7600-6300 BCE farming began to develop at many sites across the Near East. Farmers by this time were selectively breeding the genetic characteristics of plants and animals to give them the maximum yields. These improved species were even introduced in areas where they did not originate; for example, sheep and goats were introduced in southern Levant, and various cereals into drier areas of the Near East. Trade in raw materials increased, as a result linkages were established between different communities. As economies became more stable village settlements increased in size and number. Localities of Ain Ghazal and Basta in the southern Levant were occupied by several thousand people. Buildings were constructed with firm foundations and plastered or terrazzo floors; some buildings even had two storeys. These structures and farming developments completely transformed the Near East land into a landscape of farming villages and small towns, running in the form of a crescent from the Mediterranean coast through the Taurus and Zagros mountains to the Persian Gulf. Catal Hoyuk (see Map II.3.6) in central Turkey, which dates back to 6300-5400 BCE, is considered to be a perfect example of such a town (see Figure II.3.7).

This era also saw the introduction of shrines with sculptures, which appeared at sites like Nevali Chori and Gobekli in southeastern Turkey. Statues made of lime and plasters were also found at sites in the southern Levant, at Ain Ghazal and Jericho, and large and detailed murals that were found in Catal Hoyuk.¹¹⁹ In addition, these people practiced burial rites that have been associated with some form of an ancestor cult, where special importance was given to the skull. Different forms of this cult were witnessed in different areas across the Fertile Crescent; in southern Levant plastered skulls depicted the faces of dead relatives, while in Syria

¹¹⁸ This city is located near a major spring at the northern end of the Jordan Valley in what is now Israel. Jericho (or Tel es - Sultan, as it is known in Arabic), is one of the oldest continuously inhabited place on earth. It is believed that Elisha's Fountain, the spring in Jericho, has witnessed virtually continuous human occupation, since at least 10,000 BC. This land has significant biblical and Quranic connections.

T. Douglas Price and Gary M. Feinman, *Images of The Past* (Houston: Mayfield Publishing Company, 1997), 196-99.

¹¹⁹ Catal Hoyuk was clearly a prosperous centre and a large town, probably because of its control of the obsidian (a translucent, hard, black glass, produced by volcanoes) trade. It is believed to have been twice as large as Neolithic Jericho. The houses were made of stone and close together with one, two or three stories around small courtyards. The roofs were flat and it is believed that access into the house was through the roof. Another important feature of the structures is that perhaps twenty percent were shrines. The walls of these shrines were elaborately decorated and painted with a variety of animal, bulls, vultures and human figures. We will return to this decoration in chapter 3.3.

T. Douglas Price and Gary M. Feinman, *Images of the Past* (Houston: Mayfield Publishing, 1997), 200-1.

and Turkey the dead or sometimes just their skulls were interred in communal burial chambers.¹²⁰ In Catal Hoyuk we find elaborately decorated shrine rooms, depicting animals, humans and vultures (see Figure II.3.8). All these points will be discussed in detail in the coming chapters.

It is believed by most archaeologists that around this time period, if not later farming spread northwest from the Levant into Europe, and into the Iranian Plateau and Central Asia east and northeast a little earlier. Then, beyond the Iranian plateau, further east into present - day Pakistan. There is evidence of farming and local domestication of animals at Mehrgarh,¹²¹ before 6000 BCE and evidence of farming communities is also found in Djeitun and neighbouring oases in Turkmenistan, Central Asia.¹²² Approximately 1000 years later that some farming communities of the Near East wandered into the Nile Delta, from their nuclear area. Merimde beni Salame, on the western edge of the Nile Delta, is a transitional early Neolithic site: excavations indicate a mixed hunting and cultivating society there. This site was later abandoned after the local branch of the Nile changed its course, leaving the village with no excess to river water.¹²³ In short, there is a general consensus among historians and archaeologists today that Near East was the birth place of agriculture, and then from here it spread in both directions to the west (Europe) and to the east (Pakistan, India and China). What further research may behold is beyond authenticity at this stage. But as Professor Childe notes, “The peoples of the West were not slavish imitators: they adapted the gifts from the East ... into a new and organic whole capable of developing on its own original lines.”¹²⁴ This probably is true for the areas that lay towards the east of the Near East, (i.e., Mehrgarh). Keeping the genetic study of the human race in mind, there is no doubt that the people living both east and west of the Near East were in part descendants of migrants who came originally from Africa to the Near East. Then with the new knowledge from farming villages and towns they too build up different cultural identities and civilizations that had their own unique characteristics.

Almost three thousand years separate the early farming villages from the emergence of cities and states in the Near East. As the Fertile Crescent was the first area to develop village

¹²⁰ Paul G. Bahn, ed., *The Atlas of World Archaeology* (Oxfordshire: Andromeda, 2002), 56-7.

¹²¹ Mehrgarh will be discussed in detail in the section on the Indus Valley Civilization in chapter 3.1.

¹²² Paul G. Bahn, ed., *The Atlas of World Archaeology* (Oxfordshire: Andromeda, 2002), 58-9.

Robert J. Braidwood, *Prehistoric Men* (Toledo, OH: Scott, Foresman and Company, 1967), 102-27.

¹²³ Excavation in the nearby vicinity is difficult, it being a delta area, due to wetland. But there is a possibility that other sites may be buried deep beneath layers of silt or water.

¹²⁴ Braidwood, *Prehistoric Men*, 130-5.

farming, thus it was also the first region where city states turned into civilizations and then major empires. During this time span of 3000 years, man developed new technologies like pottery making and others directly related to material culture. As, early as 6000 years ago farmers in the Near East discovered ways of diverting the rivers to irrigate their fields. This allowed them to cultivate more arid areas, which led to colonization the fertile area between the Tigris and Euphrates Rivers. This simple technology laid the foundation for the first cities of the Near East between 4300-3100 BCE there was momentous change in social organization and hence cities came about. The question that comes to mind here is why cities arose in southern Mesopotamia rather than in areas where village farming had already begun earlier; areas that include southern Turkey, Syria, Palestine, or northern Iraq.¹²⁵ Historical evidence has proved that the development of the city state from villages, the irrigation system and the development of cuneiform writing are all achievements of the Sumerians, who around the 6th or 5th millennium BCE arrived in the Fertile Crescent from the Iranian Plateau. On the other hand, according to Robert Braidwood the northern areas were quite easy to cultivate as they were mountain valleys or coastal stripes with plenty of rainfall around the year. Therefore, as soon as the earliest experiments with agricultural and domestication of animals was successful, a bountiful living could be maintained individually without much effort.

The areas towards the south perhaps had better soil because of the rivers but they required not only irrigation system but the art of working together to make the system work properly. Therefore, communal efforts were required, and it was the Sumerians who first made such a system work. This was the important feature that led to the momentous change in social organization and hence allowed cities to rise.¹²⁶

Thus, two facts must be highlighted: First man developed a new relationship with the natural world when he started the process of domestication of plants and animals. Man learned at this stage about natural forces that were beyond his control, but he tried to manipulate what he could; such as the building of irrigation systems. Second although working together came a little later in man's life, he understood that for better results communal work was required. These two new conditions of life transformed the thinking of earlier man.

¹²⁵ Was it because of a Great Flood (Noah's Flood) that devastated these areas? This point will be taken up later.

¹²⁶ Paul G. Bahn, ed., *The Atlas of World Archaeology* (Oxfordshire: Andromeda, 2002), 60.

Robert J. Braidwood, *Prehistoric Men* (Toledo, OH: Scott, Foresman and Company, 1967), 136-44.

Eridu, in southern Mesopotamia identified in later Mesopotamian myths as the first city was also known as Uruk by the archaeologists. In this early city there are no signs of social inequality or difference in wealth or status. The role of maintaining social and economic stability was the responsibility of religious institutions. Excavations in the city have uncovered a succession of sixteen temples, built one on top of the other. The earliest temple was a simple square building with an altar fitted into a niche in the back wall. With the passage of time such shrines became more elaborated, as additional rooms were built around the altar room. Such structures are found at many other sites too.

As the cities grew in size temples too grew in physical size. They were not only growing in size but were becoming stronger and more powerful institutions. There is some evidence that farmers and other workers delivered a portion of their produce, grain, wool, fish or other goods - to the temple precincts, partially to feed the temples personnel and partially to create a central storage bank from which the temple could distribute commodities to certain people in the community.¹²⁷ Though we have evidence for this activity of collecting and then distributing these commodities, we do not know on what bases this distribution was made. Was it made as barter trade or was it made purely on religious and moral grounds, meaning that the sick, travelers, the elderly or any needy person benefitted from this service too? The communities were beholden to the religious temples and apparently undertook their responsibility with honesty and dedication. What could be the driving force behind this community service of honesty and dedication, when still there is no evidence of any other motive?

Maybe it was the temple's economic and social roles that helped attract people to city life and, in time, created the basis for state organization. Whether the temple had political authority at this stage is a question that has not been answered, but this much is clear, that there were other political institutions at that time working alongside the temple's personnel. It can be assumed, for example that the temple workers along with those of other institutions developed systems for recording economic transactions, which laid the foundations for writing.¹²⁸ This ability of special skills and knowledge set these men apart from people of other walks of life. Who specialized in their own professions, whether pottery making, weaving, seal cutting, metalworking, sculpting, farming or herding. It is further assumed that these craftsmen

¹²⁷ Paul G. Bahn, ed., *The Atlas of World Archaeology* (Oxfordshire: Androneda, 2002), 60.

¹²⁸ According to Professor Jacobsen, writing was a means for overcoming space, time, and the increasing complications of human affairs. "Literacy, which began with ... civilization, enhanced mightily those very tendencies in its development which characterize it as a civilization and mark it off as such from other types of culture."

may have been directly employed by the temples and/or may have supplied items for the growing networks of trade. In search for raw materials Uruk colonies were established as far away as Syria in Habuba Kabira some 4000 years ago (see Map II.3.7). By this time complex state governments were working and expanding across the Near East. In Syria and eastern Anatolia, the rulers of Arslantepe, Tell Hammam at-Turkman, Tell Brak and Tepe Gawra had constructed elaborate building structures and also had a bureaucratic form of administration, which was possibly the result of interaction with the Uruk. Towards the end of 4th millennium the urban organization in these states failed, while it survived in the southern Levant until the end of the 3rd millennium. Similarly, urban states developed in various parts of Iran, Pakistan¹²⁹ and Central Asia in the 4th and 3rd millennium only to collapse after the 2nd millennium BCE.¹³⁰ In the mountainous areas of Mesopotamia (including both Iraq and Iran) people continued to reside in relatively small agricultural units without disruption.¹³¹

By 4300 BCE hundreds of large villages and small towns had developed in Near East. The region has rich soil but lacked natural resources. Wood, stone and metal ore for every purpose from building to jewelry making had to be imported from neighboring regions either in exchange for surplus food or craft items such as pottery. Trade by this time was controlled the rich and powerful rulers. It was their responsibility to organize communal projects such as the construction of irrigation canals and flood defenses. This system was important as floods could cause serious damage to both crops and houses.

The Uruk period was followed by what is known as the Early Dynasty Period (3000-2300 BCE). In Sumer, southern Mesopotamia, cities with population of up to 10,000 people had emerged. All these cities were independent states ruled by kings. Most of the people were still farmers, who worked in the fields and who at night returned to the cities. These cities were dominated by powerful temples, which were now acting as major controlling storehouses for the whole community. This period also saw the development of cuneiform writing, which had been invented in the late Uruk period (3300 BCE). The earliest inscriptions are mostly administrative records; whereas the first example of Sumerian literature occurs about 500 years later. The earliest texts suggest that people with Akkadian names lived mostly in areas that were towards the north, like Kish, Jemdet Nasr and Abu Salabikh, while the Sumerians lived

¹²⁹ The area known as the Indus Valley (Pakistan).

¹³⁰ The reasons for collapse shall be taken up as we proceed.

¹³¹ Paul G. Bahn, ed., *The Atlas of World Archaeology* (Oxfordshire: Andromeda, 2002), 61.
Robert J. Braidwood, *Prehistoric Men* (Toledo, OH: Scott, Foresman and Company, 1967), 150-3.

towards the south in areas of Nippur (An important religious centre), Ur, Lagash, Uruk and Umma. Though the Sumerians and the Akkadian were living in different regions with different languages major cultural distinctions cannot be seen. The texts of both early and late Sumer contain Semitic words and scribes with Akkadian names. State capitals were formed that housed the court of the ruling elite as well as the temple of the city's chief god. Temples of other deities were also built in the same vicinity, in other cities. By the end of the Early Dynasty Period temples which were once autonomous were now under the influence of the ruling elite (the palace). Their assets were no longer under their control. Material and literary evidence from this period onwards provides a clear picture of the conflicts and rivalry between city-states, often leading to war. One of the best examples was the ongoing conflict between the cities of Umma and Lagash over the control of land and water.¹³²

From this period onwards, ruling elites grew more powerful and controlling. This was a period of constant conflicts, invasions, destructions, constructions, losses, victories and the succession of one empire after the other. The Sumerians were soon followed by a series of different people: among them were the Semitic Babylonians and Assyrians; Indo Europeans, Medes, Persians, Greeks and Romans; Arabs, Turks and other Semitic group known as the Hittites who settled in present day Turkey. The Phoenicians who were also Semitic people who settled in Lebanon and Syria. The Hebrews another Semitic people who developed the first religion based on one God, were from the city of Ur and guided by the Prophet Abraham they settled into Canaan (present day Israel) around 2000 BCE.

People who had seemed to be quite peaceful and helpful were within three thousand years now thirsty for each other's blood. Was the cause lust for land, power, hunger, dissatisfaction, lack of tolerance, unjust behavior, inequality or a combination of all of these.

Approximately 1000 years, after the Emergence of the Sumerian Civilization, the Egyptian Civilization emerged on the banks of the river Nile. As I have mentioned earlier, it is believed that People from the Near East (Sumer) migrated towards the Nile River¹³³ and then

¹³² Paul G. Bahn, ed., *The Atlas of World Archaeology* (Oxfordshire: Andromeda, 2002), 68-9.

Robert J. Braidwood, *Prehistoric Men* (Toledo, OH: Scott Foresman and Company, 1967), 166-69.

John Haywood, *Atlas of World History*, 22-5.

¹³³ A. G. Isachenko, "Geographical Roots of Ancient Civilizations" (on the 120th anniversary of L. I. Mechnikov's Civilization and Great Historical Rivers), Part I. *Regional Research of Russia*, Vol. 1, No. 1, Pleiades Publishing (2011): 91-8.

later established the Nile civilization in due course. This civilization would be discussed when required as we move on.

From here I move on to the Indus Valley my birth place and my home and the task of trying to find the religious beliefs of my ancestors, the people of the Indus Valley Civilization, as unfortunately this topic has never been taken up sincerely or seriously.

I believed when I decided it to take it up as my dissertation topic that there was much more to be said than what has been presented previously. I have gone back in time to show the reader the unfolding of prehistory and history step by step, and I have also engaged geographical circumstances, which many times played a major part in shaping history.

The Indus civilization along with the Mesopotamian and Egyptian civilizations is considered to be the cradle of early civilization (see Map II.3.8). Of the three the Indus is the only one that has expanded over a very large area, extending from northeastern Afghanistan and including present-day Pakistan and eastern India. Unfortunately, out of the three it is the one that has been most poorly investigated. There are various reasons for this misfortune: the most important one is that the script of this civilization has not yet been deciphered and it still remains a mystery, another important reason is that Mesopotamia and Egypt have been mentioned in Biblical and Quranic accounts; therefore, western scholars sought to explore those ruins that could reveal more about those legendary accounts. Thus, the only way left to reconstruct the past and understand the great Indus civilization is with the help of archaeological finds.¹³⁴

The narrative of the Indus civilization only begins in the twentieth century though the last fifty years has pushed the dawn of this civilization deep into the past, back to the remote Neolithic Age of 8,000 to 7,000 BCE.¹³⁵ When it was first discovered, and for many years afterwards, eminent scholars and archaeologists like Mortimer Wheeler and S. Piggott puzzled over its sudden emergence. But explorations and excavations of the last fifty years have completely revolutionized our understanding of this great civilization. There was no such thing as “sudden emergence”; new discoveries have securely documented a long sequence of

¹³⁴ Rita P. Wright, *The Ancient Indus: Urbanization, Economy, and Society* (New Delhi: Cambridge University Press, 2010), 1-3.

¹³⁵ John L. Papanek, *Ancient India: Land of Mystery* (Alexandria, Virginia: Time-Life Books, 1994), 15-16.

development preceding the appearance of the Indus cities.¹³⁶ It is essential that we investigate the settlements that predate the Indus cities and also when, how, and why these areas were inhabited first by hominids and later by humans.

The Indian sub-continent or Indian peninsular comprises of present day Pakistan, India, Bangladesh, Nepal and Bhutan. It was initially part of the super-continent Gondwana, but over a hundred million years ago it separated from it and led the existence of an island. Then around fifty million years ago it collided again with Eurasia. This collision left impressive results nothing matches the Himalayas (see Map II.3.9), which are the highest mountain range in the world and the source of the life line of this region, the two great rivers, the Indus and the Ganges (see Map II.3.10).

Though there is not much difference between the alluvial plains of the sub-continent when compared with the plains of Near East, the significant difference lies in their climates. The sub-continent receives much more rain both in winters and summers when compared with the Near East. But the distribution of the summer rainfall was very uneven. The wettest regions are the coastal strip in the southwest and a large area in the northeast, whereas the southern highlands are a bit dry and the northwest shares the aridity of the Near East, the northwest region is in present day Pakistan, and it is the Indus River that brings life to this region despite its aridity. The Ganges takes its water from an area of abundant rainfall that is in the northeast.

On the bases of geology, the sub-continent can be divided into three major regions. The first is the south with its coastal plains, modest mountain ranges and highland plateaus, which is not lacking in agricultural resources. The second region, in the northeast, is rich in agricultural resources due to the river Ganges. The third and the last region is in the northwest and centred on the river Indus. Here the agricultural conditions are similar to those found in Mesopotamian and the Egyptian Nile basins.

Geologically all three regions are rich in their own respects, but only the northwest (Pakistan) has pre-historical and early historical significance. It has served as a gateway between the west and the sub-continent for centuries through either its mountains or deserts.

Rita P. Wright, *The Ancient Indus: Urbanization, Economy, and Society* (New Delhi: Cambridge University Press, 2010), 21-2.

The role of the northwest (Pakistan) has been fundamental in the making of history in this region and the northwest was the area where history in this region first began.¹³⁷

In Chapter 2.2, we noted that although anatomically modern humans can be traced back to 40,000 to 50,000 years, a behavioural change, in man appeared only somewhere between 15,000 to 20,000 years ago, when we witness man altering his environment. The movement of either hominids or humans into South Asia first occurred around 70,000 to 60,000 years ago via the Red Sea, and then again around 20,000 years ago via Iran. On the basis of a general consensus of historians any species earlier than 20,000 years ago in this area cannot be categorized as humans but are *hominids*. Lithic industries attested that the Western Himalayas, Hindu Kush and Pamirs as well as the sub-Himalayan Belt that is the Siwalik Range, were inhabited even much before 50,000 years, that is, during prehistoric times. However, in this transition zone between plains and high mountains, distinction is to be kept between the low-middle altitude regions and high-altitude regions. *Hominid* occupation on the western Himalayan fringes can be attested to at least two million years ago,¹³⁸ by the stone flakes found from the Riwat area on the Potwar Plateau in the Siwalik Range, Pakistan (see Map II.3.11). In the Siwaliks, lithic assemblages composed of flakes and cores on cobbles indicate *hominid* activity much before one million years. In northwestern Siwaliks, the Soanian *hominids* lived in plenty on the river terraces, which were all settled 400,000 years ago, and the *Acheulian hominids* appear there even earlier between 700,000 and 500,000 years ago. The middle Palaeolithic is still rich in cobble tools and therefore named Late Soanian, Upper Palaeolithic evidence is missing maybe due to climatic factors, but the Neolithic is characterized by polished axes/adzes, which actually may have belonged to the cobble tool technical tradition common in South-East Asia during the Late Pleistocene and Early Holocene Periods.¹³⁹ The *hominids* that occupied South Asia during the Late Pleistocene have left behind a technologically diverse archaeological record that represents different flexible and adaptive strategies to variable ecological situations. Evidence for the early intentional production of blades, early microlithic industries, and technology that varies over both time and space

¹³⁷ Michael Cook, *A Brief History of The Human Race* (London: Granta Books, 2003), 146-49.

¹³⁸ Anne Dambricourt Malasse, Claire Gaillard, "Relations between climatic changes and prehistoric human migrations during Holocene between Gissar Range, Pamir, Hindu Kush and Kashmir: The Archaeological and Ecological Data". *Quaternary International*, Vol. 229 (2011): 123-31.

R. K. Ganjoo and S. B. Ota, "Mountain Environment and Early Human Adaptation in NW Himalaya, India: A Case Study of Siwalik Hill Range and Leh Valley", *Quaternary International* (2012): 1-7.

¹³⁹ Claire Gaillard and A. Dambricourt-Malasse, "L' Anthropologie", *Science Direct*, 112 (2008): 404-22.

provides an intriguing glimpse of the way in which hominid populations coped with fluctuating and often challenging environmental conditions.

One of the most alarming things for the archaeologists today is that they cannot see any abrupt revolutionary change in the technological innovations of this area when compared with Europe or East Asia. No abrupt technological change can be witnessed from the Late Acheulean through to the microlithic industries of the Terminal Pleistocene. The most probable explanation for this difference is the multiple dispersals of both hominids and anatomically modern humans into this region from either Africa or Western Asia at different time intervals as mentioned in Chapter 2.2.¹⁴⁰

The human behaviour exhibited by the population living in this region was expressed in a unique way when compared with populations in Europe and East Asia. Overt symbolism, in terms of art and self-adornment, is relatively rare and appears relatively late in the record, but other aspects of modern behaviour, such as the use of structured sites, appear somewhat earlier.¹⁴¹ The roots of some of the more important aspects of modern behaviour may date back to the Middle Palaeolithic. The first production of symbolic artefacts - bead and art, the use of bone, and the first microlithic assemblages - coincide with the Last Glacier Maximum and the major expansion of human populations within the sub-continent.¹⁴²

History has shown us repeatedly that change in human ecology and, particularly mankind's relation to his natural environment, shapes the patterns of population health and survival.¹⁴³ It is a well established today that climate has varied significantly since the Last Glacial Maximum. During the Last Glacial Maximum (20,000-15000 years) populations living in Europe, Middle East, Persia, and Central Asia were facing extreme cold weather and aridity. Hence a bottleneck was created. Populations had to relocate to areas where living conditions were favourable. So, they resettled in the vicinity of the Indus River, Himalayan steps and Kashmir valleys.¹⁴⁴ These area falls under South Asia in northern Pakistan and eastern India.¹⁴⁵

¹⁴⁰ Or in other words we can say that this area was always inhabited after two million years without interruption by different species one after the other due to favorable geological and climatic conditions.

¹⁴¹ This difference in behavioral change and its unique representation will be discussed in detail when discussing the organizational structure of the Indus Valley civilization Chapter number 3.1 and 3.2.

¹⁴² Hannah V. A. James and Michael D. Petraglia, "Modern Human Origins and the Evolution of Behavior in the Later Pleistocene Record of South Asia", *Current Anthropology*, The University of Chicago Press, 46, no. S5 (Dec, 2005), S3-S27.

¹⁴³ Anthony J. McMichael, "Population, environment, disease, and survival: past patterns, uncertain futures", *The Lancet*, 359 (March, 2002): 1145-48.

¹⁴⁴ Narendra Katkar, "The Last Glacier Maximum: The third migration", *Comptes Rendus Palevol*, 10 (2011): 665-78.

¹⁴⁵ R.W. Dennella, M. Martín-Torres and J.M. Bermúdez de Castro, "Out of Asia: the initial colonization of Europe in the Early and Middle Pleistocene", *Quaternary International*, no. 10 (2009): 1016.

This variation continued in the Holocene Period when West Asia witnessed the rise and occasionally the abrupt collapse of many agriculture-based societies due to abrupt climate changes. Around 8000 years ago (8.2 K event) that farming communities across West Asia were reduced radically due to widespread droughts and water necessary for agriculture was not available. In Mesopotamia, this interval may have witnessed the partial abandonment of northern and central Mesopotamia and the first colonization of southern Mesopotamia by habitat-tracking irrigation agriculture villagers,¹⁴⁶ who are believed to have migrated from the Iranian Plateau.¹⁴⁷ It is further believed that these Mesopotamian migrants also moved eastwards towards the Northwestern region of South Asia (Pakistan).¹⁴⁸ We can also propose on the basis of “Out of Asia” hypothesis that this area had already been inhabited since the Last Glacial Maximum and that there was a continuous flow of populations from and out of this region via the Iranian Plateau,¹⁴⁹ on whose western edges at the junction is the Tigris-Euphrates plains, on the eastern edges are the hills of Baluchistan and the Indus plains, whereas on the northern edge particularly to the east of the Caspian Sea, in the Elburz and Kopet Dagh Mountains are the plains that lie towards the north as far as the valley of the Oxus. All these eastern, western and northern fringes not only share many common environmental features but are culturally interrelated in many ways and appear to be parts of a larger whole. They may loosely be defined as a cultural interaction sphere.¹⁵⁰ Archaeological records today back these findings as we have the earliest evidence for settled life in South Asia from 7000 BCE onwards¹⁵¹ and it witnesses a remarkable growth in human populations and a shift from a hunter-gatherer way of life to agriculture and food production from the year 8000 onwards.¹⁵²

According to Rita Wright, there are a number of ongoing debates among archaeologists on the question of agricultural and pastoral origins in South Asia and their implications: is South Asia an original hearth of domestication; were the plants and animals domesticated here local; if they were not where did they come from; did domestication of plants and animals

¹⁴⁶ Michael Staubwasser and Harvey Weiss, “Holocene Climate and Cultural Evolution in Late Prehistoric-Early Historic West Asia”, *Quaternary Research*, 66 (2006): 372-87.

¹⁴⁷ For details see Chapter 2.2.

¹⁴⁸ Paul G. Bahn, ed., *The Atlas of World Archaeology* (Oxfordshire: Andromeda, 2002), 68-9.

Robert J. Braidwood, *Prehistoric Men* (Toledo, OH: Scott Foresman and Company, 1967), 166-69.

John Haywood, *Atlas of World History*, 22-5.

¹⁴⁹ Details mentioned in Chapter 2.2.

¹⁵⁰ Bridget and Raymond Allchin, *The Rise of Civilization In India and Pakistan* (New Delhi: Cambridge University Press, 1996), 99-100.

¹⁵¹ Rita P. Wright, *The Ancient Indus: Urbanization, Economy, and Society* (New Delhi: Cambridge University Press, 2010), 44.

¹⁵² R. Sinha, R. Kumar, S. K. Tandon and M. R. Gibling, “Late Cenozoic fluvial successions in northern and western India: an overview and synthesis”, *Quaternary Science Reviews*, 26 (2007): 2801-22.

occurred at once or over a period of time; as a result, what social and economic changes took place, that is why and when did people leave hunting and gathering and opted for farming and a permanent way of life.

Mehrgrah is our only example of an early village settlement (see Map II.3.12).¹⁵³ It is on the eastern border of the Iranian Plateau, on the Kachi Plain in northern Baluchistan, at the foot of a major pass and on the western margins of the Indus alluvium. Throughout history this Bolan Pass has served as a crossroad between Iran and the Indus Valley. Despite its archaeological importance this region has had the misfortune to be the most poorly investigated and documented area, not only in South Asia but probably in all of archaeology.

The geographical location of Mehrgrah is important as it lies near the Irano-Anatolian belt, stretching from eastern Turkey and including most of Iran and Afghanistan. Therefore, grains like wheat and barley predominantly found at Mehrgrah lay within the normal distribution zone of plants that had already been domesticated much earlier in the Near East. Evidence for a shift from a hunting and gathering way of life to farming and animal keeping came to Fertile Crescent between 8,000 to 10,000 years ago. And according to the prevalent evidence, domestication of both plants and animals began in South Asia, between 7000 and 6000 BCE, therefore the next question that arises is whether domestication in this region was independently, or it developed and was imported to Mehrgrah from the Near East. To clarify this matter archaeobotanists (archaeologists with a speciality in the study of ancient plants) and zooarchaeologists (archaeologists who specialize in studies of ancient animals and their bones), investigated the plants and animal bones found from this area.¹⁵⁴ They concluded that Mehrgrah falls under the natural distribution zone for wild barley. Its grains have a distinctive morphology - short compact spike, shortened internodes, and small rounded seeds - that is characteristic of grains cultivated but not completely domesticated.¹⁵⁵ Therefore barley was locally domesticated while two other grains einkorn and emmer, found at Mehrgrah are east of

¹⁵³ C. Jarrige, R. H. Meadow and G. Quivron, "Mehrgrah: Field Reports 1974-1985. From Neolithic Times to the Indus Civilization", *The Department of Culture and Tourism, Government of Sindh, Karachi* (1995): 1-95.
 F. J. Jarrige and G. Quivron, "Mehrgrah Neolithic: The Updated Sequence", in *South Asian Archaeology 2001*, Vol. 1 Prehistory, eds. C. Jarrige and V. Lefevre (2005): 128-41.

¹⁵⁴ H. Pringle, "Neolithic Agriculture: Readings the Signs of Ancient Animal Domestication", *Science*, 282 (1998), 1448.

¹⁵⁵ L. Costantini, "The Beginning of Agriculture in the Kachi Plain: The Evidence of Mehrgrah", in *South Asian Archaeology*, ed. B. Allchin (1984): 29-33.

the distribution of their wild ancestors, suggesting that they were imported from the Fertile Crescent.¹⁵⁶

The shift from wild animals to domesticated animals was a more gradual and lengthy process and it is difficult to pinpoint the exact date for this shift. The earliest evidence for animals at Mehrgarh dates to approximately 7000 BCE, but there are bones of wild animals. The argument for the local or imported domestication of goats, sheep and cattle can only be evaluated on the bases of their increased representation over time and their decreasing body size.¹⁵⁷ Keeping these criteria in mind the argument for local domestication of goat is compelling as we find the presence of young goats in several burials found at Mehrgarh early settlements. Cattle, like goats, also over time increased in number, but decreased in body size. The predominant domesticated cattle specie is the Zebu (*Bos indicus*), a type native to South Asia. It is genetically different from the Near Eastern cattle specie (*Bos taurus*), again providing strong evidence for local domestication of the zebu, by 4300 B.C.¹⁵⁸ Sheep domestication in the region is doubtful as although the decrease in their size suggests local domestication, genetic studies indicate that all modern forms of sheep are descendants from a single Near Eastern ancestor.¹⁵⁹

Mehrgarh is the only area in Baluchistan that has been properly investigated to date and excavations there provide evidence for experimentation with both plant cultivation and animal-breeding by 4300 BCE. Evidence for house structures, domesticated sheep, goats and cattle also have been found in deposits dating back to that time at Kili Ghul Mohammad, a site located north of Mehrgarh near Quetta.¹⁶⁰ There is also evidence for local domestication of animals from outside Baluchistan in Loteshwar in northern Gujarat, from between 3657 to 2250 BCE, dated by radio carbon cattle bone analyses. Thus, the multiple cattle domestication centres

¹⁵⁶ R. H. Meadow, "Animal Domestication in the Middle East: A Revised View from the Eastern Margin", in *Harappan Civilization*, ed. G. L. Possehl, (New Delhi: Oxford and IBH, 1993), 295-320.

¹⁵⁷ R. H. Meadow, "Pre- and Proto-Historic Agricultural and Pastoral Transformations in Northwestern and South Asia", *The Review of Archaeology*, 19 (1998): 12-21.

¹⁵⁸ Ed. S. Settar and Ravi Korisetar, *Archaeology and Interactive Disciplines: Indian Archaeology in Retrospect*, Vol. 3 (New Delhi: Manohar Publishers and Distributors, 2002), 368-407.

¹⁵⁹ R. H. Meadow and A. Patel, "Prehistoric Pastoralism in Northwestern South Asia from the Neolithic through the Harappan Period", in *Indus Ethnobiology*, eds. S. Weber and W. R. Belcher, 65-94. Lanham, Maryland: Lexington Books, 2003).

¹⁶⁰ W. A. Fairervis, "Excavations in the Quetta Valley, West Pakistan", *Anthropological Papers of the American Museum of Natural History*, 45 (2) (1956), 167-402.

found in South Asia, may suggest an independent development of pastoral traditions within the sub-continent.¹⁶¹

As far as agro-pastoral economies were concerned they have been only found at Mehrgarh up to now and suggest that the villagers were relatively self-sufficient, since diverse food options were available within a single community. According to R. H. Meadow and A. Patel no pastoral community can survive for long without agricultural products. Balathal, in Rajasthan, is the closest known agricultural settlement, where wheat and barley can be found around 3000 BCE. As these crops were not native to the region; it is assumed that they came from the west.

In summary for some plants and animals South Asia was an original hearth of domestication, while others diffused from the Near East. The presence of domestication of both plants and animals within Baluchistan, between 7000 – 6000 B.C., is quite evident and it later spread to Lothal and Balathal around 4500 BCE.¹⁶²

On the bases of the arguments and evidences given, the *hominids* (modern humans) that migrated to this area around the late Pleistocene period, between the Last Glacial Maximum 12,000 to 17,000 years ago, by now had sound native roots. The “Out of Asia” hypothesis¹⁶³ claims that populations that came from the northern Near East, Central Asia or Europe during the Last Glacial Maximum migrated back to these lands around the early Holocene period when conditions were more favourable and liveable. This is backed with irrefutable DNA data which completely harmonizes with archaeological data found from this period enlightening us about a third migration, which occurred this time from east to west, instead of from west to east of survivors of the Last Glacier Maximum. It can further be believed that some people from these migrating populations must have preferred to settle here permanently. We can make this claim on the bases of the genetic studies from this area, which shows a strong linkage with populations from Africa and the Near East.¹⁶⁴ According to the archaeological evidences, it was from this time onwards that we witness the beginning of domestication of two types of

¹⁶¹ R. H. Meadow and A. Patel, “Prehistoric Pastoralism in Northwestern South Asia from the Neolithic through the Harappan Period”, in *Indus Ethnobiology*, eds. S. Weber and W. R. Belcher, 65-94. Lanham, Maryland: Lexington Books, 2003).

¹⁶² Rita P. Wright, *The Ancient Indus: Urbanization, Economy, and Society*. (New Delhi: Cambridge University Press, (2010), 45-51.

Bridget and Raymond Allchin, *The Rise of Civilization In India and Pakistan* (New Delhi: Cambridge University Press, (1996), 101-3.

¹⁶³ See Chapter 2.2 for details.

¹⁶⁴ See Chapter 2.2 for details.

plants and animals, the former native to the Fertile Crescent while the later first appeared in the Iranian Plateau. We have archaeological as well as genetic proof that it was the same race of people who first migrated to the north-western part of South Asia (Pakistan), and from here some of them again migrated back to the Near East through the Solang Pass (Persian Passage) in early Holocene Period. When the agricultural and climatic conditions were almost the same, when the wild grasses were the same, when the early domesticated animals were the same; when the people were from the same race, then why can't we claim that both farming and domestication of animals were initialized independently without any influence from the west? Would it be wrong to suggest that the Mehrgarh region had all the potentials required for laying the foundations of a civilization independent from any foreign influence? But we also need to keep this in mind, that there were probably interactions between Mehrgarh people and the Fertile Crescent for trade and commerce. The archaeology of Baluchistan needs to be properly investigated, to find answers to these questions. In future we might unearth more sites that even predate Mehrgarh, to match the dates of domestication of the Near East and the Iranian Plateau.

As Narendra Katkar says that the end of the Last Glacier Maximum was not only the beginning of domestication but also the foundations of first human civilizations were laid in the process.¹⁶⁵ The archaeological findings at Mehrgarh along with recent studies related to contemporary sites have revised South Asian prehistory.¹⁶⁶ According to Jean-Francois Jarrige, Director of the French Archaeological Mission to Pakistan and Richard Meadow the developments at Mehrgarh are antecedent to the Indus Civilization. They have in mind the first plants and animals domesticated here during the pre-pottery Neolithic phase, in addition to the sophisticated technologies invented here during a continuous occupation of the site over 3000 years. These crafts were later adopted and refined by the people of the Indus Valley Civilization.¹⁶⁷ We can no longer envision the inhabitants of the Indus Plains as simple recipients of inventions from the west. Nor can we attribute the rise of this great civilization after 2600 BCE to the flow of ideas from the Mesopotamian civilization.¹⁶⁸

¹⁶⁵ Narendra Katkar, "The Last Glacier Maximum: The third migration", *Comptes Rendus Palevol*, 10 (2011): 665-78.

¹⁶⁶ T. Douglas Price and Gary M. Feinman, *Images of the Past* (California: Mayfield Publishing Company, 1997), 203.

¹⁶⁷ Rita P. Wright, *The Ancient Indus: Urbanization, Economy, and Society* (New Delhi: Cambridge University Press, 2010), 51.

¹⁶⁸ T. Douglas Price and Gary M. Feinman, *Images of the Past* (California: Mayfield Publishing Company, 1997), 203.

Chapter 3.1

Growth, Development and Expansion of Indus Valley Civilization

The Indus Valley Civilization had firm, deep and indigenous roots, unlike what was thought when it was first discovered in the 1920s. In spite of the pioneer efforts of Sir Aurel Stein, Sir John Marshall, N. G. Majumdar, E. J. Mackay, Sir Mortimer Wheeler, Stuart Piggot, M. S. Vats and A. Ghosh, the pre-history of the Indus civilization was missing. These authors proposed that the elements of higher culture had been brought to this land by people living in the west - in Mesopotamia – that is Iraq and Iran. There were too many guesses and very few certainties.¹⁶⁹ Later in the 1930s and 1940s Piggot¹⁷⁰, Wheeler¹⁷¹, McCown¹⁷², Gordon¹⁷³, Ross¹⁷⁴ and Fairservis¹⁷⁵ laid the foundations to understand the extent of this interaction and diffusion of Indus culture, and they all claimed that only future excavations could shed more light on the problems they faced.

The last fifty years have changed this scenario dramatically; archaeologists have uncovered more than 1,000 sites, in Pakistan, India and Afghanistan, where similar architecture and artefacts confirm that they were member communities of the Indus Valley civilization. This civilization was spread over an area of 300,000 square miles, a region twice the size of Sumer and Egypt and larger than Western Europe. No other Bronze Age civilization can claim to have such a vast geographical reach. It encompasses the entire Greater Indus Valley, the region drained by the Indus and the Ghaggar-Hakra Rivers, today consisting of the Punjab and Sindh plains up to the Siwalik foothills in the North. In the East it extends to the Indo-Gangetic divide, spreading along the western fringes of the Thar Desert and reaching as far south as the Gulf of Cambay in Western India. In the west it spreads along the Arabian Sea coast in Pakistan up to the site of Sutkogandar near the Iranian border. Moving from the river plains and coastal area towards the hilly mountain passes of Baluchistan, it extended north to Shortugai in Afghanistan (see Map III.1.1).¹⁷⁶

¹⁶⁹ Bendapudi Subbarao, "The Personality of India: Pre and Proto-Historic Foundation of India and Pakistan", *M. S. University Archaeology Series*, No. 3, 87-94 (Baroda: Maharaja Sayajirao University of Baroda, 1958).

¹⁷⁰ Stuart Piggot, *Prehistoric India* (Harmondsworth-Middlesex: Pelican Books, 1950)

¹⁷¹ Mortimer Wheeler, *The Indus Valley Civilization*, The Cambridge History of India-Supplementary Volume (London: Cambridge University Press, 1953), 14.

¹⁷² Robert W. Ehrich, ed., *Relative Chronologies in Old World Archaeology* (Chicago: Chicago University Press, 1954), 154.

¹⁷³ D. H. Gordon, "Pottery Industries of the Indo-Iranian border", *Ancient India*, No. 10-11 (1954-55): 169.

¹⁷⁴ E. J. Ross, "A Chalcolithic site in Northern Baluchistan", *Journal of the Near Eastern Studies* 5 (1946).

¹⁷⁵ Jr. Walter A. Fairservis, "Excavations in the Quetta Valley West Pakistan", *Anthropological papers of the American Museum of Natural History*, Vol. 35, pt. 2 (1956).

¹⁷⁶ John L. Papanek, *Ancient India: Land of Mystery* (Alexandria, Virginia: Time-Life Books, 1994), 16.

The earliest settlements found so far in South Asia are located in Baluchistan. The ecological variables for human settlement in Baluchistan were not as favourable as other places in South Asia, yet man made this his first home.¹⁷⁷ In the sub-continent Baluchistan falls in the arid zone with extreme temperatures in both winters and summers and with less than 200 mm of annual rainfall, which is changeable and unpredictable at times. The only area where land could be cultivated was in the valley floors where moisture was available; the rest of the area was dry and uninhabited (due to this climatic severity a large area of Baluchistan still remains uncultivable even today).¹⁷⁸ As far as its geography is concerned, there can be no doubt that Baluchistan was connected with Central Asia, Afghanistan and Mesopotamia. Baluchistan is an extension of the Iranian plateau that forms a great tertiary basin almost surrounded by chains of mountains, isolating it from Central Asia in the north, the Tigris-Euphrates valley on the West and the Indus valley on the East. This vast Iranian plateau contains several sub-basins and desserts with interior drainage: the Great Salt Desert of northern Iran is separated from the Caspian Sea by the Elburz Mountains; towards the West the Zagros Mountains connect the coastal range of the Persian Gulf with the Caucasus; the Dasht-e-Lut on the East lies between central Mekran ranges on the Arabian Sea; and the Koh-i-Baba Mountains of central Afghanistan merge with the Hindukush mountains. The areas that are most relevant to our discussion are the area north-central, north-eastern and south-eastern, where developmental sequences have been reconstructed on the bases of excavations. Developments and traces of human occupation in these areas can be reconstructed archaeologically from the Neolithic Period to the Bronze Age that is from at least 7000 BCE.

Sialk a site in north-central Iran that dates back to the second half of the seventh millennium BCE, is known for its finely painted red ware and full-fledged metallurgy, involving smelting of copper and casting of implements. Hissar, located in the Damghan plain towards the south of the Elburz Mountains in north-eastern Iran is a principal site that shows developmental stages from the Neolithic to the Iron Age. According to archaeological data, this site is comparable to sites in Turkmenistan located in south Central Asia. Investigations have proved that these sites existed from late fifth to the second millennium BCE. They were

Hermann Kulke and Dietmar Rothermund, *A History of India*, 4th (London and New York: Routledge Taylor and Francis, 2008), 19- 20.

M. Rafique Mughal, "The Indus Valley: 3000-1500 BC", in *History of Humanity: Scientific and Cultural Development*, Chapter 8, Vol. 2, ed., A. H. Dani and J. -P. Mohan, 32- 3. Paris and London: UNESCO and Routledge, 1996.

¹⁷⁷ I shall elaborate this point as, I proceed.

¹⁷⁸ M. Rafique Mughal, "The Indus Valley: 3000-1500 BC", in *History of Humanity: Scientific and Cultural Development*, Chapter 8, Vol. 2, ed., A. H. Dani and J. -P. Mohan, 11. Paris and London: UNESCO and Routledge, 1996.

involved in craft activities including the smelting of copper, *Lapis Lazuli* and had trade links with the Iranian plateau, Central Asia and the Indus Valley civilization. A similar cultural development can be traced in the Gurgan plain from the belt and Hotu caves and Yarim Tepe (Aceramic and Neolithic), and Tureng Tepe (Chalcolithic and Bronze Age) is related to the cultural sequences of Iran, Turkmenistan and southern Afghanistan. The middle Bronze Age (2500-2000 BCE), also saw major developments on the eastern Iranian plateau and in southern Turkmenia represented by Altyn-depe, in Seistan at Shahr-i-Sokhta in Iran, at Mundigak in Afghanistan, and the Indus valley in Pakistan. The Soghun valley in southeastern Iran also witnessed development from Neolithic times to the second millennium BCE. During the proto-Elamite and later periods the site at Tepe Yahya had close ties with Mesopotamia, Khuzistan, the Persian Gulf and southern Baluchistan.

As Baluchistan is an eastern extension of the Iranian plateau, therefore it was culturally closely connected, yet it remained open to receive and transmit cultural influences from and to the other centres of ancient civilizations, especially between northeastern Iran, Seistan and Central Asia on the one hand and the Greater Indus on the other.¹⁷⁹ Hence these areas were not only geographically linked but were strategically linked too, and at no time in history were they ever disconnected from one another.

The story of Indus civilization began in Baluchistan, the oldest site so far excavated in South Asia. Archaeology has proved that domestication of both plants and animals started there around 7000-6000 BCE. As people settled at Mehrgarh many later settlements grew up around it, setting in motion a totally new way of life. Excavations at Mehrgarh have pushed back the chronology of the Indus civilization to 7000 BCE from 4500 BCE, an earlier dating on the bases of the presence of ceramic styles similar to types known from Central Asia, in southern Turkmenistan. On the base of chronology, Mehrgarh now not only predates the Central Asian settlements, but also shows indigenous innovations with a long and extended sequence of development.¹⁸⁰ J. F. Jarrige believes that the material culture of Central Asia has similarities with that of Mehrgarh, but that this is the result of interaction and not diffusion.¹⁸¹ J. F. Jarrige again and Richard Meadow believe that the developments at Mehrgarh were antecedent to the

¹⁷⁹ M. Rafique Mughal, "The Indus Valley: 3000-1500 BC", in *History of Humanity: Scientific and Cultural Development*, Chapter 8, Vol. 2, eds., A. H. Dani and J. -P. Mohan, 1-10. Paris and London: UNESCO and Routledge, 1996.

¹⁸⁰ Rita P. Wright, *The Ancient Indus: Urbanization, Economy, and Society* (New Delhi: Cambridge University Press, 2010), 76-7.

¹⁸¹ J. F. Jarrige, R. H. Meadow and G. Quivron, "From Neolithic Times to the Indus Civilization", *Mehrgarh Field Reports 1974-1985*, The Department of Culture and Tourism, (Karachi: Government of Sindh, 1995):1-95.

Indus civilization, and we can no longer believe that the inhabitants of the Indus Plains were simply recipients of inventions from the West.¹⁸² Archaeological evidence available today from several other sites is sufficient to conclude that cultural processes leading to full urbanization were already underway in Mehrgarh since the middle of the fourth millennium BCE.¹⁸³

Other than Mehrgarh there are many ancient sites in the different valleys and plains of Baluchistan. Zhob, Loralai, Quetta-Pishin, Kej and Las Bela are among the various sites where water resources were effectively utilized, as water has always been a critical factor in settlement location and duration of occupation. Archaeological excavations have proved that these sites were not only locally interconnected but were inter-regionally connected too along the principal lines of communication. Therefore, since antiquity, as said by Dr. Mughal, "Baluchistan was neither a 'backwater' or 'borderland' but an area of distinctive physical environment connected with surrounding regions and nearby centres of civilization through easily accessible routes."¹⁸⁴

Evidence unearthed from Baluchistan significantly helps in tracing the long sequence of growth, development and expansion of the Harappan civilization. The various strata introduced by historians have been named Pre-Harappan, Early Harappan, Mature Harappan and Late Harappan, whereas other archaeologists have distinguished them as Pre-Urban, Urban and Post-Urban. The Pre-Harappa/Pre-Urban phase is also known as the Neolithic age a time when man transitioned from nomadic herdsman to settled agriculturist.

The Neolithic culture of South Asia began to unfold with excavations conducted at Kili Gul Mohammad in the Quetta Valley by Walter A. Fairervis in the 1950s. The Neolithic occupation of Kili Gul Mohammad shows that the earliest inhabitants had domesticated sheep, goats and oxen, and were probably initially nomadic; they used stone tools - sickle blades, scrapers, microliths and ground stone tools, bone points and spatulas, but no pottery. However, by the end of the period they had constructed houses of mud-brick or hard packed clay (see Figure III.1.1-4). The subsequent phase yielded handmade crude pottery that was sometimes

¹⁸² T. Douglas Price and Gary M. Feinman, *Images of the Past* (Houston: Mayfield Publishing Company, 1997), 203.

¹⁸³ M. Rafique Mughal, "The Indus Valley: 3000-1500 BC", in *History of Humanity: Scientific and Cultural Development*, Chapter 8, Vol. 2, eds., A. H. Dani and J. -P. Mohan, 35. Paris and London: UNESCO and Routledge, 1996.

¹⁸⁴ *Ibid.*, 35.

painted. Painted pottery appears almost from the beginning of ceramics production in Baluchistan. It has parallels with ceramics types from sites covering a large area from southern Afghanistan at Mudigak to the Kalat plateau at Anjira and eastward to the Kachi plain in the Indus valley. According to calibrated dates the beginning of the non-pottery Neolithic Period at Kili Gul Mohammad was about the end of the sixth millennium BCE. This earliest period in Baluchistan is believed to have come to an end by the first half of the fourth millennium BCE. The developments seem to match those reported from Djeitun, Turkmenistan by Masson and his colleagues at and from northern Iran, from Sialk I-III.¹⁸⁵

This Neolithic evidence was further enlarged in the 1970s when excavations at Mehrgarh an ideal site to study as it offers a long sequence of constant occupation, starting from 7000 to 2500 BCE. Mehrgarh's history has been divided into seven phases (see Table III.1.1).¹⁸⁶

Table III.1.1 The Summary of Chronology and Occupation at Mehrgarh

Phase I	7000-4800 BCE
Phase II	4800-4000 BCE
Phase III	4000-3200 BCE
Phase IV-VII	3200-2500 BCE

On the base of archaeological findings these phases will be discussed to determine their social and economic development by examining their architecture, artefacts, burial practices and external links. The earliest settlement (Phase I) is at the northern end of the site, on the high banks of Bolan River and dates to the end of the seventh millennium BCE. This site was originally the camp of a group of nomadic pastoralists. The early levels of the excavated site witness a sharp shift from hunting and gathering to domestication of cereal crops namely wheat and barley in addition to animal husbandry. A further development is witnessed by the end of the sixth millennium BCE, when sheep, goats and cattle (zebu) and naked six-row barley and bread and short wheat were domesticated. It is believed that domestication of animals must have begun in Baluchistan at about the same time as in Western Asia. Sheep were the first animal to be tamed here, followed by water buffaloes, whose earliest remains outside China are

¹⁸⁵ M. Rafique Mughal, "The Indus Valley: 3000-1500 BC", in *History of Humanity: Scientific and Cultural Development*, Chapter 8, Vol. 2, eds., A. H. Dani and J. -P. Mohan, 12-3 (Paris and London: UNESCO and Routledge, 1996).
Bridget and Raymond Allchin, *The Rise of Civilization In India and Pakistan*, (New Delhi: Cambridge University Press, (1996), 102-3.

¹⁸⁶ Rita P. Wright, *The Ancient Indus: Urbanization, Economy, and Society* (New Delhi: Cambridge University Press, 2010), 54.

found here. The earliest dwellings were made of mud-bricks and consisted of four to six rooms, but the settlement included structures perhaps to be identified as granaries, with six or nine-roomed units. It is significant even at such an early stage provision for storage was incorporated in the settlement.¹⁸⁷ This feature indicates that they were producing surplus grain and stored it for hard times, or for trade. All these assumptions indicate that the people were in control of their dietary requirements. Pottery making was still unknown during Phase I.

The most common form of burial was a burial chamber, accessed through a long shaft and sealed by a mud-brick wall, (reminiscent of much later Iranian burials). This is the earliest evidence for institutionalized burial in south-east Asia. Some chambers contained several bodies lying in orientation was east-west with heads turned southwards toward the specially constructed walls. The graves were near the houses¹⁸⁸ or in abandoned dwellings. According to Pascal Sellier, bodies were wrapped in leather shrouds impregnated with red ochre,¹⁸⁹ a mineral used for processing leather (this practice of covering the body with red ochre is attested in Central Asia during the Middle Paleolithic and is still found among untouchable groups in South India today).¹⁹⁰ In some graves there is evidence for secondary burials, which suggests that some members of the community left the village for periods of time, possibly moving their animals to mountain pasturage during summer months. During phase I, funerary goods included personal items such as pieces of jewellery or sacrificial goats. There are beads made of turquoise from Persia or Turkmenia in Central Asia, *lapis lazuli* from Afghanistan and shells which must have come from the coast 400 miles away. It was during the fourth millennium BCE during Phase II, that grave chambers started to include funerary items such as vessels of clay, bone and flint implements, stone or bitumen vessels and jewellery (beads) along with bronze or copper objects, showing a transition from Stone Age to Bronze Age cultures. The presence of precious items in the graves suggests the existence of a network of long-distance trade even during this early period. Among other features of this phase was the development of pottery manufacture, a feature that not only made the method of cooking more efficient but made possible the addition of new types of food to the diet. Pottery containers not only helped

¹⁸⁷ M. Rafique Mughal, "The Indus Valley: 3000-1500 BC", in *History of Humanity: Scientific and Cultural Development*, 13.

Bridget and Raymond Allchin, *The Rise of Civilization In India and Pakistan*, 105.

Hermann Kulke and Dietmar Rothermund, *A History of India*, 21-2.

¹⁸⁸ There is evidence from Jericho and Catal Huyuk that they also buried their dead beneath their houses.

¹⁸⁹ Bridget and Raymond Allchin, *The Rise of Civilization In India and Pakistan*, 107.

¹⁹⁰ Pascal Sellier, "Mehrgarh: Funerary Rites and the Archaeology of Death", in *Forgotten Cities on the Indus: Early Civilization in Pakistan from the 8th to the 2nd Millennium B.C.*, eds. M. Jansen et al., 78 (Mainz: Verlag Philipp von Zabern, 1996).

in cooking and heating food items but also in storage for short and long intervals. Other new features included making jewellery with beads and shells, woodworking, spinning, weaving, sewing and making both animal and human clay figurines.¹⁹¹ The figurines are miniature work of art (see Figure III.1.5) and as their style and manufacturing techniques changed over time, they can be considered good indicators of chronology (the significance of these figurines will be discussed in the Chapter on Indus religion). Finally, cotton fibres and seeds were also discovered in Phase II levels, indicating the production of cloth. Most of the raw materials required for the production of these items were available locally but some came from distant areas. The development of trade networks must have further enhanced the contacts of Mehrgarh, not only within Baluchistan, but with regions nearby.¹⁹²

The III Phase, approximately in the early 4th millennium BCE, brought many logistical changes not only at Mehrgarh but throughout Baluchistan. The most dramatic change was the increased size of Mehrgarh and the increased number of newer settlements. Among the settlements is a large one in the Kachi Plain at Pathani Damb; it is at the foot of a major mountain pass (the Mula) leading from the north and west to the Indus Plain. Some villages were located to the west of Mehrgarh and served as feeder routes, leading towards the mountain pass, strategically positioned for travelling both south and west.¹⁹³ Other sites include Damb Sadaat and Kili Ghul Mohammad, located at the head of the Bolan Pass near Quetta, again well positioned for attaining non-local materials such as *lapis lazuli* from Afghanistan. Other than these, there were numerous sites north of Kachi, in Zhob and Loralai, which provided alternate routes from Baluchistan onto the Indus Plain.

Several factors can be attributed to the increase in the number of settlements. Many people, who were living in nearby areas and regions, must have been attracted by the settled village life. Some people who were formerly herders might have decided to finally settle down in one place after witnessing the benefits of it. But another important factor was the increased birth-rate, which according to Sellier was high,¹⁹⁴ possibly due to the settled way of life.¹⁹⁵

¹⁹¹ Human figurines especially female figurines have been found since 20,000 BCE, in Europe and Asia. But what is the significance of the first unbaked male torsos and to what extent, can these early terracotta's be given with regard as cult objects is impossible to say.

¹⁹² Hermann Kulke and Dietmar Rothermund, *A History of India*, 4th Edition, 21- 2.

Rita P. Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 54-64.

Bridget and Raymond Allchin, *The Rise of Civilization In India and Pakistan*, 100-6.

¹⁹³ S. P. De Atley, "Archaeological Surveys in Baluchistan 1948 and 1957", *Occasional Publication*, No. 8 (London: Institute of Archaeology, 1983), 4.

¹⁹⁴ Pascal Sellier, "Mehrgarh: Funerary Rites and the Archaeology of Death", 78.

¹⁹⁵ Rita P. Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 64.

During Period I and II the villages were tightly clustered, but during Period III not only the size and location of the village settlement changed but specialized activities spread to specialized zones, that is, dwelling units, storage in compartmented buildings, burials and craft activities had their specific places.¹⁹⁶ Despite all these changes, there is continuity in the material culture.

During Period III building techniques improved: the houses were still mostly rectangular in shape but their walls were more substantial now and in some cases walls were built with two rows of mud-brick and back walls had three rows, suggesting that it was an exterior wall that either served as a protective barrier against outsiders or animals, or might have provided support for a second storey. Only the larger rooms had doors, suggesting that the smaller ones were used for storage or as earlier, the houses were probably accessed from the roof.¹⁹⁷

Burial was similar to earlier one. The dead were buried with a few grave goods, but a distinction can be seen on the basis of age and sex. The lowest percentages of artefacts were found in the burials of children and juveniles. According to Wright, it might not have been appropriate for juveniles and children to have had any kind of grave goods before puberty. In her view grave goods might have had a religious significance tied to some kind of concept of an afterlife from which children were excluded.¹⁹⁸ The differences between male and female burials became quite distinct with respect to their personal ornamentation. As it seemed that a new appropriate code of behaviour with respect to construction of the grave, distribution of grave goods, and orientation and preparation of the body was underway.¹⁹⁹

Phase III was also a period of developing technologies and inventing new ones, which continued to be used during the Indus Civilization too. The chief invention of this time was the potter's wheel, which was used for making fine ware gray pottery (better known as Faiz Mohammad) on a large scale (see Figure III.1.6). This pottery is not only beautiful but is also technically much more sophisticated than pottery types of early societies. Different motifs were painted on it, sometimes geometric, sometimes figural but of animals only and plants.²⁰⁰ In

¹⁹⁶ It is here that for the first time we witness expansion of settlement not only for more space but also for the betterment of the community at large.

¹⁹⁷ It is known, by archaeologists that people living in Jericho and Catal Huyuk, which have the first permanent dwellings of humans found so far, also had access to their houses from their roofs.

¹⁹⁸ The 'religious significance' that Dr. Rita is talking about parallels the religious beliefs of Muslims. According to Islamic teachings, the Book of Deeds is opened once a child reaches puberty and before that he is pure and is not answerable for his/her actions. I shall take up this point later on in the chapter on religion.

¹⁹⁹ Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 64-7.

²⁰⁰ No human figures were painted, unlike in the Mesopotamian and Egyptian civilizations. I would elaborate this point further in the chapter on religion.

short, the Mehrgrah potters were masters of innovation in firing and colouring. The Mehrgrah production not only met local needs but was traded to nearby regions; examples of this gray pottery have been found in eastern Iran too.²⁰¹ Another innovation of this time was the use of a drill that was moved by means of a bow. The drill point was made of green jasper and was used to drill holes into beads made of *lapis lazuli*, turquoise and cornelian. (Similar drills were later used in the Indus Valley at Chanhudaro and were also found at Shahr-i-Sokhta in eastern Iran).²⁰² Parts of a crucible for the melting of copper were also found at Mehrgrah. Many stone tools including axes, stone hammers, maceheads, weights, counterweights and implements and ornaments (like hooks, amulets and double spiral-headed pins) were excavated.

On the basis of the evidences of these innovative and new technologies J. F. Jarrige proposes that Mehrgrah served as some kind of a marketplace or distribution centre for the exchange of raw materials, crafts and agricultural implements.²⁰³ His proposal is backed by the variety of different crafts found in addition to the large production numbers that were well beyond the needs of local consumption. He further proposed that seasonally migrating groups travelling from the highlands and lowlands and even beyond into Afghanistan could have brought back raw materials and traded them with the settled villagers in exchange for finished products. His theory is backed by studying the current trade in Baluchistan, where exchanges of this type are still prevalent today during seasons when the borders are open for migration.

It is obvious that Phase III, was a period of “formation”, and this formation could have been only achieved through firm stability. People grew in numbers, expanded, invented, imagined, produced and traded. They enhanced their mental capabilities by building a new life structure. It would not be wrong to assume that during this time they lived peaceable for we fail to see any evidence of unjust or irrational behaviour in the society. Why were they not fighting, why were they not thirsty for each other’s blood? Had they been so would the pace of growth and development altered if not stopped altogether? The archaeological evidences tell us; instead they witness a great pace in their growth and development both domestically and economically. So, what could be the driving force behind their actions? What was binding them together? We still lack evidence for any kind of economic or religious structures that could

²⁰¹ Rita P. Wright, *Technology, Style and Craft Specialization: Patterns of Interaction and Exchange on the Indo-Iranian Borderlands, Third Millennium B.C.* PhD. Diss. Harvard University and University Microfilms. (1984)

²⁰² Hermann Kulke and Dietmar Rothermund, *A History of India*, 22.

²⁰³ J. F. Jarrige, R. H. Meadow, and G. Quivron, 1995, “From Neolithic Times to the Indus Civilization”, *Mehrgrah Field Reports 1974-1985*, ed., C. Jarrige, 1-95. Karachi: The Department of Culture and Tourism, Government of Sindh.

be holding them together, such as we witness at Mesopotamia or Egypt at this time. Maybe it was simply a consciousness that man is born with, a consciousness of a divine force, a consciousness that does not require heraldic structures, a consciousness that helped him to realize the benefits of binding and bonding with his fellow men.²⁰⁴

Once again during Phase IV there was a shift in settlement. Ceramics attained major importance during this phase; it was not only produced on a much larger scale now, but it excelled in its designs, sizes (large storage jars) and more various forms. It was also during this phase that the earliest terracotta seals were found along with more stylized in representation of small female terracotta figurines, which according to Dr. Mughal indicate increased importance of religion.²⁰⁵ It is believed that Mehrgarh by this time must have been inhabited by settled and fairly wealthy people.²⁰⁶

During Phases V through VII we see an overall increase in the size and number of settlements in the vicinity of Mehrgarh, within and beyond Baluchistan. The features that were characteristic during the fifth Phase had also been noted at sites in eastern Iran²⁰⁷ and Central Asia²⁰⁸. As not much was known about the protohistory of Baluchistan prior to the fourth millennium BCE, but these features were once thought to have derived from those western regions. While it is true that long distance trade must have contributed to the exchange of cultural achievements, excavations at Mehrgarh have proved beyond any doubt that the early settlers of this site were not just passive imitators but had actively contributed to their growth and cultural development.

During these phases Mehrgarh was actively involved in an ever-widening sphere of interaction with groups within and outside of Baluchistan, to its west and east. By 3300 BCE, a small settlement on the Indus plain at Harappa had been established. It was previously believed that sometime during the middle of the third millennium BCE, Mehrgarh was

²⁰⁴ I would elaborate this point further in the chapter on religion with examples backed by archaeological evidences from this time period.

²⁰⁵ M. Rafique Mughal, "The Indus Valley: 3000-1500 BC", in *History of Humanity: Scientific and Cultural Development*, 17.

²⁰⁶ Hermann Kulke and Dietmar Rothermund, *A History of India*, 4th, 22.

²⁰⁷ Rita P. Wright, *Technology, Style and Craft Specialization: Patterns of Interaction and Exchange on the Indo-Iranian Borderlands, Third Millennium B.C.* PhD. Diss. Harvard University 1984, University Microfilms.

Rita P. Wright, M. J. Blackman and S. Mery, "Production and Exchange of Ceramics on the Oman Peninsula from the Perspective of Hili", *Journal of Field Archaeology*, no.1691 (1989): 61-77.

Wright, "Revisiting Interaction Spheres-Social Boundaries and Technologies on Inner and Outermost Frontiers", *Iranica Antiqua*, no. 37 (2002): 403-17.

²⁰⁸ Hermann Kulke and Dietmar Rothermund, *A History of India*, 4th Edition, 22.

Bridget and Raymond Allchin, *The Rise of Civilization In India and Pakistan*, 108.

abandoned by its inhabitants. But recent excavations show that a new village six kilometres from Mehrgarh at Nausharo was erected in period VII. Excavations at this site reveal continuous occupation throughout the Harappan Period. Another important new development was the emergence of a new pottery type, known as the Kot Diji or Early Harappan style (see Figure III.1.7). The wide distribution of this type of pottery clearly marked connections with emerging settlements on the Indus plain.²⁰⁹

During these periods building techniques improved further. Although the principal form of architecture still consisted of tightly clustered dwelling units, they were enlarged and the large storage buildings disappeared. The houses were placed in a random fashion without any apparent plan, but the rooms contain many architectural details that suggest new functions. It is believed that most houses now had small storage rooms, where pots were placed on wooden shelves.²¹⁰ Another new detail was the use of storage niches cut into interior walls. A system of lanes separating buildings is also seen for the first time. In many houses the entrance now led from the lane into large courtyards. These courtyards had hearths and most rooms were built around them. It seemed that individual houses were now storing their own food as the large communal compartmented storage buildings are missing. It is further known that canals were built to utilise water diverted from the floodplain to the land at its margins, in order to increase the area of potentially cultivable land and agricultural yields. This suggestion is based on the discovery in 1995 of ditches filled with rusty-coloured sediment characteristic of the bottom of canals.²¹¹ Public and monumental architecture in the form of mud-brick platforms appeared at Damb Sadaat and Mehrgarh.

Burial patterns during this period were mostly the same. The bodies were placed in mud-brick-lined pits in flexed positions, in an east-west orientation as before. Craft activities increased: pottery was produced on a very large scale, and hence archaeologists have labelled it as “semi-industrial mass production”. One kiln was found to contain 200 jars; they may have been left there, due to mistake during the firing in the kiln.²¹² Another area was discovered

²⁰⁹ Hermann Kulke and Dietmar Rothermund, *A History of India*, 4th Edition, 23.

Rita P. Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 71.

²¹⁰ M. Santoni, “Potters and Pottery at Mehrgarh during the Third Millennium BC (Periods IV & VII)”, in *South Asian Archaeology*, 2 (1989): 176–85.

²¹¹ J. F. Jarrige, R. H. Meadow, and G. Quivron, “From Neolithic Times to the Indus Civilization”, *Mehrgarh Field Reports 1974–1985*, ed., C. Jarrige (Karachi: The Department of Culture and Tourism, Government of Sindh, 1995), 76.

²¹² Hermann Kulke and Dietmar Rothermund, *A History of India*, 4th (Ed), 23.

where wasters was kept, maybe as a kind of reference collection.²¹³ But the most remarkable advance in pottery production was the invention of a two-chambered kiln, at Lal Shah excavated at Mehrgrah by Dr. Rita Wright, which seemed to have been in use till the very end of occupation.

This period also witnessed a wide variety of objects made from raw materials that were not previously found at Mehrgrah, and it is assumed that they were either locally procured or were imported. Among these were a new variety of ivory or bone seal known as “button seals” (see Figure III.1.8), various metal tools and a general replacement of metal for bone in leather processing and woodworking. Some small seals were discovered in residential areas with geometric designs that might have been used to signify an individual or social group, as is proposed by archaeologists. A new type of male and females decorated figurines that have elaborately dressed hair are also associated with this time. According to Dr. Mughal, female figurines had become standardized by this time, and had taken the full form of “Mother Goddess” with bejewelled breasts and male figurines are identifiable by their genitals and a special ‘phallic’ pendant ornament.²¹⁴ However Dr. Wright believes that it is difficult to assign any function to these figures, as they could be the Barbie Dolls or G. I. Joe figures of their time.²¹⁵ Specialized micro-drills and other drilling tools were used for producing beads and ornaments of semiprecious stones.

This was a time of complex interactions of people within Baluchistan but also with cultures that were widely distributed beyond Baluchistan. Mehrgrah was one town among many. Other settlements developed in other parts of India, but it is assumed that the people of Mehrgrah were not directly influenced by them. Mehrgrah had contacts with other places that were nearer to it, like the villages and towns towards the north along the Bolan Pass in the Quetta region, towards the north in the modern districts of Zhob and Loralai and towards the south in Kalat and Makran. Details of items found attest to an extensive established trade networks: marine items were traded from the south, *lapis lazuli*, gold and copper from Afghanistan or eastern Iran. It is believed that Mehrgrah served as a gateway to and from areas

²¹³ M. Santoni, “Potters and Pottery at Mehrgrah during the Third Millennium BC (Periods IV and VII)”, in *South Asian Archaeology 1985*, eds. K. Frifelt and P. Sorensen, Vol. 2 (London: Curzon Press, 1989), 181.

²¹⁴ M. Rafique Mughal, “The Indus Valley: 3000-1500 BC”, in *History of Humanity: Scientific and Cultural Development*, 17.

²¹⁵ I reserve my comments here, and shall elaborate on them in the chapter on religion.

to the north, west, the Greater Indus basin and the coast, but perhaps the areas along the Indus were of the utmost importance.

By now every doubt with respect to the indigenous roots of the Indus should be dispatched, as the presence of Early Harappan/Kot Diji pottery directly links Mehrgarh with the Indus and Ghaggar-Hakra plains. The sequence of developments at Mehrgarh is an ideal example of a small village farming community first developing into a sizable town, and later setting stage for full-fledged urbanized cities on the Indus Plains. Several thousand years of developing basic technologies, of animal and plant domestication, water control systems, ceramics, metallurgy, stone manufacturing, craft industry and architecture leads us to conclude that the people of Mehrgarh were highly organized people and had developed strong relationships based on commercial and kinship.²¹⁶

Another important aspect of the pre-eminence of Mehrgarh is with regard to its strategic location for cultivation at the foot of Bolan Pass. But we also have to keep in mind that Mehrgarh is in Baluchistan, which falls in the arid zone with extreme temperatures in both winters and summers and has less than 200 mm annual rainfall, that can be unpredictable and that the only areas where land could be cultivated were in the valley floors where moisture was available. Due to this climatic severity a large area of Baluchistan remains uncultivable even today. Therefore until now a large section of the population remains nomadic, raising cattle, goats and sheep.²¹⁷ Now the question must be raised is, why, when the condition of the land was not ideal or encouraging for cultivation in this area on a larger scale, man still chose this habitat as his home, leaving or ignoring the more fertile lands of South Asia, the Indus or Gangetic plain. The answer that can be given on the base of recent archaeological findings is that modern man (a man with consciousness and awareness) entered South Asia through the Iranian passage, whether in the Palaeolithic, Mesolithic or Neolithic or perhaps even before that time. The back to and forth movement of races in and out of South Asia through this passage is backed by the genetic makeup of the South Asian population today, especially in the northwestern region of Pakistan. Excavations, carried out at Mehrgarh have proved beyond doubt that this area had trade networks with eastern Iran, Central Asia, Turkmenia and Afghanistan. The question that still remains is, whether the people who laid the foundations of

²¹⁶ Mughal, "The Indus Valley: 3000-1500 BC", in *History of Humanity: Scientific and Cultural Development*, 15. Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 74-6.

²¹⁷ Mughal, "The Indus Valley: 3000-1500 BC", in *History of Humanity: Scientific and Cultural Development*, 11

civilization in Mehrgarh and Indus, travelled from west to east or as per the “Out of Asia” hypothesis travelled from east to west. I believe only future excavations can help answer this question but for now we can rest our case by assuming that these people all belonged to the same racial group.

In the Greater Indus and the Ghaggar-Hakra Plains several different settlements help us to construct foundations for the emergence of the great Indus cities. Today more excavations have helped to place different sites in their correct chronological order. For example, it was believed during Wheeler’s time that Amri, Kot Diji, and Kalibangan were important pre-urban sites. Today know that these sites were contemporaneous with the last stages of occupation at Mehrgarh Phase VII. Recent excavations at Harappa have revealed that the site was first occupied by 3300 BCE or possibly 3500 BCE, hence, pushing back its chronology from 2400 BCE (initially Wheelers thought).²¹⁸ According to Dr. Mughal, Cholistan was first inhabited at the same time as Harappa,²¹⁹ he further comments that in contrast to the regional patterns of settlements in Baluchistan, the settlements in the vast plains of the Greater Indus Valley show great uniformity in materials approaching cultural integration. The peripheral areas, such as south-western Sind and northeast Rajasthan are exceptions.²²⁰

The areas of greatest expansion during the pre-urban Phase included the alluvial plains of the Upper and Lower Indus and the Ghaggar-Hakra region. In the Upper Indus, on the Ravi River, is the best-known site of Harappa. Kot Diji and Amri are located in the Lower Indus plains, on its western margins. Settlements in Cholistan and Kalibangan are towards the east and south, where the Ghaggar-Hakra River once flowed. Other than these, expansion of settlements continued in the previously occupied areas on the mountain zones, as we know that the later levels of Mehrgarh are contemporaneous with the pre-urban sites on the plains: some artefacts such as (Kot Diji pottery) indicate contact between these sites. The sites in Quetta,

²¹⁸ Mortimer Wheeler, *The Indus Civilization*, 3rd (Ed), 125.

²¹⁹ Mughal, “New Archaeological Evidence from Bahawalpur. In *Indus Civilization: A New Perspective*”, ed., A. H. Dani (Islamabad: Centre for the Study of the Civilizations of Central Asia, 1981), 33-41.

Mughal, “Recent Archaeological Research in the Cholistan Desert”, in *Harappan Civilization: A Contemporary Perspective*, ed. G. L. Possehl (New Delhi: Oxford and IBH and the American Institute of Indian Studies, 1982), 85-95.

Mughal, “Jhukar and the Late Harappan Cultural Mosaic of the Greater Indus Valley”, in *South Asian Archaeology*, ed., C. Jarrige (Madison: Prehistory Press, 1992), 213-76.

Mughal, “The Consequences of River Changes for the Harappan Settlements in Cholistan”, *The Eastern Anthropologist*, no. 45 (1992): 105-16.

Mughal, “Resurrecting Sir Aurel Stein from the Cholistan Desert”, *Context 15* (2001): 1-4.

²²⁰ Mughal, “The Indus Valley: 3000-1500 BC”, in *History of Humanity: Scientific and Cultural Development*, 18.

Zhob and Loralai also continued to expand during this phase and sites are established in the mountains valleys of Baluchistan and elsewhere.

On the basis of these settlement expansions, covering an area of 300,000 square kilometres, we can envision a vast area occupied by large and small villages and towns. From these areas both raw and finished products were imported and exported over large distances. According to Dr. Wright, these linkages could be one of the factors that contributed to the rise of the great Indus cities.²²¹ During this period there is the uniformity in their material culture and site planning among the different settlements. However, this uniformity was not the result of political unity, for we see many emerging polities. These polities were no longer, in less circumscribed environments like the valleys of hilly mountains of Baluchistan but were established in areas where large tracts of land were available for cultivation and pasturage.²²²

So, there is hardly any reason why these people should not have flourished. For we know that the people who had shifted from hunting and gathering to settled life, who discovered domestication, who had built the first houses, people who first buried their dead, who discovered the making of pottery, who discovered the techniques of woodcutting, metallurgy, weaving, sewing, making toys, etc., who had built the first villages, who had established trade links and who were expanding their settlements were conscious of their actions. So the question that we need to address is that from where these people attained this awareness. So far we have seen possible evidence of representation of such thinking in the form of mother goddesses found in Spain, in female or male sculptures of Catal Hoyuk in addition to the painted pictures of man, beasts and vultures found in shrines in the same vicinity, or the plaster skulls associated with some kind of ancestor cult found all over the Near East, or the burials found with elaborate grave goods and bodies painted with red ochre. Since the beginning this has been a question he had been trying to figure out.

Dr. Wright in her latest book has provided us with a list that outlines these complex developments.

“(1) Presence of diverse communities, ranging in size from villages to major towns; (2) Presence of settlements having different functions; (3) Increase in population density; (4) Economies based upon agriculture, pastoralism, raw material exchange, and craft specialization; (5) Settlements with planned layouts oriented to the cardinal points; (6) Settlement showing significant community building projects, including architectural structures, such as fortifications, revetment walls, and massive platforms; (7)

²²¹ We have already discussed the importance of these linkages in the preceding pages.

²²² Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 80.

Division of communities into sectors (perhaps neighbourhoods is a better word); (8) Creation of communication systems, a. Written symbols that are apparent precursors to the Indus script, documented at Harappa and surrounding rural settlements, b. Seals to identify individuals or groups, c. Precursors to a measurement system that became the standard for the Indus civilization (the discovery of a weight); (9) Establishment of exchange systems for acquisition of nonlocal raw materials; (10) Production of a variety of new objects; (11) Employment of many different and innovative production techniques; (12) Fabrication of the same object using different materials and production techniques”²²³

These developmental patterns will be discussed as we proceed in discussion of the Harappan/ Indus Valley regions. Archaeologists have developed terminologies and categorizations with which to describe materials that have been excavated in a systematic way, making the understanding of the development of a particular site much easier to comprehend. As, is in the case of Mehrgarh, where history was divided into five strata for convenience.

Jim Shaffer was the scholar who devised terms to explain the various categories found in South Asian chronology.²²⁴ For example he used the term, tradition (for Baluchistan), era (early food producing) and phase (“a diagnostic ceramic style located at one or more sites during a particular time”), for example, the Amri and Kot Diji Phase. I have employed Dr. Wright’s method in which she has divided the cultural history of settlements on the plains into three periods and has named them Pre-urban, Urban, and Post urban/Late Harappan. She has incorporated Shaffer’s phase categories but her chronological order is based on geographical areas (see Table III.1.2).

Table III.1.2 Pre-urban Ceramic Phases

Upper Indus Valley	
Ravi Phase	3300-2800 BCE
Early Harappan/Kot Diji Phase	2800-2600 BCE
Lower Indus Valley	
Amri Phase	3300-2600 BCE
Hakra Phase	3500-3000 BCE
Early Harappan/Kot Diji Phase	3200-2600 BCE
Ghaggar-Hakra in Cholistan	
Hakra Phase	3500-3000 BCE
Early Harappan/Kot Diji Phase	3000-2600 BCE

²²³ Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 81.

²²⁴ Jim G. Shaffer, “Indus Valley, Baluchistan and the Helmand Drainage (Afghanistan)”, in *Chronologies in Old world Archaeology*, 3rd (Ed), ed., R. W. Ehrich (Chicago: University of Chicago Press, 1992), 442.

Ghaggar-Hakra in Northwest India	
Early Harappan/Kot Diji Phase	3200-2600 BCE
Sothi-Siswal Phase	3200-2600 BCE ²²⁵

Upper Indus-Harappa is the most important site of Indus civilization, as it is the only major site for which we have an excavated the complete sequence from the early Pre-urban to Urban to Post-urban Periods (see Map III.1.2). Harappa's long history of occupation is reflected through its physical topography, as the site consists of various clusters of mounds with different chronological histories and details. Parts of Mound AB and E were occupied during all periods at Harappa. During the Ravi Phase, the settled area on these mounds was between seven and ten hectares, while it expanded to approximately twenty-six hectares during the Kot Diji Phase. At its peak, Harappa was spread over 150 + hectares. Among these clusters, the Ravi Phase is the oldest as it has pushed back the chronology of Harappa to 3300 or perhaps 3500 BCE.

Upper Indus-Ravi Phase is named after a distinct pottery style found in the early levels of occupation. It appears that the earliest settlement was on the west side of the mound AB and the north-western corner of mound E. The houses were supported by wooden posts and had walls of mud-plastered reeds. It seems that many different living floors were superimposed one above the other, representing successive rebuildings. The levels were variously used for domestic purposes or craft production: kitchen areas contained small bell-shaped, well plastered pits for storage and cooking pots. One floor of such a house dating from 3100 BCE was found to contain complete vessels, broken necklaces, bone and stone tools, terracotta spindle-whorls, and bangles of shells and terracotta. According to Dr. J. M. Kenoyer and Richard Meadow many crafts were found in various stages of production.²²⁶ Noteworthy among these is the manufacture of beads, especially steatite beads. Steatite beads and terracotta beads occurred in large quantities, while beads made from carnelian, banded agate, and jasper of various shades, lapis lazuli, and amazonite were also found. In addition, there are quantities of finished and unfinished marine shell bangles produced in different styles. The presence of carnelian, *lapis lazuli* and shells in the context of unfinished objects attested to the presence of

²²⁵ Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 85.

²²⁶ J.M. Kenoyer and R. H. Meadow, "The Ravi Phase: A New Cultural Manifestation at Harappa, Pakistan", in *South Asian Archaeology 1997*, ed., M. Taddei and G. De Marco (Rome: Istituto Italiano per l' Africa e l'Oriente and Istituto Universitario Orientale, 2000): 64.

long distance procurement of these precious objects. Geometrically decorated small button seals made of bone were also found. Points and awls were common bone tools. It is supposed that these bone awls could have been used for basketry and the polished rib fragments for weaving.

Pottery from the first part of the Ravi Phase was all handmade and included bowls; narrow-mouthed, ridged vessels; and large globular, thick-walled cooking pots. Before the mid-1990s this phase was called, “the Ravi aspect of the Hakra phase”,²²⁷ on the base of its pottery style. This changed when Heather Miller found shreds of Ravi pottery partially hidden in the gullies, at Harappa deposited there through processes of natural erosion and human and animal traffic.²²⁸ It is true that Ravi ceramics bear close resemblance to the Hakra wares found at contemporary sites in Cholistan and elsewhere, but at the same time Dr. Wright believes “they are sufficiently different to warrant a typological distinction”.²²⁹ The dissimilarity between the two that stands out is that Ravi ceramics were hand-made,²³⁰ whereas Hakra ceramics were wheel-turned.²³¹

Additionally, two discoveries particularly stand out: First are the miniature terracotta carts, that may be copies of actual wooden vehicles, used for transport,²³² and the second are sherds inscribed with signs that later became symbols in the Indus civilization script: Thus, the origin of the Indus writing can now be traced back to the Ravi Phase at Harappa (3300-2800 BCE). The later symbols were found in the next Kot Diji Phase at Harappa (2800-2600 BCE).²³³

Upper Indus-Early Harappan/Kot Diji Phase is also known through its distinct pottery style. This pottery is widely distributed throughout the Indus Plain. It includes a short-necked ovoid pot, painted with designs of a horned deity, pipal leaves and fish scales among others.

²²⁷ Dilip K. Chakrabarti, *The Oxford Companion to Indian Archaeology: The Archaeological Foundations of Ancient India Stone Age to AD 13th Century* (New Delhi: Oxford University Press, 2006), 129-30.

²²⁸ Heather Miller, *Pyrotechnology and Society in the Cities of the Indus Valley*, PhD diss., University Microfilms, (Madison, Ann Arbor: University of Wisconsin, 1999).

²²⁹ Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 83.

²³⁰ J.M. Kenoyer and R. H. Meadow, “The Ravi Phase: A New Cultural Manifestation at Haraappa, Pakistan”, in *South Asian Archaeology 1997*, eds., M. Taddei and G. De Marco (Rome: Istituto Italiano per l’Africa e l’Oriente and Istituto Universitario Orientale, 2000), 64.

²³¹ Mughal, *Ancient Cholistan: Archaeology and Architecture* (Lahore: Ferozsons, 1997), 66.

²³² Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 87.

²³³ Dilip K. Chakrabarti, *The Oxford Companion to Indian Archaeology: The Archaeological Foundations of Ancient India Stone Age to AD 13th Century* (New Delhi: Oxford University Press, 2006), 129-30.

Forms include flanged bowls, jars and a dish-on-stand. These designs with slight variations in some forms continued into the Urban period. Kot Diji pottery was generally wheel-turned.²³⁴

Mound AB and E that were occupied during the Ravi Phase expands from 10 hectares to 26 hectares during the Kot Diji Phase, there was a continuous sequence of development between the two phases. During this period kiln-baked bricks became the principal building material and were produced in uniform sizes and specific ratios. New features of this phase were the building of massive mud-brick perimeter walls separating Mound AB from Mound E, massive mud-brick platforms and what appears to be an early example of city planning with streets in north-south/east-west orientations.²³⁵ The walls and platforms suggest that city planning was now carried out on a fairly large scale. Craft production is evident from several areas with finds of hearths and pottery kilns that show an increase in the number of areas devoted to craft production.²³⁶ The crafts that continued from the Ravi phase included, button seals, steatite beads, numerous terracotta objects, such as animal and human figurines, and cart models. Many of these crafts continued into the mature Harappan Phase. More seals were produced with graffiti and symbols that were the precursors to the later Indus script. The marks were scratched on pottery too, either before or after firing. Some are considered to be potters marks used to identify his pieces, whereas others are considered to represent an early form of Indus writing. Some seals even at this stage were produced with narrative scenes and images of animals, for example, the famous “unicorn seal” (see Seal III.1.1). Non-local materials used during the Ravi Phase continued to be used during this phase too; these included *lapis lazuli*, carnelian, chert, marine shells, copper, and gold. Another important feature of this phase was the adoption of an agro-pastoral economy. It appears that the farmers were now not only experimenting with a year-round cropping system but were exploiting domesticated cattle, sheep, and goats for meat and their secondary products too. Evidence for a fishing industry has also been found.

Some regional surveys conducted Near Harappa in the Upper Indus and Cholistan are contemporary with the Ravi Phase. A survey of the Upper Indus was conducted by the Punjab Archaeological Survey under the Department of Archaeology, Government of Pakistan. This

²³⁴ Upinder Singh, *A History of Ancient and Early Medieval India: From The Stone Age To The 12th Century* (New Delhi: Pearson Longman, 2008), 142.

²³⁵ J.M. Kenoyer, “Lithic Studies: In Harappa Civilization: A Recent Perspective”, 2nd (Ed), ed., Gregory L. Possehl (New Delhi: Oxford and IBH and the American Institute of Indian Studies, 1993), 512.

²³⁶ Upinder Singh, *A History of Ancient and Early Medieval India: From The Stone Age To The 12th Century*, 144.

survey discovered over 1000 prehistoric and historic sites and monuments,²³⁷ thirty-four of them were occupied during periods related to the Indus civilization. These sites are near the Chenab, Ravi, and the Beas Rivers. Thirty sites were occupied during the Pre-urban Period, including eight sites on the west bank of the Ravi, five of which are less than five hectares, two between five and ten hectares; two between fifteen and sixteen hectares. Jalilpur, which is on the southeast bank of the Ravi²³⁸ was discovered by Dr. Mughal and had less than two hectares. Five sites on the west bank of the River Chenab are less than five hectares and two are between five and ten hectares. Two large settlements on the west bank of the Ravi were continuously occupied during the Pre-urban and Urban phases.

Eighteen settlements have so far been found on the Beas River dating to the Pre-urban, Urban, and Post-urban Periods. However, it is believed that this is not the correct number, as during the late nineteenth and early twentieth century, when extensive infrastructural projects were implemented in the Punjab, many archaeological sites were destroyed. Pre-urban settlements along the Beas River are distributed in a uniform and linear fashion along its former bed. An exception is a small cluster of them located at the river's southern extension along an old tributary of the Beas that is no longer visible. As these settlements varied from those along the river, it may suggest that settlers were exploring different micro-environments, such as those settlements near the river pursuing agriculture, while others might have been involved in pastoralism. This situation can lead us to believe that different economic groups were interacting with each other.

Archaeological evidence has been found in these sites near the Ravi and Beas Rivers that identify the Ravi and Kot Diji Phases of occupation. There are similarities in material culture and a number of sherds inscribed with Indus writing were found attesting to significant interaction between these smaller sites and Harappa itself.

Unlike the Upper Indus, a place of high cultivation, Cholistan is quite different due to its aridity, as it is a desert today and is sparsely inhabited: the principal economy is based on cattle breeding and nomadic pastoralism, as the landscape is quite forbidding for cultivation. But this was not the situation during the Pre-urban and Urban Period, when the Hakra River once flowed through the region. Dr. Mughal and his team have extensively surveyed the area

²³⁷ Mughal, *Ancient Cholistan: Archaeology and Architecture* (Lahore: Ferozsons, 1997), 66.

N. Rasool, "Archaeological Sites and Monuments in Punjab", *Pakistan Archaeology*, Special Issue No. 2 (Karachi: Department of Archaeology, 1994-1996).

²³⁸ Mughal, "Excavations at Jalilpur", *Pakistan Archaeology* 8 (1972): 117-24.

and 138 Pre-urban settlements have been discovered along the now-dry bed of the Ghaggar-Hakra River in the Cholistan region of Pakistan alone.

Hydrographic changes that occurred at various time intervals led to different settlement patterns in Cholistan.²³⁹ One of the first documented shift occurred sometime around 2500 BCE, when the Yamuna River, which lies to the east of the Ghaggar-Hakra, captured one of the Ghaggar-Hakra's tributaries, the Chautang River, thereby reducing the water to its north and east where the Hakra now meets the Indian border. A second change occurred around 1500 BCE, when the Sutlej River, which originally joined the Hakra, was captured by the Beas, rendering the Hakra totally dry.²⁴⁰

The Ghaggar-Hakra plains is the core area of Pre-urban settlements discovered in Cholistan, in both Pakistan and India. As we know that the Hakra once flowed through this region, it is possible that these people practiced agricultural and also raised cattle, sheep and goat utilising the desert environment: camp sites, indicating temporary occupation, have been found containing characteristic Pre-urban pottery and other materials. The presence of kilns at some of these sites suggests specialized craft activities in addition to production of wheel-turned pottery.²⁴¹ Dr. Mughal has divided the one hundred and thirty-eight sites of the Pre-urban period into two groups, the Hakra (comparable to the Ravi Phase at Harappa), followed by Early Harappan (Kot Diji Phase). The artefacts and location of the sites can help us to compare the settlement patterns and their shifts through time.²⁴²

The Hakra Phase in Cholistan and northwestern India is identified by its distinctive pottery style, known as Hakra pottery. It consists mostly of wheel-turned, globular jars and bowls with geometric motifs and textured surfaces, dating to 3500-3000 BCE. This area is different from the plains where we find sites with continuous occupation from Pre-urban to Urban and Post Urban, as here there are a large number of settlements having short-term occupation. The settlements are distributed along both sides of the river banks. Artefacts associated with this phase include grinding stones and pestles, shell and terracotta bangles,

²³⁹ Mughal, "The Consequences of River Changes for the Harappan Settlements in Cholistan", *The Eastern Anthropologist* 45 (1992): 105-16.

Mughal, "Resurrecting Sir Aurel Stein from the Cholistan Desert", *Context* 15, No. 2 (2001): 1-4.

²⁴⁰ Mughal, *Ancient Cholistan: Archaeology and Architecture* (Lahore: Ferozsons, 1997), 26.

²⁴¹ Mughal, "Recent Archaeological Research in Cholistan Desert", in G. L. Possehl (ed.), *Harappan Civilization: A Contemporary Perspective* (New Delhi: Oxford and IBH Publishing Company, 1982).

Mughal, "Archaeological Exploration in Cholistan", (Islamabad: Lok Virsa and Department of Archaeology and Museums, 1989).

²⁴² Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 89-92.

small terracotta balls, humped-bull figurines, stone tools for utilitarian purposes and bone points which were used for leatherworking and basket making. Kilns have been found for firing pottery and other production fragments includes bits of copper, unworked carnelian, and agate, which attest to the presence of long range contacts.²⁴³

The Early Harappan/Kot Diji Phase is known through its Kot Diji pottery style, which is similar to the Upper Indus pottery style. Like the Ravi at Harappa, some Hakra pottery also shares specific qualities with the later Kot Dijian wares; especially the globular jars and pedestaled vessels, although the fabrics and treatment of their exteriors differ.

Significant differences between the Hakra and Kot Diji Phases are not only the shift of settlements towards present day Fort Abbas from Derawar Fort, but also the dramatic decrease of the nomadic pastoralists who had inhabited the area during the Hakra Phase²⁴⁴ disappearing finally during the Kot Diji Phase. It is proposed that the decrease in the number of camp sites could mean that the nomadic pastoralists might have settled into the villages and towns that came to dominate the area. This proposal is backed by a noticed rise in single- function settlements from 2% to 14%. The settlements were production centres for pottery and metal work. The artefacts found during this phase are not different from the Hakra Phase: grinding stones and pestles, stone tools included blades and arrowheads along with copper bits, terracotta animal figurines, beads, spindle whorls, and from two sites, unworked *lapis lazuli*,²⁴⁵ attesting to its procurement in an unworked state from Afghanistan. Ceramics from Baluchistan have also been found here, hence linking the two areas.²⁴⁶

So far, we have been discussing the in Pakistan (which was separated from India in 1947) and most of the sites belonging to the Ghaggar-Hakra Phase in northwest India can be traced in Pakistan. However, we find an interesting pattern of settlements clustered in and around the Ghaggar-Hakra Rivers in India. According to G. Possehl, there are 165 sites associated with this phase in India; most sites were discovered within the southern extension of the rivers, suggesting that the region was a major centre of pre-urban development.²⁴⁷

²⁴³ Mughal, *Ancient Cholistan: Archaeology and Architecture*, 68.
Wright, 92-3.

²⁴⁴ Mughal, *Ancient Cholistan: Archaeology and Architecture*, 40.

²⁴⁵ *Ibid.*, 71.

²⁴⁶ Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 94-5.

²⁴⁷ G. Possehl, *The Indus Civilization: A Contemporary Perspective* (New York: Alta Mira Press, 2003).

The ceramics of this pre-urban period bears strong similarities to the Kot Diji types found in the Upper Indus and Cholistan. Despite these similarities some have divergent forms and decoration showing sufficient variation that archaeologists have established an additional category, known as 'Sothi-Siswal'. This pottery style has some similarities with the pottery of Baluchistan too. Sothi was excavated in 1952 and the similarities between its pottery style and Kot Dijian pottery were pointed out by A. Ghosh in 1965 at Kalibangan. The most important site of this phase was discovered by A. Ghosh and on this basis, Ghosh could speak about the "Sothi sub stratum".²⁴⁸ Two structural phases have been discovered at Kalibangan. The settlement was initially four hectares in size and was surrounded by massive mud-brick fortifications. Houses were made of mud and mud-brick of standardised sizes and were built around courtyards. Hearths, lime-plastered storage pits, and saddle querns were also found in the houses. Artefacts included stone blades, terracotta cakes, shell bangles, disc beads made of steatite, carnelian, faience, gold, and silver, along with over a hundred copper objects. Some of the graffiti on pottery is similar to the script of the mature Harappan Phase. An interesting discovery was that the ancient ploughed field had furrows like those found yet today in the vicinity.²⁴⁹

Extensions of the Pre-urban cultural phenomena are found further east and northwards, at the earliest levels of Siswal,²⁵⁰ at Banawali,²⁵¹ located 120 Km east of Kalibangan, and at Manda, near Jammu²⁵² on the right bank of the Chenab River. The pre-urban phase is marked by mud-brick houses with hearths and plastered storage pits in the courtyards. The pottery is also similar to that found at Kalibangan and in Kot Diji style. The Urban phase at these sites follows a Pre-urban Phase, making their date fall into the second half of the third millennium BCE, making these peripheral sites contemporary, in part, with the fully urbanized phase of the Harappan culture in the core area of the Greater Indus Valley.²⁵³

²⁴⁸ Dilip K. Chakrabarti, *The Oxford Companion to Indian Archaeology: The Archaeological Foundations of Ancient India Stone Age to AD 13th Century*, 130-1.

²⁴⁹ Upinder Singh, *A History of Ancient and Early Medieval India: From The Stone Age To The 12th Century*, 144.

²⁵⁰ Suraj Bhan, "Siswal A Pre-Harappan site in Deishadvati Valley", *Puratattva*, no. 5 (New Delhi, 1971-72): 44-46.

Jim G. Shaffer, "Cultural Developments in the Eastern Punjab", in J. Jacobson (ed.), *Studies in the Archaeology of India and Pakistan* (New Delhi: Oxford and IBH Publishing Company, 1986), 195-235.

²⁵¹ R. S. Bisht, "Excavations at Banawali: 1974-77", in G. L. Possehl (ed.), *Harappan Civilization: A Contemporary Perspective* (New Delhi: Oxford and IBH Publishing Company, 1982), 113-24.

²⁵² J. P. Joshi and M. Bala, "Manda: A Harappan Site in Jammu and Kashmir", in G. L. Possehl (ed.), *Harappan Civilization: A Contemporary Perspective* (New Delhi: Oxford and IBH Publishing Company, 1982).

²⁵³ Mughal, "The Indus Valley: 3000-1500 BC", in *History of Humanity: Scientific and Cultural Development*, 24-5.

The Lower Indus Valley area covers modern Sindh province of Pakistan (see Map III.1.3). It is watered by the combined streams of the Indus River and its tributaries and on the bank of the Indus is the largest city of the Indus civilization, Mohenjo-Daro. Recent surveys in this area have been conducted by Shah Abdul Latif University in Khairpur under the guidance of Dr. Nilofer Shaikh and the Sindh Archaeological Research Project. This team has identified two Pre-urban Phases in this area, the Hakra and Kot Diji.

The sites that fall under the Hakra Phase today are located in a fairly inhospitable regions, although the environmental conditions of this area have not been studied extensively, there is some indication that they differed in the past. These sites are distributed in separate clusters each identified as an archaeological site by the presence of diagnostic pottery and stone tools. Eight workshops at the Dubi complex and nine settlements in the Thar Desert have so far been found. Today, the Dubi area is mostly occupied by nomadic pastoralists during periods of monsoon rains.

During the Kot Diji Phase we see an expansion in the number of sites both in the Dubi complex (twenty workshops) and in the Thar Desert region (eight settlements). The site of Kot Diji is the first settlement in which Kot Diji ceramics were found (hence the name). The site was discovered in 1935 and was excavated in the 1960s. It can be divided into two phases. The first human occupation at the site is called Kot Dijian it predates the urbanization of the Indus Plain and corresponds with the Kot Diji phase at Harappa. This occupation was within a fortification wall of mud-bricks and limestone rubble and consisted of large buildings whose functions are still unknown. The houses were built with mud-bricks or with mud on stone foundations. The use of bronze is restricted to household and personal ornaments, chert blades (which include leaf-shaped arrowheads), balls and beads, pestles, grinding stones, beads of carnelian and *lapis lazuli*, and shell bangles were also found. Other than these there were a variety of terracotta objects including cones and toy-cart frames and wheels.

The site of Amri is located 100 miles to the south of Mohenjo-Daro, on the west bank of the Indus at a point where the hills of Baluchistan are closest to the river. It seems that the people who settled there, wanted to be close to the early cultures of Baluchistan.²⁵⁴ Like Kot Diji this area is also known by a distinct pottery style, known as Amrian. Some of its pottery bears motifs, such as looped designs, sigmas, and gazelle horns, comparable to designs on

²⁵⁴ Hermann Kulke and Dietmar Rothermund, *A History of India*, 4th Edition, 23.

Togau-type pottery at Mehrgrah III, suggesting some kind of active interaction between this region and Baluchistan.²⁵⁵ But there are other vessels that bear motifs that can be associated with the Kot Diji and Hakra pottery style. The mixture of pottery styles indicates that there was interregional contact as well as continuity between the Amri Phase and the Urban period at Mohenjo-Daro.

It is believed that the earliest settlement at Amri goes back to the fourth millennium, possibly to 3500 BCE. This site and similar sites in the Lower Indus valley were inhabited throughout the millennia of the Indus civilization, and hence provide evidence of the cultural sequence in the Indus valley from the Pre-urban to the Urban Periods. There is evidence of at least twenty-nine settlements at the margins of the Lower Indus Basin in the Kirthar Mountains, the Piedmont, and the Sindh Kohistan where assemblages similar to those at Amri and Kot Diji have been discovered. The ceramics of Ghazi Shah, an important site in this vicinity, shows varied patterns, including Amri wares types, along with others that suggest interactions with settlements in the mountains of Baluchistan, such as Mehrgrah. The settlements in the Kirthar Mountains Piedmont and Sindh Kohistan did not have large cultivable fields; hence they adapted water management strategies to control and distribute water (*gabarbands* or check dams).²⁵⁶ The Pre-urban Period at Amri is further sub-divided into four phases. The earliest phase shows no trace of buildings, but its jars and ceramic rubble have patterns related to those that have been found in Baluchistan, along with some tools made of flint and a few items of copper and bronze. The second and third phases 3660-3020 BCE, according to radiocarbon dating shows Amri at the height of its development. This phase coincides with a similar state of development occurring at Mehrgrah. Houses built during this phase were rectangular compartments built on stone foundations or gravel consisting of several rooms that were probably roofed in the same way as at Mehrgrah. The compartments had varying sizes; it is supposed that they were used for storage purposes. Other than them, hearths and other materials suggest that domestic activities were carried out in the spaces between these compartmented buildings, as was done at Mehrgrah.²⁵⁷

²⁵⁵ Jim G. Shaffer, "Indus Valley, Baluchistan and the Helmand Drainage (Afghanistan)", in *Chronologies in Old world Archaeology*, 3rd (Ed), ed., R. W. Ehrich (Chicago: University of Chicago Press, 1992).

²⁵⁶ Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 100.

²⁵⁷ Hermann Kulke and Dietmar Rothermund, *A History of India*, 4th (Ed), 24-5. Wright, 99-100.

Before moving to the Urban Phase, one thing needs to be highlighted, with regard to the “cultural affinities” of the Pre-urban Phase. The increase in the number of settlements and regional ties that began in Baluchistan (Mehrgarh) continued during this phase not only in the lower Indus region and in the Ghaggar-Hakra plains, but traces of contemporary cultural affinities were also found in regions that were beyond Mehrgarh in Baluchistan and towards its western border. These regions were not only interacting locally, but the interaction-sphere was quite vast, and it included regions towards its West (southeastern Iran and beyond) and North (Central Asia and Afghanistan). This claim is backed by noting the procurement of raw materials from far flung areas and similarities in ceramic styles and other finished objects during this phase that give ample evidence of movement among these regions. A similar claim was made given before in Chapter 2.3 on the origin and migration of populations, that movement was either from west to east or from east to west has continued to occur since prehistoric times. Cultural affinities and the religious beliefs of the Indus people will be discussed again in Chapter 3.2 and 3.5, as we proceed.

Cultural patterns that began at Mehrgarh thus existed before the emergence of the Indus civilization and continued through the Pre-Urban Phase of the Indus region. A useful summary of these developments is given by Dr. Mughal²⁵⁸ and Dr. Wright.²⁵⁹ These patterns and developments provide a picture of life on the plains and include the innovations that occurred in agriculture and other technologies, which eventually led to the emergence of social differentiation in various aspects of life.

The spread of Bronze Age culture in the Greater Indus, with the use of fortifications, long distance trade, locally and regionally craft specialization, production of standardised tools, ceramics and clay, animal and human figurines, agriculture based economy with farmers, but also pastoralists and fishers, the beginning of writing in the form of graffiti and potter’s marks, large settlement sizes with complexity of architecture- all represent an early formative stage of the Indus civilization. Changes that occurred during this phase suggest a formative period, a stage of incipient urbanism when new regions on the alluvial plain were settled and a number of new ideas crystallized. Though the scale of these developments is significant, yet it is not sufficient to suggest that full-scale urbanism had yet taken hold. The rise of large cities such as

²⁵⁸ Mughal, *The Indus Valley: 3000-1500 BC*, 28-30.

²⁵⁹ Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 81.

Mohenjo-Daro and Harappa (Urban phase) during the middle of the third millennium BCE, in fact, marks the climax of cultural processes that were already underway at least from the middle of the fourth millennium BCE (Pre-urban phase). Cultural processes included a greater complexity of social, political, and economic organization, but we are still unable to pinpoint the one active force, out of these that led to the eventual urbanization of the Indus civilization. Many archaeologists today no longer support the earlier claim of “homogeneity” in the civilization; however there are still many aspects of material culture and elements of landscape are common throughout the region, like the system of standardised weights, distinct seals and sealings, written script, pottery styles, terracotta human and animal figurines, planned public architecture and extensive trade in almost every class of commodity throughout the whole cultural zone. Many scholars have given arguments in favour of this homogeneity, but they are still puzzled about the one active force that led to this urbanization. According to Chakrabarti, the answer may lie in the emergence of a new, decisive political leadership, significant changes in social organization, or perhaps a new ideology.²⁶⁰ According to Mughal, “Wide-spread distribution of ceramics mainly of identical basic forms, surface decorations and treatment throughout the Greater Indus valley illustrates mass production of ceramics which in turn is indicative of an effective central or administrative system to enforce standardization.”²⁶¹ But the Allchins say, “Even if the political and economic unity is admitted, there remain the profound and tantalizing problems of how it came about and how it was maintained. These have yet to be tackled satisfactorily.”²⁶²

While all eminent scholars admit that a new ideology, new effective central control, or a new political and economic unity were responsible for controlling such a vast span of land that had become homogeneous in many respects, at the same time they have not been able to pinpoint that “one force” that has kept this land and its people together for many generations without any concrete evidence of warfare. In the preceding pages I have given my own suggestions on the subject that how religious binding held this new ideology, the political and economic unity together. This was not new at all for them, as this one binding force (religion) had always been there with them since man’s beginning and which kept not only everything together but also in control since its beginning stages at Mehrgarh and eventually spread with

²⁶⁰ Dilip K. Chakrabarti, *The Oxford Companion to Indian Archaeology: The Archaeological Foundations of Ancient India Stone Age to AD 13th Century* (New Delhi: Oxford University Press, 2006), 142-3.

²⁶¹ Mughal, *The Indus Valley: 3000-1500 BC*, 36.

²⁶² Allchin, *The Rise of Civilization In India and Pakistan*, 169.

its people to the greater plains of the Indus during the Pre-urban Phase and proceeded further towards complete urbanization.²⁶³ I will elaborate this point further as I proceed.

The Urban Phase of Indus Civilization does not mean that all contemporaneous settlements were also urban in character. In fact, majority of them remained villages. In the preceding phase we saw a marked spread and increase in population. This probably resulted from the increase in birth-rate and from the successful exploitation of the remarkably rich agricultural lands of the plains. It is believed that the geological determinants of the region remained constant as there is no convincing evidence of any drastic change in climate during the past four or five millennia.²⁶⁴ However an increase in population numbers meant either expansion of the current sites or founding new sites. It is not easy to estimate the exact size of any particular site as the sites are spread over many mounds and are buried under many layers. However, it is clear that the Indus sites varied a great deal in size and function, from large cities to small pastoral camps. Keeping pace with the increase in population numbers, modifications were carried out not only in the physical layout of settlements but also in the domestication of both plants and animals. The emergence of a common style is seen with respect to technology and crafts, though a local touch is visible at times. However, commonality and stylistic preferences are also pretty obvious. Linkages established through trade of finished goods and procurement of raw materials helped in the spread of a single ideology. All these changes, however unsettling or impressive they might have been during the developing Pre-urban Phase, progressed, never to return to the uncomplicated simplicity of earlier times.²⁶⁵

The Urban Phase began in approximately 2600 BCE. Earlier developments that predate this phase were no doubt impressive, but they were reasonably small in comparison to what we shall witness during this phase. It was these small developments that evolved to include every aspect of life and culture, and hence played an intrinsic part in the emergence of cities. There was an increase in the number of sites from a total of 463 in the Pre-urban Phase to 976 in the Urban Phase.²⁶⁶

Key elements of this new Urban civilization that we shall come across during this phase include modifications in the landscape through community planning, the further development

²⁶³ See conclusion of this dissertation for details about how this all came about.

²⁶⁴ Allchin, *The Rise of Civilization In India and Pakistan*, 167.

²⁶⁵ Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 106-7.

²⁶⁶ G. Posschl, "Revolution in the Urban Revolution: The Emergence of Indus Urbanization", *Annual Review of Anthropology*, 19 (1990): 261-82.

of regional exchange networks, creation of trading outposts, and economic specialization in agriculture, pastoralism and craft production. These developments can best be traced with the emergence of five major cities: Harappa (150 hectares) in the Upper Indus; Mohenjo-Daro (between 125 and 200 hectares) in the Lower Indus; Dholavira (between 47 and 100 hectares) to the South (see Figure III.1.9), on the western edge of peninsular India in Kutch; Ganweriwala (81 hectares) in Cholistan; and Rakhigarhi (over 80 hectares) on the Ghaggar-Hakra plain. There were smaller settlements too ranging between 10-50 hectares, such as Kaligangan, and even smaller settlements ranging between 5-10 hectares such as Amri, Lothal, Chanhudaro, and yet even smaller ones ranging between 1-5 hectares at Kot Diji, Balakot and elsewhere. There are also settlements even smaller than these. Unfortunately, archaeologists have not paid enough attention to the village communities that probably formed the basis of the Harappan system (as indeed they always have in both Pakistan and India).²⁶⁷ Similarly, little is known about nomadic or semi-nomadic communities²⁶⁸ that must have then, as now, lived on the periphery of the plains, breeding cattle and livestock, and providing transport for trade and communication. It is possible today to study this civilization only through its larger settlements.

The uniformity of the Urban Harappan cities is best displayed through its town planning, physical layout, and residential and non-residential structures. The cities were laid on a grid-pattern oriented north-south and east-west, with but slight divergences from astronomical calculation. The cities of Mohenjo-Daro and Harappa were well planned with grids of streets cut across the whole area, linking all parts. However, they do not form a perfect grid system as the roads were not always straight and did not always cross one another at right angles. There is no correlation between the level of planning and the size of a settlement as at Lothal, which is a relatively small site, we see a much higher level of planning than Kalibangan, which is almost twice its size. Differences in the details of the plan are also pretty obvious: Mohenjo-Daro, Harappa and Kalibangan have a similar layout, consisting of a raised citadel complex and a lower city; Lothal and Surkotada the citadel complex is not separate but is located within the main settlement; and at Dholavira the city plan consisted of three parts rather than two, a citadel, middle town and lower town. Different materials were used for building houses in the cities and villages. The houses in the cities were mostly made of sun-dried or burnt bricks, whereas houses in the villages were mostly made of mud-bricks, with additional

²⁶⁷ Allchin, *The Rise of Civilization In India and Pakistan*, 171.

²⁶⁸ *Ibid.*, 171.

use of mud and reeds. Stone was occasionally used for foundations and drains. Houses varied in size, usually consisting of rooms arranged around a central courtyard. The windows and doorways generally faced a side lane and very rarely opened onto the main street. The view from the lane into the courtyard was blocked off by a wall.²⁶⁹ Some houses were two or three stories high as suggested by the thickness of the house walls. Generally, the doors and windows of the houses were made of wood and mats. Although the wood has perished clay model houses were found with carved and painted doors and windows with simple designs. Some small houses attached to larger houses have also been excavated, that may have been the living quarters of servants working for wealthy city dwellers.²⁷⁰

These cities have well-conceived city plans and their urban facilities rivalled any in the contemporary ancient world. They completely revolutionised the lives of people living in and outside of them.²⁷¹

Mohenjo-Daro, the largest city of this civilization, lies about five km away from the Indus River but is believed that in protohistoric times the river may have flowed much closer to the site (see Figure III.1.10). It consists of two mounds, a higher but smaller one on the West mound and a lower but larger one on the East. An extensive area towards the east has not yet been excavated. The approximate size of the site is 200 hectares, and according to the density of the houses, Walter Fairervis, suggests the lower city may have housed as many as 41,250 people.²⁷² At Mohenjo-Daro was oriented on a north-south axis.²⁷³ Its well-planned grid system cut across the entire city, thereby linking all of its parts in a coordinated plan.

The western mound of Mohenjo-Daro better known as the citadel; it rises 18 metres²⁷⁴ above the plain. This is an artificial elevation constructed as a platform of mud and mud-bricks. It was circled by a six-metre-thick mud-brick retaining wall or platform with projections on the southwest and West, and a tower has been identified on the southeast. It has been suggested by archaeologists that this higher part of the town does not represent a defensive fortification but

²⁶⁹ This point will be explained in Chapter number 3.5, on the religious beliefs of the Indus civilization.

²⁷⁰ Upinder Singh, *A History of Ancient and Early Medieval India: From The Stone Age To The 12th Century*, 147. Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 107-22.

²⁷¹ Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 110-14.

²⁷² W. A. Fairervis, "The Origin, Character, and Decline of an Early Civilization", in *American Museum Novitates* 2302 (New York: American Museum of Natural History, 1967).

²⁷³ H. Wanzke, "Axis Systems and Orientation at Mohenjo-Daro", in *Interim Reports* Vol. 2, Reports on Field Work Carried out at Mohenjo-Daro, Pakistan 1983-1984 by the IsMEO-Aachen-University Mission, eds., M. Jansen and G. Urban, Forschungsprojekt "Mohenjo-Daro," Aachen (1984) 23-32.

²⁷⁴ M. Jansen, "Mohenjo-Daro: City of Wells and Drains, Water Splendor 4500 years ago" (Bonn: Bergisch Gladbach Frontinus-Gesellschaft, 1993) 31.

more probably is a civic design to create an elevated symbolic precinct. This high part of the town was separated from the lower town (80 hectares in size) that mostly consisted of residential areas that might also have been surrounded by a fortification wall too by an empty zone. This area was divided into major blocks by four major north-south and east-west streets and numerous smaller streets and alleys. The main streets were about nine metres wide, while the others were in the range of 1.5-3 metres.

According to Dr. Wright and most Indus scholars, the most dramatic differences between the Pre-Urban villages and towns and the cities is the presence of non-residential structures. At Mohenjo-Daro they were constructed on the high western mound. The building foundations were given names by early excavators according to what they assumed their function could have been, but it now seems doubtful that the buildings were used for these purposes. However, we are stuck with the early names. The Great Bath (see Figure III.1.11-2), the Granary (see Figure III.1.13), the College of Priests, the Monastery, and the Stupa (which now is believed to be a later addition) (see Figure III.1.14). I will reconsider the functions of these structures in the views of later Indus scholars in discussing the organizational structure of the Indus community, Chapter number 3.1 and 3.2.²⁷⁵

Harappa covering an extensive area of about 150 hectares is almost ten kilometres away from the River Ravi and like Mohenjo-Daro the city is comprised of two major mounds, higher and lower (see Figure III.1.15). Although the site plan is similar to that of Mohenjo-Daro, grid plan but with some streets running parallel to enclosure walls that encircled parts of the city. These walls divided Harappa roughly into four sections and could only be entered at special gateways. The most spectacular wall at Harappa, between Mounds E and ET, has an elaborate gateway with pylons and side rooms built of baked brick, it was a major entryway into the city, providing access to a street that ran the full length of the two separate mounds. The citadel on the higher mound in the first sector was built on a mud-brick platform, shaped roughly like a parallelogram about 415 metres north-south and 195 metres east-west. It was also surrounded by a mud-brick wall with massive towers and gateways. Archaeologists have not been able to identify any structures in this area for, like Mohenjo-Daro, brick theft has obscured the buildings, but one thing is certain, these structures were re-built on several occasions. The second sector was within a walled area and was accessible through a northern gate. It contains

²⁷⁵ Upinder Singh, *A History of Ancient and Early Medieval India: From The Stone Age To The 12th Century*, 149-51. Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 114-17.

a set of buildings described as barracks by its early excavator, due to an architectural layout of buildings lined up in rows. Further to their north were rows of bricks set in circles, which were initially thought to be workmen's platforms used for grinding grain.²⁷⁶ However, recent research has cast doubts on this interpretation, for there is, no indication of grain processing, straw or husks to be found there.²⁷⁷ Recently Professor Kenoyer and Miller²⁷⁸ discovered that these platforms were not out in the open, but were enclosed in rooms with room walls made of baked brick approximately 5.5 metres on a side. Therefore, all the previous suggestions are clearly incorrect and there is no current consensus on how this area was used.

Another large structure North of these platforms was initially excavated by D. R. Sahnî in 1921; who was unable to identify its function (see Figure III.1.16). When M. S. Vats conducted further excavations on the advice of Marshall, in 1940, he identified this building as a granary and the whole area as "workmens quarters". Vats's identification led Wheeler to compare this area with villages in Pharaonic Egypt or in Mesopotamia, where labourers were "semi-servile" employees of the state.²⁷⁹ The building is spectacular with a series of twelve symmetrically arranged rectangular structures raised four feet above the plain in rows of six, separated by a central lane. Even recent research and excavations have failed to identify the true purpose of this building; however, it can be stated that these structures were non-residential due to lack of components found that can be associated with living quarters. Whatever the purpose might have been, there is no doubt that a lot of effort and labour was required to erect these structures, indicating that some kind of civic authority was in force.²⁸⁰

Dholavira, approximately 100 hectares in size is located on Kadir Island off the Rann of Kutch in Gujarat (India). It is believed that in protohistoric times, the water levels may have been higher than today, allowing boats to sail from the coast right up to the site (see Figure III.1.17). A large-scale use of sandstone in some places combined with mud-brick is a Harappan feature found in sites of Gujarat. Like Mohenjo-Daro, the sectors of Dholavira were separated into higher and lower town areas. The high ground was towards the northwest and was surrounded by a wall that enclosed an area of 47 hectares. This outer wall was constructed

²⁷⁶ M. S. Vats, *Excavations at Harappa*, (Delhi: Government of India, 1940).

²⁷⁷ M. Wheeler, "Harappa 1946: the Defenses and Cemetery R37", *Ancient India* 3 (1947, [1994]): 58-130.

²⁷⁸ Jonathan Mark Kenoyer and H. M. L. Miller, "Metal technologies of the Indus Valley Tradition in Pakistan and Western India, in *The Archaeometallurgy of the Asian Old World*, edited by V. C. Pigott (Philadelphia: University Museum Pennsylvania, 1999) 107-51.

²⁷⁹ M. Wheeler, *The Indus Civilization*, 3rd (Ed), Supplement volume to the *Cambridge History of India*, (Cambridge: Cambridge University Press, 1968), 34.

²⁸⁰ Rita P. Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 120-26.

of stone rubble and mud-bricks, whereas additional walls divided portions of the interior spaces (see Figure III.1.18). Like Harappa, these walls could not be entered except at special gateways. One wall here was accessible through these gates on three sides. Another wall featured mud-brick-filled ramparts faced with stone and several gateways, some of which contained stairways. It also had sunken passageways and screenwalls, which created alleys or corridors between two walls. Remains of limestone pillar bases and pillar fragments with highly polished surface were also found at the eastern gateway.²⁸¹ This discovery takes the history of monumental stone sculpture and architecture in the sub-continent back from the 4th century BCE (Mauryan Period) to the 3rd millennium BCE.

The non-residential structures at Dholavira, as at Mohenjo-Daro, were located in the elevated sections of the town, but unlike the structures that we find at Mohenjo-Dara, these have been termed as “Castle” and “Bailey”, because their plan resembles that of European castles. Bisht describes Dholavira as, “having two well-fortified areas, called inner and outer baileys”.²⁸² Excavators have found large open spaces between the castle and bailey and the middle town, and suggest that they were used as a stadium or ceremonial area for special community occasions.²⁸³ The lower town gives evidence of houses and areas where various types of craft activities such as bead making, shell working, and pottery making were carried out. There is also substantial evidence of habitation and burials outside the fortified wall. It seems that the site is looking towards the sea and it is supposed that Dholavira must have been an important stopping point on a busy maritime trade route.²⁸⁴ The Public Works of three Harappan cities, related to water management and water control are a most important aspect of the Indus cities unknown in previous periods. According to Dr. Kenoyer, there is quite a bit of information on this aspect of Indus civilization²⁸⁵ and according to Dr. Wright, “had there been a Guinness Book of World Records 4,500 years ago, the Harappans would definitely have won recognition for their engineering feats.”²⁸⁶ It was not until Roman times that people devised so many clever techniques for water management.

²⁸¹ Upinder Singh, *A History of Ancient and Early Medieval India: From The Stone Age To The 12th Century*, 154-55.

²⁸² R. S. Bisht, “The Water Structures and Engineering of the Harappans at Dholavira (India)”, in *South Asian Archaeology 2001*, Vol. 1, ed., C. Jaridge and V. Lefevre (Paris: CNRS, 2005): 11-26.

²⁸³ Rita P. Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 115-19.

²⁸⁴ Upinder Singh, *A History of Ancient and Early Medieval India: From The Stone Age To The 12th Century*, 155.

²⁸⁵ Jonathan Mark Kenoyer, *Ancient Cities of the Indus Valley Civilization*, 59-60.

²⁸⁶ Rita P. Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 122.

The Harappan engineers excelled in techniques to control waste disposal and to prevent encroachment of floodwaters on the city buildings and their destruction from a rising, saline water table. We find less elaborately designed waste disposal systems at sites in Syria and Iran about a thousand years earlier, but it is highly doubtful that the Harappans engineers knew about them, and even if they did, they did it better.

The Harappans made elaborate arrangements for acquiring and disposing of water for daily needs. A system of vertical shaft wells has been discovered by archaeologists in both Harappan cities and villages. These wells were constructed of special wedge-shaped bricks that were placed with their smaller end facing the centre of the well.²⁸⁷ The largest numbers of wells have been found at Mohenjo-Daro, but other than wells there were other methods for storing water like dams, reservoirs and cisterns. A large depression in the centre of Harappa may represent a tank or reservoir that would have served the city's inhabitants. There are a few wells at Dholavira too, but it is also noted for its impressive water reservoir constructed with a dam of blocks of stone (see Figure III.1.19-20). The retained water was then channelled into terraced reservoirs that banked an outer fortification wall of the city. It is believed that water-retaining devices of this and other types lined seventeen percent of the walls at Dholavira. All this information may lead us to conclude that the Harappans made elaborate arrangements for acquiring water for drinking and bathing. According to Dr. Singh, "it is possible that frequent bathing also had a religious or ritualistic aspect."²⁸⁸

Most houses or groups of houses had separate bathing areas and toilets, either these units were built in separate rooms or in the corners of multipurpose rooms. Bathing platforms with drains were often located in rooms next to a well (see Figure III.1.21). The floor of the bathing area was made in such a way, that tightly fitted bricks, often set on edge were used to make a careful sloped, watertight surface. Small drains led water from these areas, cutting through the house walls going right into the street and connecting ultimately with a larger sewage drain. The sewage drains from each house spilled out into drains that ran along the edge of streets or into sump pits. In areas where street drains extended over long distances or where two or more drains met, cesspits were built to avoid clogging. In this manner solids would sink to the bottom and liquids would flow into a larger system of drains. The sump pits were

²⁸⁷ Ibid., 122-23.

²⁸⁸ Upinder Singh, *A History of Ancient and Early Medieval India: From The Stone Age To The 12th Century*, 149. To be further discussed in Chapter number 3.5.

outfitted with stairs, and waste could be scooped out of them. A feature common to both Harappa and Mohenjo-Daro was a large drain with a corbelled arch over head (see Figure III.1.22). The drain at Harappa is almost identical to one associated with the Great Bath at Mohenjo-Daro, the large drain at Harappa was built under a gateway linking mounds E and ET to a major entrance to the city, that is, it was the principal drainage point for these sectors of the city. Alternatively, large ceramic vessels on the exterior of the household courtyards were a reasonably inexpensive means of collecting waste from various household activities. Since ceramics are porous, liquids would leach out, whereas solid material would sink to the bottom. When these were full, they were replaced by new pots. Another important invention of the Harappans was toilets. These could be a simple hole in the ground sometimes fitted with seats above a cesspit, while others were built of baked bricks or wood (see Figure III.1.23). Recent excavations at Harappa have uncovered toilets in every house. These toilets were not equipped with a water tank to flush out waste; it was carried through a sloping channel into a jar or drain in the streets outside.²⁸⁹ The waste must have been cleaned from drains on a regular basis. In short, the wells and sewage system of Harappan cities were *par excellence* for their time. According to Dr. Wright these sanitation facilities “seem not to have been restricted to a particular segment of society.”²⁹⁰

Another important invention of the Harappans was the construction of massive platforms that were artificially designed to raise the level of buildings in order to prevent destruction from the encroachment of floodwaters. These platforms filled with earth and debris was enclosed in baked bricks - some were as high as 7.3 metres above the plain. In order to prevent buildings from the rising levels of the saline water table, the Harappans manufactured clay nodules and fired them. These nodules were used in the foundations to insulate buildings from the saline groundwater and to provide efficient drainage.²⁹¹

Although there was an overall similarity in the city plans and physical layouts of the Harappan cities, a number of features differed in the public structures. The elaborate colonnade, pillared corridor, and sunken pool in the so-called The Great Bath at Mohenjo-Daro has no

²⁸⁹ Rita P. Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 122-23.

Upinder Singh, *A History of Ancient and Early Medieval India: From The Stone Age To The 12th Century*, 148.

Bridget and Raymond Allchin, *The Rise of Civilization In India and Pakistan*, 177-8.

²⁹⁰ Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 124.

This point can help us further to suggest that the Indus society was equality based. I will elaborate this point further as I proceed.

²⁹¹ Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 124.

counterpart in the other cities and the so-called workmen's platforms at Harappa, whatever their function, are unique as Dr. Wright has noted.²⁹² Although Wheeler had thought that both Harappa and Mohenjo-Daro had Granaries, this interpretation is now in doubt given the absence of grain or food-processing equipment at either location. Moreover, the two so-called granaries are not similar in construction and are unique to each city. At Dholavira, the "castle and bailey", the large open courtyard associated with them, and the terraced reservoirs have no counterparts at Mohenjo-Daro or Harappa. One thing that is suggestive from these details is the presence of localized authorities capable of involving labour in building huge projects unique to civic needs. Though archaeologists might be wrong in suggesting names and functions of these structures, one cannot ignore that their presence does evoke some concept of civic authority. It is quite evident, that the authorities in different cities lacked uniform patterns in the construction of public buildings. This situation is very unlike what we find in its contemporary civilizations, for example, the Mesopotamian temples were built using a standard plan in its various cities.²⁹³

According to Dr. Wright, "the lack of uniformity in the Indus argues against a strictly shared conception of religious or administrative buildings or an overarching authority common to all cities."²⁹⁴ Here I partially disagree, as I believe that these people were religiously bound together, a unity that had been with them since the beginning stages at Mehrgarh and which had kept not only everything together but also controlled it. This unifying force eventually spread with them, generation by generation, to the Greater plains of the Indus Valley during the Pre-urban phase. But an important thing to establish here is that this control apparently was not physically implemented by any force, but was spread by a single strong ideology, shared by a people who inhabited a vast area over many generations. This ideology helped them not only in binding together (and not fighting over worldly gains) and must be the reason why they excelled to such an extent. Therefore, it can be further suggested that these people did not need any common elaborate structures to prove their binding, like the people of Mesopotamia or Egypt, where one ruling elite was in control, for these people were not ruled by any one elite but were under the binding of a much greater force (religion). At the same time each person was free to fulfil their civic needs and requirements for their betterment and growth, without

²⁹² Ibid., 126.

²⁹³ S. Pollock, *Ancient Mesopotamia* (Cambridge: Cambridge University Press, 1999).

²⁹⁴ Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 127.

been answerable to any one single authority. I will elaborate this point further in chapter 3.5 and 4, when I discuss how this force came about.

Truly, cities were the major catalyst in the urbanization of this society, but at the same time the role played by the rural population, who lives at the outskirts of these localities cannot be ignored. Since the dawn of civilization, we have witnessed a common pattern of mutual dependency between rural and urban dwellers. Many city inhabitants had agricultural fields and animals too, but these were not sufficient to fulfil the requirements of the craft specialists that were living in the cities. They depended on the rural farmers and herders who travelled from these areas to the cities. Therefore, cities must have served as centres of commerce and meeting places for the exchange of goods among urban and rural people and hence trade networks developed. In order to understand the extent to which the Indus cities depended on these regional settlements let's briefly discuss their pattern of their spread, from the Upper Indus, Ghaggar-Hakra plain in Cholistan, towards the east to settlements in northwest India (see Map III.1.4).²⁹⁵

Most of the sites in the Upper Indus near Harappa, both towards the west and near the Indus River and tributaries – the Chenab and the Ravi - have been subjected to a lot of disturbances at the hands of modern cultivators, hence making it difficult for archaeological appraisal. The sites along the Beas River are better documented due to less destruction. A number of sites have been found between the sizes of 1 – 5 hectares and 5 – 10 hectares, and one, at around 14 hectares. It is believed that changing environmental conditions prevailing at that time were a major catalyst for the rapid spread of settlements along the Beas.²⁹⁶ The well-studied site from this region is Vainiwal, which was first settled in the Ravi and Early Harappan/Kot Diji Periods and abandoned in the Post-urban/Late Harappan. Throughout the Beas settlements, including Vainiwal, artefact styles and production technologies are similar to those at Harappa: the same type of kilns and the use of Indus script etched on pottery fragments indicate their close ties and frequent interactions. At the same time, according to Dr. Wright, “there are many artefacts and raw materials from outside of the sphere of Harappa, indicating that rural people at the Beas settlements engaged in interregional contacts

²⁹⁵ Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 127.

²⁹⁶ J. Schuldenrein, R. P. Wright, M. A. Khan and M. R. Mughal, “Geoarchaeological Explorations on the Upper Beas Drainage: Landscape and Settlement in the Upper Indus Valley, Punjab. Pakistan”, *Journal of Archaeological Sciences* 31 (2004): 777-92.

conceivably independent of their connections with Harappa.”²⁹⁷ It is further believed that the location of these sites provided a natural corridor between Harappa and Mohenjo-Daro, hence increasing its strategic importance.

The most important site of the Ghaggar-Hakra plain in Cholistan is Ganweriwala City at 81.5 hectares in size and the largest among the 174 mature Harappan sites. It is located between the important city centres of Mohenjo-Daro (314 kilometres) and Harappa (290 kilometres)²⁹⁸. The regions towards the east of Ganweriwala had important natural resources; therefore, it was strategically positioned for agriculture, pastoralism, and trade. No other site of this region has yet been excavated, but there seems to be a general, although not universal, distinction between residential and industrial sites. A breakdown of these 174²⁹⁹ sites is according to their function shows as increase in the number of industrial sites (79 sites), sites with kilns (33), whereas the rest were camps of the (50). The industrial and sites with kilns were meant exclusively for craft related activities.³⁰⁰ The nature of camp sites is not clear, but suggests a reverse trend, in which pastoral groups were attracted to permanently settled areas but at the same time remained on their margins. As Dr. Mughal notes, it suggests that there were many coexisting groups engaged in diverse activities.³⁰¹

There are a number of continuing settlements towards the east of the Ghaggar-Hakra plain, in northwest India. Kalibangan, Banawali and Rakhigarhi are among the large settlements. According to Possehl, the number of settlements is 218,³⁰² 140 a greater population density than Cholistan.³⁰³ Kalibangan (see Map III.1.5), occupied since the early Harappan Period, in its first period was about 4 hectares in size and was surrounded by massive mud-brick fortifications. Houses were built of mud and mud-bricks, mostly around courtyards. One of the exciting finds of period 1 is a ploughed field surface, showing the north-south and east-west furrow marks left by a plough thousands of years ago.³⁰⁴ During its mature phase Kalibangan had a raised area in its western sector surrounded by a wall with towers restricting

²⁹⁷ Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 127-31.

²⁹⁸ Ibid., 127-132.

²⁹⁹ Dilip K. Chakrabarti, *The Oxford Companion to Indian Archaeology: The Archaeological Foundations of Ancient India Stone Age to AD 13th Century*, 154-55.

³⁰⁰ Mughal, *Ancient Cholistan: Archaeology and Architecture*, 56.

³⁰¹ Ibid., 50.

³⁰² G. Possehl, “Harappans and Hunters: Economic Interaction and Specialization in Prehistoric India”, in *Forager-Traders in South and Southeast Asia*, edited by K. D. Morrison and L. L. Junker (Cambridge: Cambridge University Press, 2002), 62-76.

³⁰³ Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 133-34.

³⁰⁴ Upinder Singh, *A History of Ancient and Early Medieval India: From The Stone Age To The 12th Century*, 144.

entrance, whereas its lower town was residential, thus, following the classic model. Banawali, covering about 9 hectares, lies considerably upstream on the right bank of the Ghaggar River between Hissar and Sirsa. About one third of its total area is taken up by an acropolis, separated from the lower town by an arch-shaped fortification. A moat has been traced along the eastern wall of the site and it is inferred that it existed on the three other sides as well.³⁰⁵ There were many typical Harappan features at this site, like mud-brick houses, bathing areas, courtyards and pottery jars used for disposing waste materials. Wells, constructed with wedge-shaped baked bricks similar to those found at Mohenjo-Daro and other Indus sites, have also been found. The most unusual feature of the site is that the streets were laid out semi-radially and converged on the east gate of the citadel wall.³⁰⁶ Rakhigarhi the largest settlement of the area in the later Harappan Period, is about 105 hectares in size, making it comparable to all the other so-called metropolitan cities of the Indus civilization (see Figure III.1.24-5). The plan of the site was similar to Kalibangan's. One similar feature in the sites in Kalibangan (see Figure III.1.26), Banawali and Rakhigarhi (see Figure III.1.27) are the "fire alters"; according to excavators Bisht and Nath, people must have been involved in a ritual involving fire.³⁰⁷

The major difference between the pattern of settlements in the Lower Indus and that in the Upper Indus and Cholistan regions is in the sizes of the sites. L. Flam has identified twenty-two sites, which are all less than 5 hectares in size around Mohenjo-Daro. Another site Lakhueen-jo daro, discovered by the Khairpur team, is 50 hectares in size, while another one 34 hectares in size sits atop sand hills.³⁰⁸ Flam suggests that this later site may have been occupied by people seeking refuge from abnormal flooding.

When we compare the Pre-urban Period of the Cholistan region with its Urban Period, we see an explosion of sites and an apparent shift from a more dense settlement pattern in areas west of the plain onto the plains itself. According to Dr. Wright this movement suggests more dependency on floodwater farming and husbandry, thus weakening ties with regions towards the west and placing a greater focus on the central city of Mohenjo-Daro.³⁰⁹ Flam further suggests that there is a similar pattern at Ganweriwala, indicating an increased importance of

³⁰⁵ Dilip K. Chakrabarti, *The Oxford Companion to Indian Archaeology: The Archaeological Foundations of Ancient India Stone Age to AD 13th Century*, 158-9.

³⁰⁶ Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 133-34.

³⁰⁷ Dilip K. Chakrabarti, *The Oxford Companion to Indian Archaeology: The Archaeological Foundations of Ancient India Stone Age to AD 13th Century*, 158-159.

³⁰⁸ L. Flam, *The Paleogeography and Prehistoric Settlement Pattern in Sind, Pakistan (4000-2000 B.C.)*, PhD. Diss. 96. Philadelphia: University of Pennsylvania, 1981.

³⁰⁹ Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 134.

trade networks along the rivers and coastal settlements in the Urban Period and close interactions.³¹⁰

Recent excavations by the Khairpur team have further improved our understanding of the urban settlements on the Lower Indus alluvial plain (see Map III.1.6). They have identified 65 settlements of the Urban Period, a clear increase when compared with the Pre-urban Period. Several areas have been identified as densely-packed workshop complexes. These include workshops at Dubi (12), Rohri (18), Veesar Valley (3), and Khandharki (2), all in towns that are comparatively small in size. In the Thar region there are another 32 Urban Phase settlements. From all these settlements excavators have found large quantities of chert blades, ceramics, and clay bangles and animal figurines typical of the nearby site of Mohenjo-Daro.³¹¹

There are also important settlements to the west and north known as “gateway settlements”. During the Urban Period when the civilization was spread over a very large area, these settlements helped to procure raw materials from distant lands beyond the sphere of Indus cities. They served as a contact zone between different routes. According to Possehl, these settlements are located in places that facilitate transportation either along coastlines, at the foot of passes, or at the junction between distinct cultural groups.³¹²

All these settlements were relatively small in size when compared with the large urban centres and to some extent were pretty isolated from one another, but at the same time had extraordinary uniformity in their spatial layouts and material culture (though at times we can also see local variations). According to Dr. Wright,³¹³ the similarities and variations are in accordance with local requirements suggesting a high degree of interaction among the major settlements and its frontier zones and at the same time local autonomy. Although there are a number of such settlements, but I shall only highlight six.

Shortugai, located in north-eastern Afghanistan near the Oxus River, is the most distant settlement, some 500 kilometres away from any major Indus town. The strategic importance of the site lies in the fact that it is near the world’s largest *lapis lazuli* mine. (Its significance today is that it lies north of the Hindukush Mountain along a route that centuries later became part of the famous Silk Road connecting China with the west). The total size of the settlement

³¹⁰ L. Flam, 173-8.

³¹¹ Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 134-6.

³¹² G. Possehl, *Indus Civilization in Saurashtra* (New Delhi: B. R. Publishing Corporation, 1980), 76.

³¹³ Wright, 142.

is 2.5 hectares! People living here were mostly farmers, pastoralists, or craft producers. These similarities seen in its material culture, ceramics and ornaments produced lead us to believe in that this settlement was founded by the people of the Indus Civilization as an outpost for the procurement of raw materials and trade. It is further believed that during its final period connections with other Indus settlements diminished.³¹⁴

Rehman Dheri in the Gomal Valley, some 500 kilometres of Shortugai, was towards the southeast, near the confluence of the Indus and Zhob Rivers. The settlement was 22 hectares in size and, like most Indus settlements is surrounded by a wall and with a main street that served as a central axis. The one remarkable fact about this settlement is that we see here the Kot Diji style of ceramics prevalent from the Pre-urban Period to the Urban Period till 2300 BCE, even when it had been superseded on the plains. This suggests that even though the people of this settlement interacted with the Indus civilization, they continued to maintain their own indigenous culture too. Artefacts including beads made of *lapis lazuli* and turquoise and clay human figurines typical of settlements in Central Asia to its north, get its ties with the Indus civilization suggest that it was also a “gateway” settlement.

Nausharo, a settlement 5 hectares in size, lies south of Reham Dheri on the Kachi plain at the western margins of the Indus plain and is some 11 kilometres from Mehrgrah. Its Pre-urban Period was contemporary with the last phase of Mehrgrah. Mehrgrah itself was abandoned before full scale urbanization took place on the plains but Nausharo continued to flourish. The architectural elements at Nausharo are similar to the Indus style, suggesting continuity with the Pre-urban Phase, with an influx of new ideas from the plains super-imposed over them during the Urban Phase.³¹⁵

Many sites dating to the Urban Period have been found on or near the Kachi plain that lie at the frontier of the Lower Indus plain, towards the east in the Kirthar and Piedmont areas. One such site is Ghazi Shah. This area was explored by Flam,³¹⁶ where he found important water retention devices called gabarbands. These small dams were walls made of stone and mud was to divert water to required areas. This is a form of artificial irrigation, the first of its

³¹⁴ Wright, 138-40.

³¹⁵ Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 138-40.

³¹⁶ L. Flam, “Excavations at Ghazi Shah, Sindh, Pakistan”, in *Harappan Civilization: A Recent Perspective*, 2nd (Ed), ed., G. Possehl (Oxford: Oxford and IBH and American Institute of Indian Studies, 1993), 457-67.

kind in the Indus region.³¹⁷ Devices of this nature have not been found on the plains. The materials found from these areas are common to those found in other Indus settlements; and include ceramics, terracotta beads, disks, bangles, and a bull figurine, along with imported minerals like *lapis lazuli*, agate, carnelian, steatite, marine and shells. Potters marks or inscribed signs have also been found on several vessels.

There are three “gateway” sites in southern Baluchistan that are important: Balakot is in Las Bela, whereas the other two, Sutkagen-dor and Sotka-koh, can be accessed from the Indus plain either through Las Bela or by travelling through mountain valleys directly south of villages like Nausharo. All these sites have typical Indus artefacts in addition to many similar architectural details in which stone was the major building material. Wedged between these three settlements are more settlements referred to as the Kulli culture.³¹⁸ These settlements are positioned in strategic locations, on mountain tops overlooking valleys, controlling plains and passes.³¹⁹ One important aspect about the latter sites is that their material culture is sufficiently different from Indus to suggest that they represent an entirely separate culture.

Lothal is another settlement that may have held strategic importance in the distribution of networks (see Figure III.1.28). Lothal is a small well-planned settlement of only five hectares. It is further believed that there may be more distribution settlements towards Dholavira beyond the east. It has many features similar to Indus like the use of massive brick wall to surround both the upper and lower town. One feature that has stimulated a lot of controversy since its excavation is the famous “dockyard” as described by S. Rao, it consists of a depressed rectangular space enclosed by a baked brick wall (see Figure III.1.29).³²⁰ Based on the presence of post holes Rao believes that this area could be connected to the tidal flows from the sea and the depressed area was used for docking. Despite criticisms of Rao’s theory, scholars so far have not offered a more feasible alternative, except one - that it was used for storing water.

³¹⁷ L. Flam, “The Other Side of the Mountains: Explorations in the Kirthar Mountains Region of Western Sindh, Pakistan”, in *Arabia and Its Neighbors*, Vol. 2, eds. C. S. Phillips, D. T. Potts, and S. Searight, 315-26. Brussels: ABIEL, 1998.

³¹⁸ U. Franke-Vogt, “Balakot Period I: A Review of Its Stratigraphy, Cultural Sequence and Date”, in *South Asian Archaeology 2001*, Vol. 1, ed., C. Jarrige, V. Lefèvre, 95-103. Paris: Editions Recherche sur Les Civilizations, 2005

³¹⁹ U. Franke-Vogt, “The Archaeology of Southeastern Baluchistan”, (2000) Internet publication with 121 photographs. <http://www.harappa.com/baluch>.

³²⁰ S. R. Rao, “Lothal: A Harappan Port Town, 1955-62”, in *Memoirs of the Archaeological Survey of India* 1 (1979): 78.

Chapter 3.2

The Organizational Structure of the Indus Civilization: Trade and Its Influences

In Chapter 3.2, discussion began from the small settlement at Mehrgrah in Baluchistan, spreading first to the nearby vicinity and then further, towards the plains of Indus and Ghaggar-Hakra. The story of expansion does not end here as the gateway settlements take us to Afghanistan in the north, to the eastern borders of Iran and to the Gulf of Cambay in India. The spread of all these settlements during different time periods began from the seventh millennium BCE.

Two important elements of the Indus were its uniformity and its diversity; both were prevalent at the same time and covered a vast span of land. These elements are evident from excavations and surveys of settlement patterns drawn from the major cities, their regional networks, and by other settlements that were on the margins of this civilization. Along with the settlement patterns of cities, towns, villages, and outposts, geographers and city planners have proposed various models to interpret the basic infrastructure that lay behind these settlements.

According to Dr. Wright, “Modern geographers who interpret spatial distributions of settlements view them as economic and administrative indicators. One geographical model that fits the Indus evidence and is useful in understanding their political and economic function is the Central Place Theory”.³²¹ A theory was put forward by Walter Christaller in 1900s. He proposed,

“that whereas settlements may be aligned with natural or modified features such as Indus waterways, an optimal pattern of settlement for the flow of goods is one in which a “central place” or city coexists with peripheral and secondary centres. Site-size distributions would consist of a single, large primary centre, midsize secondary centres, and smaller peripheral settlements. Secondary centres in the central place model function as production and distribution points for particular goods and provide a social and economic infrastructure for populations performing production related tasks.”³²²

This model can easily be related with the Indus settlement pattern: for as we have studied in the preceding chapter Ganweriwala and Harappa were the focal points of outlying production areas, serving as central places for settlements in the area of Cholistan and the River Beas Basin. For the main settlements of Harappa, Mohenjo-Daro and Ganweriwala, we find at

³²¹ W. Christaller, *Central Places in Southern Germany*, trans., C. W. Baskin from *Die zentralen orte in Suddeutschland* (Englewood Cliffs: Prentice-Hall, 1966).

³²² Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 137.

least one potential secondary centre larger than ten hectares and many smaller settlements. This pattern completely negates a pattern in which a single centre exists in isolation and lacks interlocking support systems.

On the base of this theory it can further be proposed that this settlement pattern is in accordance with the concept of a 'city-state'. Dr. Wright³²³ writes, "this concept was originally defined with the Greek polis in mind with specific reference to "active citizenship and participatory democracy,"³²⁴ but the concept has broadened to include other cities in the ancient world. Cities in ancient Mesopotamia and the Mayan area come to mind too, and examples exist from sub-continent polities of the seventh to fourth century BCE.³²⁵

It can easily be interpreted through the even geographical distribution of settlements, that city-states existed in the Indus on the bases of their environmental settings, for we find a vast network that connected the main cities with the smaller towns and villages, in addition to the gateway posts for the procurement and distribution of both essential raw materials and finished goods. An active transport system must have facilitated the development of these exchange networks and integration of the civilization. As mentioned earlier the concept of a city-state is economically and politically different from that of a centralized state in which the whole power lies with one primary centre that dominates the entire nation. In the city-state pattern different states are economically and politically independent of one another yet are socially and culturally connected.

Another way to view cities in order to understand their political and economic functions is through spatial models, as city planners have done. Kevin Lynch, a city planner, has identified a city type that he terms "practical" according to him practical cities work toward some end.³²⁶ They have regularity in their plans in accordance with some simple rules. These rules are tied to the city's function and are organized to facilitate flows of people, services, or products toward a particular purpose.

The central place model and city-state concept help us to understand both the political and commercial nature of particular cities. Both these concepts can be identified easily with

³²³ Ibid.

³²⁴ Elizabeth Caccilia Stone, "City States and Their Centers: The Mesopotamian Example," in *The Archaeology of City-state: Cross-Cultural Approaches*, eds. D. L. Nichols and T. H. Charlton (Washington DC: Smithsonian Institution Press, 1997), 15-26.

³²⁵ Jonathan M. Kenoyer, "Early City-states in South Asia", in *The Archaeology of City-state: Cross-Cultural Approaches*, eds. D. L. Nichols and T. H. Charlton (Washington DC: Smithsonian Institution Press, 1997), 51-70.

³²⁶ Kevin Lynch, *A Theory of a Good City* (Cambridge: MIT Press, 1981), 83-8.

the Indus cities - on the one hand they follow a regular plan according to some simple rules; on the other hand, the city plans also have small, undifferentiated parts that preserve the autonomy of each unit. Therefore, it can be proposed that the divided sectors of the Indus cities followed this type of plan and it can further be suggested that Indus cities structures followed these models. The individual cities were the centres of political and economic activities for rural networks of outlying settlements with which they interacted. Though they were politically and economically independent, yet they were loosely interconnected by the common material culture of a vast area.³²⁷ Why were they interconnected by this culture, and since when? These questions will be addressed as we proceed.

Using models from geography, city planning and history, it is not difficult to construct a picture of the early Indus cities as central places involved in the movement of goods and the reciprocal exchanges with towns and villages in their countryside with their gateway settlements and beyond the alluvial plain. Dr. Wright notes,

“... practical layouts and equidistant spatial positioning from each other were supported by an ever-expanding network of reciprocal settlements, a successful strategy that integrated local production and distribution, creating the context for an effective urban infrastructure of city-states. Viewed from the perspective of these spatial configurations, we observed significant uniformities of community planning – their two-part divisions, mud-brick platforms, segregated neighbourhoods, massive walls, and public amenities (drains, disposal points, and wells) – sufficient to indicate an overarching set of ideas. On the other hand, local variations in spatial planning at many of the settlements, as discussed at Harappa, Mohenjo-Daro, and Dholavira, argue for a strong local impulse that defined and reinforced community identities.”³²⁸

Evidence shows functional differentiation among different settlements of the cities and villages, while at the same time strong similarities in material culture indicate sustained interaction and movements of resources with a base of agriculture, pastoralism, and craft production. All the evidences found in different cities and villages of Indus (as mentioned in the previous chapter) argue for a degree of autonomy within each, hence emphasising that the civilization was not a monolithic entity. But it is also important to understand the dynamics behind the expansion of various settlements of the Indus into new territories; several known settlements located at its geographical extreme were established as trading centres, such as Shortugai, Sutkagen-dor, Sotka-koh and Lothal. It is also true that within this vast region there were some settlements (for example, Kulli in Baluchistan) that continued with their own

³²⁷ Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 138.

³²⁸ *Ibid.*, 142-3.

culture, partially staying aloof from Indus culture, thus maintaining their own separate entity.

Dr. Wright concludes her argument by saying,

“These complexities in defining the margins of the civilization and its dialogues with neighbouring groups suggest that, even though it was an expansive state, some boundary cultures were not incorporated into the civilization and remained wedged between its heartland and extended territory. This is consistent with an image of the Indus as a state that engaged in negotiations and established affiliations as a practical model of exchange.”³²⁹

Therefore, we can conclude that the urban nature of the Indus is found embedded not only in its main cities but also within its rural and far-flung settlements and its organization can be seen through the flow of resources between its cities and countryside localities. This civilization was encompassed an ever-widening territory. The extensive organizational structure of the Indus might show who had been responsible for it.

The organizational structure of the Indus civilization incorporates many aspects, some we have discussed briefly in other contexts, while new ones will be discussed below. They are important as they make the Indus civilization unique from its contemporaries in both form and contents. These are;

The Pattern of settlements

The size, form, content and structure of its cities

The Economy

The Administrative and Social Systems

The Religion

The Pattern of Settlements

According to Dr. Mughal,

“The location or concentration of sites, specialized function or character, wide-spread distribution in the greater Indus valley and beyond, provide an insight into the organizational structure of the Indus civilization and administrative control exercised over an immense geographical area.”³³⁰

The identification of functionally articulated sites in different parts of the Indus valley has enabled scholars to group them into various categories rather than to rely only on their sizes. The Indus settlements can easily be classified into cities, towns, and villages generally

³²⁹ Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 144.

³³⁰ M. Rafique Mughal, “The Indus Valley: 3000-1500 BC”, in *History of Humanity: Scientific and Cultural Development*, Chapter 8, Vol. 2, ed., A. H. Dani and J. -P. Mohan, 45. Paris and London: UNESCO and Routledge, 1996.

on the base of their size, but at the same time can be distinguished by their functions. Along with hundreds of small unfortified village level settlements, existed major city-centres, displaying a successful strategy that integrated and enhanced the local distribution system of raw and finished goods. The gateway settlements at key locations helped to procure and to trade products with far-flung regions.

Another key feature of the Indus settlement pattern is their locations almost equidistant from its major cities. The three largest urban cities Mohenjo-Daro, Ganweriwala and Harappa, are equidistant from each other and cover both Upper and Lower Indus valley, and mark the core area. This same core area was also dominated during the early Harappan Period.³³¹ Recent archaeological evidences suggest that a definite grid of settlement locations was maintained at least during the Mature Harappan Phase, which is another outstanding and unique feature of this civilization. Some variation in distances can be seen between various Harappan cities: the distance from Harappa to Rakhigrahi on its east is 350 km and southwest to Ganweriwala is 280 km. From Ganweriwala the distance to Mohenjo-Daro is 308 km. Between Ganweriwala and Kotada, there is a long distance of 522 km, as no major city has yet been discovered somewhere in the middle. Only two small sites, Chanhudaro and Nuhato are known in eastern Sindh. This long gap is like the one which existed between Mohenjo-Daro and Harappa prior to the discovery of Ganweriwala in Cholistan. Further explorations in eastern Sindh might reveal another major city north of Kotada. Such a discovery would fit well in the equidistant pattern of major Harappan cities.

The same equidistant location pattern of the major cities can be extended to some other towns or small Indus settlements. For example, the distance from Mohenjo-Daro to Nausharo in northwest Sindh is 270 km, while Balakot on the sea coast is 266 km away. The distance from Harappa to Hisam D0heri and Karam Shah in the Gomal Valley is 260 km, while the distance between the Gomal Valley and Shortugai in northern Afghanistan should measure twice the length maintained between any two sites of the Indus. In general, an average distance between the major cities of Indus is 290 km, while between a city, town or village it is even

³³¹ Richard H. Meadow and Jonathan Mark Kenoyer, "Excavations at Harappa 1994-1995: New Perspectives on the Indus Script, craft activities, and city organization", in *South Asian Archaeology*, ed., B. Allchin (New Delhi: Oxford University Press, 1995), 1.
Mughal, *The Indus Valley: 3000-1500 BC*, 46.
Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 142-3.

less, about 265 km. This information leads us to conclude that a high level of standardization was maintained, to build new avenues at equidistance throughout the Indus valley.³³²

Dr. Mughal's concluding remarks about this particular system are,

"Such a pattern of cities calls for explanations more convincing than the hypotheses of trade or exchange net-work, centres of procurement, production and re-distribution or of the capture of economic resources of a region. Likewise, the major cities cannot be regarded as administrative "capitals" of the Indus "Empire". Among five major cities so far known, four are in the core Area of the Indus Valley which measure between 76 and 83 ha. and only one in Kutch, is 40 ha. in size. The fortified cities or towns along the sea coast – Kotada, Balakot, Sotka-koh and Sutkagen-dor – had certainly different functions than those in the plains of Punjab and Sindh. Whatever explanatory models are given, the emergent picture of the Harappan cities has rejected the old argument of "Twin capitals". The location of major cities at almost equal distance from one another is yet another unique feature of the Indus Civilization which is unparalleled in the settlement history of oriental civilizations."³³³

Form, Content and Structure

There is no doubt today that the Indus civilization was unique in its form, content and structure among its contemporary civilizations. Several differences can be seen while studying various aspects of this great civilization. Dr. Mughal has pointed out some,

"An astonishing aspect is its geographical extent covering more than half a million square miles territory within the Greater Indus Valley with extension up to northern Afghanistan (Shortugai) and Oman and the Gulf coast. It is more than twice the area of Mesopotamia. Equally remarkable is the general uniformity of city planning and their layout and essential architectural features maintained throughout a vast territory. The same is also reflected in the standardized materials of diverse kind and the representational art. No formal temple buildings comparable to those of Egyptian and Mesopotamian Civilizations have been found at the major urban centres except platforms for the fire altars at Kalibangan. Moreover, at no site tombs of upper or rich class have been discovered if social stratification was also expressed in the disposal of the dead."³³⁴

Many aspects of material culture and landscape were both common throughout the Indus region and unique to it, including the layout of the major cities and towns, which was rigidly followed with the dichotomy of an acropolis raised artificially with mud brick and mud within a defence wall. The plans of all the cities included walled sectors featuring by a uniform set of streets and lanes oriented in the cardinal points. The defence wall was usually located on the west with the lower town sprawling on its east and southeast. Some walls had bastions and guardhouses that restricted entry to the separate districts, while some did not, but still there is no evidence to suggest that the walls were built for defensive purposes, and the most that can

³³² Mughal, "The Harappan Twin Capitals and Reality", *Journal of Central Asia*, Vol. 13 (1) (1990): 157-8.

³³³ Mughal, "The Harappan Twin Capitals and Reality", *Journal of Central Asia*, Vol. 13 (1) (1990): 158-9.

³³⁴ Ibid., *The Indus Valley: 3000-1500 BC.*, 47-8.

be said about them is that they imply civic control, whether imposed within individual neighbourhoods or by rulers within the city. It is evident that the citadel was on this artificially raised acropolis, which according to archaeologists might have been an administrative centre of the city around which the major public buildings were located, while the residential areas and workplaces were mostly in the lower section of the city. Each city was constructed according to well-defined city plans with slight variations, usually seen in the “public structures”. Great similarities are seen in the ‘public works’ of the cities. The variability is best demonstrated in the public structures at Mohenjo-Daro which include an elaborate colonnade, a pillared corridor, and a sunken pool (‘The Great Bath’), which have no counterpart in any other Indus city. As the citadel of Harappa was robbed of its brick, hence monumental buildings like those of Mohenjo-Daro have not been found there, but still the so-called workmen’s platforms, whatever their function, are unique. Beside these, the structures known as “state granaries”, as proposed by Wheeler, at both Harappa and Mohenjo-Daro are no longer considered to be granaries, in the absence of grain or any food-processing equipment at either location and have dissimilarities in construction. Besides these buildings at Mohenjo-Daro and Harappa, one should not forget the unique “castle and bailey” at Dholavira along with the large open courtyard and the terraced reservoirs, that have no counterparts at any other Indus city.

Though differences in public buildings in the various Indus cities are obvious, at the same time there are evidences of synchronization where public works were concerned. The best example of this are the massive platforms designed to raise the level of the buildings, to prevent the encroachment of floodwaters. The Harappans also invented a new way to bring bathing and drinking water into their houses, through a system of vertical shaft wells. Toilet was also invented by the Harappans along with bathing platforms built either in separate rooms or in the corners of multipurpose rooms. Waste from these areas flowed into an elaborate sewage system that has no counterpart in any contemporary civilization. It was probably not until later Roman times that people again devised so many clever construction techniques to deal with the comforts and discomforts related to water. Another water management system is seen at Dholavira, where a dam has been constructed to counter the dry environmental conditions of Kutch. It was constructed with blocks of stone and water was channelled onto terraced reservoirs that banked the outer fortification wall of the city.³³⁵

³³⁵ Mughal, *The Indus Valley: 3000-1500 BC*, 49-50.
Wright, *The Ancient Indus*, 117-24.

City planning in the Indus civilization surpassed that of any of the known Oriental civilizations. Based on the city planning of Indus, scholars have made attempts to understand the social and economic structure of the Indus society.

The Economy

A full-fledge picture of Indus economy becomes more pronounced during its Urban Period when many new developments occurred. As cities grew at places like Mohenjo-Daro, Dholavira, Harappa, Ganweriwala, and Rakhigarhi regional networks were established and rural villages and towns developed over a broad geographical area. The economy of the Indus, like that of any other early state in the ancient world, was largely based on agriculture, animal husbandry, foraging, craft technologies, and trade or exchange networks for the procurement and distribution of both raw and finished goods within and outside the Indus valley. Therefore, the Indus Valley economic system can further be divided into different sub-headings: Agriculture, Animal Husbandry/Pastoralism, Foraging and Fishing, Craft Technology, Trade and Weights and Measures.

The economic changes that occurred during the Urban Phase were the result of a complex interplay of environmental factors and human choices made by many preceding generations. These complexities and their impact on the economy can be understood by focussing on the intensification, diversification, and specialization of agro-pastoral and craft-producing activities. According to Dr. Wright,

“Intensification in the context of farming and pastoralism refers to the development of ways and means to increase yields or output from a unit of land; it also applies to craft production and technological activities involving the production of new products and increased numbers of producers. Diversification refers to the development of increased numbers and diversity of food and craft products. The closely aligned concept of specialization relates to movement toward allocation of resources to specific but diverse activities and the acquisition of specialized skills necessary to undertake the tasks involved. Specialization in agropastoral and craft-producing economies involves increases in divisions of labour and the exchange of products because no single producer is likely to maintain self-sufficiency.’ She further says, ‘These aspects of the Urban period – intensification, specialization, diversification, and the organization of production, distribution, and exchange – comprise the infrastructure that fuelled the Indus social and political economy.’³³⁶

Agriculture

The Harappan economy was based on a combination of natural and man-made resources. These resources and technologies enhanced its speed of growth. There is no doubt

³³⁶ Wright, *The Ancient Indus*, 145-6.

that the Indus basin was, and is still, naturally fertile. One of the prime reasons for the increases in agricultural yield was the expansion of Indus settlements near riverine environments. Both the Indus and Ghaggar-Hakkar plains were the heartland of this civilization. The natural seasonal flooding cycles of these rivers provided fairly reliable water sources and conditions that helped the Harappans to increase their yields. The farmers might have used simple technologies to store water (like the one found at Shortugai), regulate flows, or create embankments to hold water, but so far, no evidence of such an activity has been found from Upper Indus or the Ghaggar-Hakkar plains. This lack of evidence may be due to severe modifications in the landscape carried out by modern farmers, or to natural forces (such as erosion) that might have erased all signs of channelling.³³⁷ According to H. P. Francfort, canal irrigation was carried out on the northern extension of the Ghaggar-Hakkar River,³³⁸ but subsequent studies of soil sediments by M. -A. Courty do not confirm the presence of canals associated with occupations contemporary with Indus civilization.³³⁹ Similar studies by L. Flam and Jorgenson in the Lower Indus propose that agriculturalist living at settlements south of Mohenjo-Daro largely depended on sheet flooding to water their fields.³⁴⁰

The Indus Civilization is also credited for being the first culture, to access underground water by wells. There is no doubt that cutcha wells were dug in villages, evidence for the construction of water-retaining devices of several types has been found, built on higher ground beyond the floodplains, to help irrigate the lower-lying fields, like the one found at Allahdino (a stone-masonry well).³⁴¹ According to Stein³⁴², Dales³⁴³, Fairervis³⁴⁴ and Flam³⁴⁵ dam like structures known as gabarbands have been found in the hills of Baluchistan that cross the valley

³³⁷ Wright, *The Ancient Indus*, 166-7.

³³⁸ H.-P. Francfort, "Preliminary Report (1983-1984): Archaeological and Environmental Researches in the Ghaggar (Saraswati) Plains," *Man and Environment* 10 (1986): 97-100.

³³⁹ M.-A. Courty, "Late Quaternary Environmental Changes and Natural Constraints to Ancient Land Use (Northwest India)", in *Ancient Peoples and Landscapes*, ed. Eileen Johnson (Lubbock: Museum of Texas Tech University, 1995), 105-26.

³⁴⁰ L. Flam, "The Paleogeography and Prehistoric Settlement Patterns in Sind, Pakistan (4000-2000 BC)", PhD. Dissertation, University of Pennsylvania, Philadelphia, 1981.

L. Flam, "Fluvial Geomorphology of the Lower Indus Basin (Sindh, Pakistan) and the Indus Civilization." in *Himalayas to the Sea: Geology, Geomorphology and the Quaternary*, ed. J. F. Schroder (New York: Routledge, 1993), 265-87.

D. W. Jorgen, D. Harvey, S. A. Schumm, and L. Flam, "Morphology and Dynamics of the Indus River: Implications for the Mohenjo-Daro Site." in *Himalayas to the Sea: Geology, Geomorphology and the Quaternary*, ed. J. F. Schroder (New York: Routledge, 1993), 288-326.

³⁴¹ Irfan Habib, *A People's History of India 2: The Indus Civilization, Including Other Copper Age Cultures and History of Language Change till c. 1500 BC* (New Delhi: Tulika Books, 2002), 25.

³⁴² Aurel Stein, *Archaeological Reconnaissances in Northwestern India and Southeastern Iran* (London: Macmillan, 1937).

³⁴³ G. F. Dales, "Harappan Outposts on the Makran Coast." *Antiquity* 36 (1962): 86-92.

³⁴⁴ W. A. Friservis, "The Origin, Character, and Decline of an Early Civilization", in *American Museum Novitates* 2302. (New York: American Museum of Natural History, 1967).

³⁴⁵ L. Flam, "The Other Side of the mountains: Explorations in the Kirthar Mountains Region of Western Sindh, Pakistan", in *Arabia and Its Neighbors*, Vol. II, eds. C. S. Phillips, D. T. Potts, and S. Searight (Brussels: ABIEI., 1998), 315-26.

floors. They were used to store water, trap runoff, and slow the water speed. A second type of water storage system, for the collection of runoff and rain water has been found at Dholavira (and possibly Lothal). This water system includes a complex of small dams or *bunds* constructed along a seasonal stream that ran near the site. These water reservoirs were technically very sophisticated. For example, one water reservoir was twenty-four meters wide and over five meters deep, with a series of thirty-one steps leading from top to bottom.³⁴⁶ Also a canal built by the Indus people has also been traced near Shortugai that took water from Kokcha River; on the basis of this, similar canals might have been present in the Indus basin.³⁴⁷ There is no doubt that the Indus Civilization's heartland was in the riverine environments of the Indus and Ghaggar-Hakra plains, yet many villages and towns, continued to depend upon dry farming, using methods like the one used at Mehrgarh in the seventh millennium BCE.

The Harappan economy was dependent upon various technologies. Probably the increase in agriculture yields was also due to advances in tools technology, especially the appearance of the plough. Its presence is confirmed not only by the evidence for ox-haulage, but also by the discovery of clay models of a plough at Banawali and at Jawaiwala (Bahawalpur). Beside these, a ploughed field has also been found at Shortugai in northeastern Afghanistan. Along with the plough, sickles, made with small stone blades bonded to a handle, of metal were used for harvesting purposes. Despite of advancement in tool technology many tasks were still performed manually.³⁴⁸

Another important factor for the increase of Indus agricultural yields was the variety in crops and the year-round cultivation pattern that not only increased agricultural yields but allowed people to save grains for difficult times. The agricultural patterns and products during the entire Indus period has been summarized by Dr. Mughal,

"The Harappan subsistence was based on winter-sown and spring/summer harvested (Rabi) crops after the monsoon rains and floods in the plains. By the Neolithic period or about the end of the 7th millennium BC., three forms of wheat and five forms of barley constituted about 90% of the cereal crops. Much before the beginning of the Indus civilization, the populations were already growing winter sown (Rabi) crops once a year which consisted of five forms of wheats (einkorn, emmer, hard wheat, bread/club wheat and short wheat) and three kinds of six-row barleys and also field peas, chickpeas, lentils, flax/linseed, jujube and mustard. Dates and cotton were harvested in summer/autumn since at least sixth millennium and grapes by the beginning of the fourth millennium BC. A piece of cloth was found on a bronze implement at Mohenjo-Daro. In addition, melon seeds and sesamum were consumed by the Harappans.

³⁴⁶ R. S. Bisht, "Dholavira: New Horizons of the Indus Civilization." *Puratattva* 20 (1991): 71-81.

³⁴⁷ Habib, *A People's History of India* 2, 25.

³⁴⁸ *Ibid.*, 25.

Mughal, *The Indus Valley: 3000-1500 BC.*, 53.

Towards the end of the Indus Civilization in the second millennium BC., the Harappan diversified their agriculture by growing autumn harvest (Kharif) crops in marginal areas to the east and south of the Indus Valley especially in Gujarat and even in the Kachi Plain in west-central Indus valley. Evidence of rice cultivation was found at Lothal and Rangpur in Gujarat and at Pirak (Costantini 1979;³⁴⁹ Vishnu-Mittre and Savithri 1982).³⁵⁰ Sorghum (jowar), finger millet (Ragi), bulrush millet (bajra) of African origin and two Asian millets, proso and foxtail were cultivated.”³⁵¹

The widespread distribution of diverse plants raises questions about the routes of their diffusion. Whether these routes were within the Indus sphere or outside it, they are equally important. According to Dr. Wright,

“With respect to wheat and barley, their presence at Balathal in the pre-urban (early Harappan) suggests they spread from the Indus Plain, but whether the diffusion of wheat and barley to peninsular India was via Balathal or directly from the Indus settlements is unclear. The spread of millets is equally complex. Whether their origins were indigenous, African, or Chinese is not yet determined. In any event, this movement of crops indicates that people engaged in contact over fairly long distances and there was a sharing of technological innovations.”³⁵²

Thus, the intensification, specialization, and diversification of the Harappan agricultural processes initiated at Mehrgarh reached their height during the urban period in the plains of the Indus and the Ghaggar-Hakra.

Animal Husbandry/Pastoralism

Animal husbandry played a vital role in the economics of the Indus civilization and involved a substantial number of individuals. This observation is based on the presence of a large number of animal bones found in both rural and urban areas. It is evident from archaeological data that people of both rural and urban areas were involved in this occupation. It is also rare to find evidence for physical separations among different professions in both rural and urban settings, as is found today, where people belonging to animal husbandry live in the villages and those following crafts and industry reside in cities. According to Dr. Wright,

“Although it may seem strange to think of farmers, animals, and craft producers living all together, especially in fairly large cities, these activities most likely coexisted comfortably in villages, towns, and cities. If we were to turn back time and walk through an Indus settlement, we likely would find people engaged in a variety of agriculture, pastoral or craft-related tasks, encounter an occasional sheep or goat, or pass a zebu tethered to a stake or hitched to a cart in an alleyway, all in the company of a metal worker

³⁴⁹ L. Costantini, “Plant Remains at Pirak, Pakistan.” in Fouilles de Pirak, eds. J. Jarrige et. al. (Paris: Diffusion de Boccard, 1979), 326-33.

³⁵⁰ Vishnu-Mittre and R. Savithri, “Food Economy of the Harappans.” in *Harappan Civilization: A Contemporary Perspective*, ed. G. L. Possehl (New Delhi: Oxford and IBH, 1982), 205-21.

³⁵¹ Mughal, *The Indus Valley: 3000-1500 BC*, 52-3.

³⁵² Wright, *The Ancient Indus*, 170.

producing tools. If we entered the courtyard of one of the homes, we might find someone milking a water buffalo. Nearby, another individual might be weaving or making a clay pot.³⁵³

Evidence has been found from the border of Baluchistan and the low lands in the west-central Indus valley indicating the domestication of cattle (*zebu*), goats and sheep by the end of Neolithic Period (circa 6000 BCE). The discovery of the remains of plants and their analysis from early Harappa sites (Jalipur, Mehrgarh IV–VII and Bala Kot) and mature Harappan sites (Allahdino and Harappa) demonstrate the persistent use of cattle. It is obvious that cattle dominated over all the other animals throughout the Greater Indus Valley. It is also evident that by the beginning of the second millennium BCE, domestic camel, horse, and donkey were used together with existing animals.³⁵⁴

The intensification of pastoralism included the continued raising of sheep, goats, and zebu for meat and non-meat products, such as dairy foods, transportation, and wool. The secondary products are important as they help in the study of specialization of animal husbandry. Richard Meadow's study of the skeleton remains of sheep from the urban deposits at Harappa and Nausharo gives us a good example of selective breeding for non-meat uses.³⁵⁵ According to him, a common pattern is that sheep when domesticated decrease in size as happened at Mehrgarh, whereas sheep bones found at Harappa in the urban period deposits were larger than those at Mehrgarh. He further noted that the kill-off patterns for sheep indicate that more than half of the animals were older than five years. Thus, he supposed that sheep were bred for wool. In another study Meadow suggests that cattle were used for dairying and transportation.³⁵⁶ This suggestion is based on the discovery of bone assemblages showing a wide range of ages at death and the presence of many young animals indicating a pattern of using cattle for secondary products. A miniature clay yoke discovered at Nausharo suggests the use of animals for haulage.³⁵⁷ Pathology studies conducted by Laura Miller on cattle bones indicating physical stresses associated with traction for transport and ploughing fields.³⁵⁸ The

³⁵³ Ibid., 146.

³⁵⁴ Mughal, *The Indus Valley: 3000-1500 BC*, 53.

³⁵⁵ Richard H. Meadow, "Prehistoric Wild Sheep and Sheep Domestication on the Eastern Margin of the Middle East", in *Animal Domestication and its Cultural Context*, eds. P. J. Crabtree, D. V. Campana, and K. Ryan (Philadelphia: University of Pennsylvania, 1989), 24-36.

³⁵⁶ Richard H. Meadow, "Pre- and Proto-Historic Agricultural and Pastoral transformations in Northwestern and South Asia", *The Review of Archaeology* 19, no. 2 (1998): 12-21.

³⁵⁷ Laura J. Miller, "Secondary Products and Urbanism in South Asia: The Evidence for Traction at Harappa", in *Indus Ethnobiology*, eds., S. Weber and W. R. Belcher, (2003), 251-326.

³⁵⁸ Richard H. Meadow, "The Origins and Spread of Agriculture and Pastoralism in Northwestern South Asia", in *The Origins and Spread of Agriculture and Pastoralism in Eurasia*, ed. D. R. Harris (Washington, D.C.: Smithsonian Institution Press, 1996), 390-412.

presence of ploughs and ploughing fields has already been discussed in the agricultural economy, for inland travel on the plains. There is plentiful evidence from the terracotta models of bullock-carts, to all intents and purposes identical with those of modern times. Cart-tracks have been found on roads of the cities, which indicate that the wheelspan of the Indus carts was a little different from that of their modern descendants. Copper and bronze model carts with seated drivers were discovered from Harappa and Chanhudaro that are nearly identical to the modern little carts known as *ikka* or *ekka*, which are still common in the Punjab today.³⁵⁹

In a study conducted on the remains of faunal at the site of Dholavira, by Meadow and Patel both wild and domesticated forms of water buffaloes were found there.³⁶⁰ They suggested that water buffaloes may have been domesticated by the Urban Period and that three other animals - the camel, horse, and donkey were possibly present by 2000 BCE, but they were not widespread until the second millennium BCE. It is likely that these animals were introduced into the region from Central Asia. Their presence may have revolutionized the whole transportation system, since camels, donkeys, and horses are able to travel long distances, bear heavy weights, and tolerate a variety of environmental conditions. The horse and camel could be trained for riding, but there is no evidence that the people of Indus were familiar with this practice.³⁶¹

Although cattle were the most dominant species throughout the Indus civilization, yet regional variability with respect to its distribution and the use of other animals is also seen. For example, goats were more at home in arid and semi-arid environments like Nausharo and regions near Dholavira, while sheep outnumbered goats in better-watered areas, such as the Punjab. While evidence for the domestication of water buffalo has been found at Dholavira during the Urban Period, images of buffalo are found on seals throughout the Indus region. Therefore, it remains unclear whether the domesticated buffalo spread to all regions of Indus. Water buffalo must be watered-down daily and according to Bisht and Patel, the series of reservoirs found at Dholavira were maybe used for this as well as other purposes.³⁶²

³⁵⁹ Bridget Allchin and Raymond Allchin, *The Rise of Civilization In India and Pakistan*, 189.

³⁶⁰ Richard H. Meadow and A. Patel, "Prehistoric Pastoralism in Northwestern South Asia from the Neolithic through the Harappan Period", in *Indus Ethnobiology*, eds., S. Weber and W. R. Belcher (Lanham: Lexington Books, 2003), 65-94.

³⁶¹ *Ibid.*, 65-94.

³⁶² Wright, *The Ancient Indus*, 173.

R. S. Bisht, "Indus Civilization, The Last Fifty Years of the Study in India." in *Exhibitions of the World's Four Great Civilizations: The Indus Exhibition*, (Tokyo: NHK, 2000), 26-8.

R. S. Bisht, "The Water Structures and Engineering of the Harappans at Dholavira (India)." in *South Asian Archaeology 2001*, 1, eds. C. Jarrige and V. Lefevre (Paris: CNRS, 2005), 11-26.

Many different forms of pastoralism were probably used for domesticated animals in the Indus civilization. Pastoralism, is the breeding and raising of animals, that may involve, what Richard Meadow refers as the “continuum of lifestyles” marked by degrees of mobility.³⁶³ According to the studies conducted by T. J. Barfield nomadic pastoralists live a “portable” life suited to the constant movement of animals but within a fixed range.³⁶⁴ During the course of these movements, it is supposed that the shepherds may trade items, that their animals produce (milk products, meat, textiles) with settled farmers in exchange for agricultural products. Semi-sedentary pastoralists, on the other hand may have a home settlement, which may be near an agricultural land, where they remain part of the year. It is supposed that some group members or entire families might leave for short periods of time, especially during dry periods, going to areas of preferential grazing.³⁶⁵ In contrast, sedentary pastoralists remain in one location all year around, and may be involved in both farming and pastoralism. According to Poyck, this is a classic combination for a small modern farm common in many parts of the world even today.³⁶⁶

The adoption of new animals and the development of secondary products help us to make inferences about specialization that occurred in the Indus valley. As summarized by Dr. Wright,

“The full range of specialization types was present in the Harappan world. At cities like Harappa and Dholavira, a form of sedentary pastoralism is reflected by the large numbers of animal bones and cart tracks found in street deposits at Harappa, and the water storage tanks at Dholavira. Judging by the current evidence, it appears that animals were kept by urban dwellers to supply dairy foods, such as milk and yogurt. Settled pastoralists on the alluvial plains most likely took advantage of its varied landscape, seeking out well-watered areas for water buffalo. Sheep and goats could graze on marginal lands on the outskirts of agricultural lands and on stubble from harvested fields.”³⁶⁷

Semi-sedentary pastoralism was evident at Mehrgarh, while pastoralists moved seasonally between the upland and lowland settlements at Nausharo to avoid harsh winters and

A. Patel, “The Pastoral Economy of Dholavira: A First Look at Animals and Urban Life in Third Millennium Kutch”, in *South Asian Archaeology 1995*, 1, eds., R. Allchin and B. Allchin (Cambridge: The Ancient India and Iran Trust, 1997), 101-13.

³⁶³ Richard H. Meadow, “The Origins and Spread of Agriculture and Pastoralism in Northwestern South Asia”, in *The Origins and Spread of Agriculture and Pastoralism in Eurasia*, ed., D. R. Harris. (Washington, DC.: Smithsonian Institution Press, 1996), 390-412.

A. M. Khazanov, “Nomads and the Outside World,” *Cambridge Studies in Social Anthropology* (Cambridge: Cambridge University Press, 1984).

³⁶⁴ T. J. Barfield, *The Perilous Frontier: Nomadic Empires and China*, (London: Blackwell, 1989).

³⁶⁵ Kamyar Abdi, “The Early Development of Pastoralism in the Central Zagros Mountains”, *Journal of World History* 17, 4 (2003): 395-443.

³⁶⁶ A. P. G. Poyck, “Farm Studies in Iraq,” *Medelingen van de Landbouwhoghe-school, Te Wageningen, Nederland* 62, 1 (1962): 1-99.

³⁶⁷ Wright, *The Ancient Indus*, 174.

hot summers. According to Dr. Mughal, the distribution of small camp sites on the Ghaggar-Hakkar plain suggests a pattern of nomadic pastoralism, where nomadic pastoralists moved beyond the limits of agricultural zones but returned to the same location on a seasonal basis.³⁶⁸

Another point of view is offered by Irfan Habib,

“A large number of animals, then, must have been kept by the peasants; and inequalities in rural society could well grow on the basis of the numbers of cattle and other animals possessed by individuals. Moreover, a separate pastoral economy could also now develop, directed to meeting the peasants’ demand for animals and their products. Outside the cultivated zone, which, in view of low population density, must have been small in extent, there were large tracts where animals could be bred by semi-nomadic communities for being sold to sedentary populations, along with milk products, wool and hide. Bits of broken pottery with slight mud structures are, however, all that may remain of the possible encampments of such nomads (Valabhi in Gujarat has been identified as one such site).”³⁶⁹

Foraging and Fishing

The Indus region was full of diversified plant and animal species. This fact is evident not only from the rich archaeological finds but also through their depictions on the Indus seals, which show encounters with wild and ferocious animals. Among the wild species depicted in Indus imagery are rabbits, rhinoceros, elephants, peacocks, ducks, and many others. This leads us to suggest that all Indus people, whether hunters-gatherers, nomadic or permanently settled communities were familiar with the products from these species. For example, the water buffalo could have been hunted for its meat and the elephant for its ivory³⁷⁰ products used by the people include fish, fish oils, wool for cloth, feathers, skins, bone tools, and wood products. On the eastern coast of Baluchistan, extensive use of fish and molluscs for food has been found not far from modern-day Karachi, at Balakot, at different levels of occupation. That suggests more efficient means (better boats and nets) may have been devised to exploit marine resources. For example, at Harappa there is evidence for a few specimens of marine catfish that were certainly imported from coastal settlements. This suggestion is backed by a potsherd found at Harappa, with a depiction of a fisherman with two nets. More evidence is based on the study of fish bones from Harappa and three village settlements - at Nausharo, Balakot, and Allahadino - conducted by William Belcher.³⁷¹ Nausharo is near the site of Mehrgarh; Balakot is in Las Bela; and Allahadino is towards the east of the Indus River Delta, so it is supposed

³⁶⁸ M. R. Mughal, *Ancient Cholistan: Archaeology and Architecture* (Lahore: Ferozsons, 1997).

³⁶⁹ Habib, *The Indus Civilization*, 28.

³⁷⁰ *Ibid.*, 28.

Mughal, *The Indus Valley: 3000-1500 BC*, 51-2.

³⁷¹ W. R. Belcher, “Fish Exploitation of the Indus Valley Tradition”, in *Indus Ethnobiology*, eds. S. A. Weber and W. R. Belcher (New York: Lexington Books, 2003), 95-174.

that fishing was a seasonal activity. The winter backwater areas would have been prime locations for catfishing. It was the principal fish at all Indus sites and used for food and fish oils. Besides fresh water fish, there is evidence of a few specimens of marine catfish at Harappa, which must have been imported from coastal areas.³⁷²

Craft Technology

As Bridget and Raymond Allchin write, “The products of the mature Harappan craftsmen exhibit a degree of uniformity similar to that found in town planning and structure plans.”³⁷³ Dr. Kenoyer, too suggests, that the Harappan crafts display an impressive level of standardization.³⁷⁴ Production of crafts made major contributions to both the agropastoral and craft-producing economy and contributed to the overall expansion of production diversity. During its mature phase, some skilled Indus artisans developed specialized technical knowledge in the production of high-quality and diverse goods for exchange or for their own consumption. I will discuss some of these crafts in detail, so that we can understand the extent to which specialization and intensification occurred during this phase that had began previously.

Many of the techniques developed by artisans of Mehrgarh, matured and eventually became important technologies during this phase. For example, the intensification of craft production is best demonstrated in the further elaboration of technique and style of those previously known products, such as ceramic production, and in the creation of new products, including seals and stoneware bangles. The combination of technical innovations and a skilled labour force helped to develop a virtuosity of technology that rivalled other craft producing civilizations in the ancient world.³⁷⁵ Some Harappan sites specialized in the production of one or a few items; others, such as Harappa, manufactured a wide range of goods.

Most crafts were produced using materials like stone, shell, fibre, and clay often using reductive or pyrotechnological methods. The reductive method involved the chipping and reshaping of stone or shell object. The pyrotechnological method involved subjecting a raw material such as clay or ore to heat. The Harappans also used this method to crush, grind and fire stones in order to prepare ‘paste’ in kilns.³⁷⁶ According to Miller, the creation of a new

³⁷² Wright, *The Ancient Indus*, 174-6.

³⁷³ Allchin, *The Rise of Civilization In India and Pakistan*, 193.

³⁷⁴ Kenoyer, *Ancient Cities of the Indus Valley Civilization*, 149-50.

³⁷⁵ Wright, *The Ancient Indus*, 148.

³⁷⁶ *Ibid.*, 149.

material through a chemical processes is called “transformative crafts”.³⁷⁷ Dr. Wright notes that studies related to pottery production reveal an emphasis on the restructuring of materials and juxtaposing shapes, textures, and colours.³⁷⁸

“Many forms were built in segments that required fitting components together, a technique that imposed new structure on the natural clays and pushed them beyond their natural workability range. Other forms required a substantial vision and experimentation with known techniques. The same form was produced with unmodified surfaces, yet others had surfaces into which deep permanent marks were carved to which contrasting slips were applied. These techniques drew attention to the transformations achieved by the potter, through use of new colour effects by controlling atmosphere and temperatures in kilns.”³⁷⁹

Other Indus crafts also used the same technique for the production of disk-shaped clay beads.

Bead Making

The craft of beading making was known in earlier cultures, but during the mature Indus Phase it became more sophisticated. The first known disc beads were found at Mehrgarh in 5000 BCE, they were produced from steatite or talc using the reductive technique, which involved cutting them from rod-like blanks.³⁸⁰ Around 4500-3800 BCE, craftsmen of Mehrgarh began to glaze the disc beads with a coating of finely ground sand, lime, and clay to which ash or a substance with an added mineral colour and then fired them at about 1,000 degrees centigrade.³⁸¹ Then at a later date, during the mature phase, extraordinarily thin beads were produced through this technique (0.8-1.0 millimetre with 0.4 millimetres, inner holes).³⁸² A necklace of this type that is composed of three hundred such beads.³⁸³

Carnelian beads with etched designs were also produced using reductive techniques that demonstrate extensive technical knowledge and a lot of skill. Dr. Kenoyer has reconstructed the production sequence with the help of a diagram (see Figure III.2.1), for our better understanding. The production process began with the chipping of the carnelian stone to

³⁷⁷ Heather M. - L. Miller, “Archaeological Approaches to Technology,” *Elsevier* (Burlington, MA: Academic Press, 2007).

³⁷⁸ Wright, “Technological Styles: Transforming a Natural Material into a Cultural Object”, in *History from Things: Essays on Material Culture*, eds. S. Lubar and W. D. Kingery (Washington, DC: Smithsonian Institution Press, 1993), 242-69.

³⁷⁹ Wright, *The Ancient Indus*, 149.

³⁸⁰ *Ibid.*, 150.

³⁸¹ A. Bouquillon and B. Barthelemy de Saizieu, “Decouverte de nouveau materieu dans les parures de la periode pre-Indus de Mehrgarh (Baluchistan): la ‘faïence’ de steatite.” *Techne* 2 (1995): 50-5.

³⁸² M. Vidale, “The Archaeology of Indus Crafts: Indus Craftspeople and Why We Study Them.” *IsIAO, Italiano per l’Oriente* (Rome, 2000), 101-3.

³⁸³ *Ibid.*, 101-3.

Heather. M. - L. Miller, “Pottery Firing Structures (kilns) of the Indus Civilization during the Third Millennium BC.” in *Prehistory and History of Ceramic Kilns*, eds. P. M. Rice and D. W. Kingery, *Ceramics and Civilization*, Vol. VII (Columbus, OH.: American Ceramic Society, 1997), 41-71.

attain the desired shape; heat was applied to make the raw material easier to modify. The final steps included polishing, drilling and reheating of the completed beads in a reducing atmosphere, a procedure that draws iron oxide from the stone, which deepens the original red colour.³⁸⁴ On the base of archaeological evidence it is believed that these beads were in great demand even outside the core area of the Indus civilization (for example, Mesopotamia). Their occurrence in other regions not only provides relative dating but also highlights the influence of the Indus trading sphere. Many different designs were made on these beads: - rectilinear lozenges, circles and eight lobed/sided figures in white-on-red, and black-on-red. The most common design was a long- barrel, slightly convex bead used to make a necklace of multiple strands.³⁸⁵ These beautiful and valued long-barrel cylinder beads made of carnelian have been found in royal burials in Mesopotamia.³⁸⁶

Beads were also made using other materials, such as semi-precious stones, steatite, faience, shell, agate, *lapis lazuli*, gold, silver, copper and even pottery. The Harappans had the ability to create different versions of a single object by using different materials.³⁸⁷ On the basis of these observations archaeologists, Vidale, Vidale and Miller and Kenoyer have suggested that a wide array of products must have been produced for a broad range of consumers (see Figure III.2.2-3).³⁸⁸

Bead making factories with tools, furnaces, and beads at various stages of preparation have been excavated at Chanhudaro and Lothal and cylindrical stone drills have been found at many sites including Mohenjo-Daro, Harappa, Chanhudaro, and Dholavira. At Bagasra in Gujarat, there are artefacts made of shell, faience, and beads have also been found. Even today

³⁸⁴ Jonathan Mark Kenoyer, "The Indus Valley Tradition of Pakistan and Western India." *Journal of World Prehistory* 5, 4 (1991): 331-85.

Also see Kenoyer, *Ancient Cities of the Indus Valley Civilization*.

³⁸⁵ Mughal, *The Indus Valley: 3000-1500 BC*, 57.

³⁸⁶ Upinder Singh, *A History of Ancient and Early Medieval India: From The Stone Age To The 12th Century* (New Delhi: Pearson Longman, 2008), 161-2.

³⁸⁷ Wright, *The Ancient Indus*, 151.

Singh, *A History of Ancient and Early Medieval India: From The Stone Age To The 12th Century*, 161-2.

³⁸⁸ Vidale, "The Archaeology of Indus Crafts: Indus Craftspeople and Why We Study Them", *Italiano per l' Oriente*, (Rome: ISIAO, 2000), 64.

M. Vidale and H. M. L. Miller, "The General Case through Time," in M. Vidale, *The Archaeology of Indus Craft*, Appendix 143 (Rome: ISIAO, 2000), 150.

Jonathan Mark Kenoyer, "Harappan Craft Specialization and the Question of Urban Segregation and Stratification," *Eastern Anthropologist*. Indus Civilization Special Number 45, 1-2 (1992): 39-54.

the bead making tradition in Gujarat continues and gives us clues on how the Harappan craftsmen may have made their beads.³⁸⁹

According to Dr. Wright, the technical knowledge and style of production of the Indus peoples are not uniformly known today. This is evident from the study of weaving techniques, which are not only under-studied because of poor preservation but also because of the small number of surviving textiles (as they are soft and were unable to withstand the hot and humid environmental conditions of the Indus. But it is suggested that the weavers must have worked with animal fibres and plants including cotton, linen, and jute for making baskets, cloth, and other woven items and large numbers of people must have been engaged in textile production. Numerous spindle-whorls of terracotta and frit are found in many Indus settlements, leading

³⁸⁹ Kenoyer, M. Vidale and K. K. Bhan, "Contemporary Stone Bead Making in Khambhat, India: Patterns of Craft Specialization and Organization of Production as Reflected in the Archaeological Record," *World Archaeology* 23, 1 (1991): 44-63.

Ibid., "Carnelian Bead Production in Khambhat, India: An Ethnoarchaeological Study," in *Living Traditions: Studies in the Ethnoarchaeology of South Asia*, ed. B. Allchin (Oxford: Oxford Books, 1994).

Upinder Singh, *A History of Ancient and Early Medieval India: From The Stone Age To The 12th Century*, (New Delhi: Pearson Longman, 2008), 162-4. The complete production process and analyses of long carnelian beads in the words of Upinder Singh, 'The city of Khambhat (Cambay) in Gujarat is one of the largest centre of stone bead-making in the world today. Mark Kenoyer, Massimo Vidale, and Kuldeep K. Bhan conducted an ethno-archaeological study, examining the techniques used by modern bead makers of this place. They supplemented this with experimentation and an analysis of the remains of bead manufacture at the site of Chanhudaro in south Pakistan. The results throw light on how the Harappan craftsmen may have made their beautiful long barrel cylinder beads. The process must have been something like this: Long nodules of carnelian (a reddish orange variety of agate) were brought from Gujarat to Chanhudaro. The best were chosen and separated. These were dried in the sun for many months and then heated in shallow ovens to make the stone easier to work. The heating also deepened the red color. The bead roughouts were made using a copper-tipped stake and an antler or horn hammer, using indirect percussion or pressure flaking techniques. Larger nodules were cut lengthwise and chipped to make bead roughouts. These roughouts were then partially ground on grooved sandstone or on quartzite grinding stones. Then came the drilling of holes through the beads. This was done using a special cylindrical drill made out of a rare metamorphic rock which was heated to make an extremely hard and durable tool. This material has been given the name of 'Ernestite', after the archaeologist Ernest J. H. Mackay, who was the first to discover the drills and understand their significance. It could have taken a craftsperson a whole day of work-heating, chipping, and grinding-to make a drill. The Harappan bead makers used many different sizes of drills (at least six sizes) to make a single bead. The drilling was probably done with a hand-held bow drill. The friction would have produced intense heat, so the work may have been done under water, or at least by dripping water continuously on the drill hole. The study conducted by Kenoyer and his team showed that even with these superior drills, it would have taken over 24 hours or three 8-hour days of steady drilling to perforate a single 6 cm long bead. The beads on the belts found at Mohenjo-Daro and Allahdino vary from 6 to 13 cm in length. It would have taken 3-8 days to make one of the longer beads, probably more, considering that the bead makers of Khambhat take long breaks after a couple of hours of work, as it is a very strenuous and tiring process. Once the beads were perforated, there was a laborious polishing process. Taking the process from start to finish, it would have taken over 480 work days to make a belt of 36 beads of the kind found at Allahdino. Even if more than one worker was put on the job, it would still have taken up to a year. These beads must have been highly valued and worn only by the rich. For people who could not afford the expensive long carnelian beads, Harappan craftspeople made imitations in terracotta and painted them red. Kenoyer, Vidale, and Bhan also analyzed the archaeological patterns of manufacturing waste and finished artifacts, the structural evidence, and settlement layout in order to make inferences about the way in which bead manufacture was organized and controlled. Why did the Harappans transport carnelian nodules from Gujarat to Chanhudaro, instead of getting at least some of the preliminary work, such as discarding poor quality nodules, done near the source of the raw materials? The evidence suggests that all stages of carnelian bead manufacture at Chanhudaro were centralized and controlled by a powerful and wealthy group of merchants. This also explains the uniformly good quality of the raw materials used and the high level of standardization. This is in contrast to evidence from the Moneer area at Mohenjo-Daro, which is suggestive of short-term production by several entrepreneurs.' I will explain this point further, during the discussion on the social structure of the Indus people.

one to believe that hand-spinning was widespread, presumably as a woman's chore in each household, whether rich or poor. There is no trace of any wooden looms, but a small fragment of dyed woven cotton discovered at Mohenjo-Daro is one of the two earliest known examples of cotton cloth in the world. The other example comes from Jordan and pre-dates 3000 BCE. Another good example is the impression of a woven cloth of jute in a simple weave found on a clay pot, in which the structure of the cloth survived the kiln firing (see Figure III.2.4). It is very unusual for the structure of a fibre and weaves to be preserved in such a manner. Beside these, the trefoil motif on the robe of the stone sculpture of the 'priest-king' (see Figure III.2.5), from Mohenjo-Daro also suggests the use of embroidery; it might have been executed using copper sewing needles as found in the Indus region. Needles would have definitely made the task much easier.³⁹⁰ Terracotta figurines wearing shawls and skirts show the kind of clothes people wore. Several examples of cotton thread and cloth were identified on copper tools. At Harappa, cotton threads were found wrapped around the handle of a small copper mirror in a burial and also around the handle of a curved copper razor. Mesopotamian texts also mention cotton as one of the imports from Meluhha (the Indus Valley). Weaving was either a household activity or a cottage industry practised in both villages and cities of the Indus region.³⁹¹

Crafts - Stoneware Bangles

The people of Pakistan and India have worn bangles since Neolithic times. The Harappans made bangles from a variety of materials included metal, shell, and stoneware that required different levels of technical expertise. The bangles produced from metal and shell were also the result of complex processes, but stoneware bangles were the most technically sophisticated and are limited in number.³⁹² They have been found in the two major cities of Harappa and Mohenjo-Daro, although three bangles have also been found at the site of Balakot.³⁹³

³⁹⁰ Wright, *The Ancient Indus*, 152.

Habib, *The Indus Civilization: Including Other Copper age Cultures and History of Language Change till c. 1500 BC*, 34.

³⁹¹ Singh, *A History of Ancient and Early Medieval India: From The Stone Age To The 12th Century*, 163.

³⁹² Kenoyer, *Ancient Cities of The Indus Valley Civilization*, 75.

According to Dr. Kenoyer, 'The oldest high-fired stoneware ceramics in the world were crafted by the Indus artisans into a standard ornament worn as a bangle or possibly carried as a ring of office.'

³⁹³ U. Franke-Vogt, "Inscribed Bangles: An Enquiry into Their Relevance," in *South Asian Archaeology 1985*, eds. K. Frifelt and P. Sorensen. Scandinavian Institute of Asian Studies, Occasional Papers No. 4 (London: Curzon Press, 1989).

Vidale, "The Archaeology of Indus Crafts: Indus Craftspeople and Why We Study Them," *IsIAO, Italiano per l'Oriente*, (Rome, 2000), 69.

"The fact that this technology disappeared with the Indus elites is evidence for the total success of this strategy of secrecy and control. Even today after almost ten years of experimentation, we have not been able to replicate these unique stoneware bangles perfectly."³⁹⁴

Dr. Kenoyer notes that the tradition of wearing bangle can yield information about the social status, ethnic identity, and religious affiliation of the people who wore them.

In Harappan burials, thin, fragile shell bangles, for example, can suggest among other things a more genteel life for their owners than the less breakable, thicker ones worn by women who were maybe obliged to perform heavy work. The secret of production of these bangles disappeared with the end of the Indus cities and did not reappear again in South Asia. In recent years Dr. Kenoyer and other Indus scholars have tried to reconstruct the process by using a combination of traditional methods, experimental reconstruction, and ethnographic studies to unlock the secrets of their manufacture. In the 1970s Dr. Kenoyer identified the shell species used for making shell bangles after conducting various experiments he produces some ornaments using tools that were available in the third millennium BCE. He suggests that artisans first removed the interior of an ovate shell with a stone or metal hammer and a metal pick or punch. Then they cut off the irregular anterior portion with a convex bronze saw (similar to one used in West Bengal yet today), leaving a hollow, circular piece from which circlets could easily be cut.³⁹⁵

Dr. Wright notes,

'Stoneware bangle production was truly innovative because it took advantage of previously known techniques such as selecting and processing specially refined clays and reduction firing. With minimal changes, potters altered conditions in kilns and created an entirely new product.'³⁹⁶

Again, the technique was lost until it was reconstructed by recent archaeologists. The secretive behaviour of the artisans and the scarcity of these bangles suggest that they were among the Harappans most valued possessions.³⁹⁷ Kenoyer and Vidale have observed, that unlike bangles produced from other raw materials, many of the stoneware ones bore personal inscriptions, etched onto their exteriors before or after firing.³⁹⁸

³⁹⁴ Kenoyer, *Ancient Cities of The Indus Valley Civilization*, 75.

³⁹⁵ *Ancient India: Land of Mystery*, (Alexandria, Virginia: Time-Life Books, 1994), 22.

³⁹⁶ Wright, "Technology and Style in Ancient Ceramics," in *Ceramics and Civilization: Ancient Technology to Modern Science*, Vol. 1, ed. W. D. Kingery (Columbus, OH: American Ceramic Society, 1985), 5-25.

³⁹⁷ Wright, *The Ancient Indus*, 158.

³⁹⁸ Kenoyer, *Ancient Cities of The Indus Valley Civilization*, 75.

Vidale, *The Archaeology of Indus Crafts: Indus Craftspeople and Why We Study Them* (Rome: IsIAO, 2000), 90

These bangles were produced from highly refined clays under strictly controlled temperatures and atmospheric conditions, creating “a strikingly fine, ceramic material, closely resembling opaque porcelain”. It was extremely difficult for modern researchers to duplicate and it was only in the 1980s that Vidale and his Pakistani colleague M. A. Halim laid the ground work, mentally reconstructing stages which were required for this process. They hypothesized that unfired bangles were first set in small containers, or saggars, and that several saggars were then stacked within a larger vessel placed on terracotta rings in a kiln for firing. Kenoyer with the help of a Pakistani potter Mohammad Nawaz tried to replicate the stoneware bangles on the basis of the research conducted by Vidale and Halim. For their experiment, they built kilns based on archaeological evidence as well as ones based on pure speculation, as no known Harappan stoneware kiln has yet been found.³⁹⁹

The process of bangle making begins with refining the clay, through a complex process in which the clay was highly refined through levigation.⁴⁰⁰ Then the refined clay was shaped into hollow clay cylinders on a potter’s wheel and the bangles were cut from the cylinders. These bangles were then hardened in the air, returned to the wheel where they were refined with tools and then fired in cylindrical pottery containers called saggars, which were stacked and encased in a large jar. Firing in airtight sealed saggars provided optimal control of atmospheric conditions and the attainment of higher temperatures.⁴⁰¹ Higher temperatures were achieved using dried goat dung, rather than cattle dung, valuable advice by Mohammad Nawaz to achieve results similar to Harappan examples.⁴⁰² The final product had a hard, uniform-textured surface that when broken had a glasslike fracture. Harappan bangles were produced in two colours, with a standard inner diameter of 5.5-6 centimeters.⁴⁰³ Black-gray bangles were produced in sealed containers (saggars) in a reducing atmosphere; these conditions lowered the melting temperature, sintering the clay and giving the bangles a shiny metallic luster.⁴⁰⁴ Red bangles were produced by using different clay compositions, firing at

³⁹⁹ *Ancient India: Land of Mystery*, 23.

⁴⁰⁰ J. M. Blackman and M. Vidale, “The Production and Distribution of Stoneware Bangles at Mohenjo-Daro and Harappa as Monitored by Chemical Characterization Studies,” in *South Asian Archaeology 1989*, in the series *Monographs in World Archaeology*, ed. C. Jarrige, no 14 (Madison: Prehistory Press, 1992), 37-44.

⁴⁰¹ Wright, *The Ancient Indus*, 159.

⁴⁰² *Ancient India: Land of Mystery*, 23.

⁴⁰³ Upinder Singh, *A History of Ancient and Early Medieval India*, 160.

⁴⁰⁴ Vidale, *The Archaeology of Indus Crafts*, 90-2.

lower temperatures, or by altering the atmospheric conditions by opening the saggars (see Figure III.2.6).⁴⁰⁵

A stoneware workshop at Mohenjo-Daro was discovered in an abandoned residential area of the city. Evidence of post holes (wood stains in the soil), indicate that the artisans erected wooden structures within the walled area thereby enclosing the workshop space. Storerooms collapsed brick walls of kilns and damp heaps were found within the workshop's walls. The damp heaps contained pieces of kiln linings, vitrified ash, overfired bricks, and the saggars in which bangles were fired. The kilns were large and rectangular in shape and contained a suspended grid with holes.⁴⁰⁶ The artisans reused bricks and pre-existing walls to make their kiln. Since the kilns have not yet been excavated, it remains unclear whether the stoneware bangle kiln fits with any of the other kiln types.⁴⁰⁷

Crafts - Ceramics

The ceramics produced by the Harappans were their most basic and important utilitarian craft, with abundant material found at all Indus sites. They include a wide range of pottery vessels and objects of daily use, serving a variety of functions: containers for liquid and dry food, for storage and for transport of products over long distances. Over a hundred different varieties of pots are known, the majority were used for ordinary pursuits like, cooking, serving, eating, and bathing. The vessels had a vast range of forms, from large storage vessels with pointed base for fixing in the ground to smaller jars, bowls, dishes, offering stands, cylindrical vessels and perforated jars.⁴⁰⁸ Others were used for more specialized tasks, such as trade transport (like the jars discovered in Oman and the United Arab Emirates). According to Mery,⁴⁰⁹ chemical analyses have shown that the transport jars found in the Arabian Peninsula were produced in the Indus, most probably at Mohenjo-Daro and Harappa.

Natural clays were abundantly available at most Indus sites. The potters demonstrated significant skills by pushing the natural clays beyond their normal workability range. The pottery was manufactured on a fast wheel and was made of finely levigated clay. It was well and evenly fired to different shades of red. The Harappans decorated their pottery employing a

⁴⁰⁵ Wright, *The Ancient Indus*, 159-60.

⁴⁰⁶ Vidale, *The Archaeology of Indus Crafts*, 90-2.

⁴⁰⁷ Wright, *The Ancient Indus*, 160.

⁴⁰⁸ Wright, *The Ancient Indus*, 153.

⁴⁰⁹ S. Mery, "Les Ceramiques d' Oman et l' Asie Moyenne: Une archeologie des échanges a l' Age du Bronze," *CRA Monographies* 23 (Paris: CNRS Editions, 2000).

colourful and exotic range of pigments, some of which were locally available in waterborne sediments, while others were procured from distant places.⁴¹⁰

Several types of ceramic kilns have been discovered: the open air, this pit, the single chamber, and the double-chambered up-draft kilns. Dr. Wright describes them in her recent book,

“Open air kilns can be dug into a sloping surface such as the one discovered at Nausharo dated between 2500 and 2400 BC., to encourage a strong draft and more even firing. Pit kilns, examples of which were found at Harappa, involved digging a shallow pit into a flat surface with openings at one end either to feed in fuel or to facilitate the escape of air. Generally, this type is smaller and has lower vessel capacity than the open kilns. The pit kiln at Harappa contained “cakes, lumps, and stones... [that would absorb] ... heat early in the firing sequence, then radiate heat as the fuel was consumed.”⁴¹¹

It was most likely used for firing small vessels or figurines, according to Dales and Kenoyer.⁴¹² Double-chambered kilns have been discovered throughout the Indus territory. At Harappa, a kiln located on the northwest corner of Mound E is a typical two-chambered kiln. Double-chambered kilns contain a lower chamber for fuel and an upper chamber where the pots were placed. They are built with central pillars that support the floor of the open chamber, thereby separating it from the fuel chamber. Since the separation of the fuel chamber from the setting area makes it possible to regulate heat and air intake, potters are able to control temperatures and atmospheric conditions to a greater degree than with any of the other types. In a double-chambered kiln excavated near Mehrgarh, at Lal Shah, a regulating hole connected the chamber with the exterior of the kiln, making it possible for the potter to view conditions in the interior of the chamber and thus to control the circulation of heat.⁴¹³

The pottery produced in these types of kilns demonstrates high level of skill. Some were simple wheel-made vessels, while others were cylindrical forms that were raised from a single lump of clay. There were other pots that were produced in a single shape but were made different by applying different surface textures. Some other pots, like a black jar used for transport, required greater skill and were produced in sections. For their production a mold was used to form the base of the jar. After drying in air, this base was placed on a potter's wheel,

⁴¹⁰ Wright, *The Ancient Indus*, 153-154.

Mughal, *The Indus Valley: 3000-1500 BC*, 53.

⁴¹¹ Heather M. - L. Miller, “Pottery Firing Structures (kilns) of the Indus Civilization during the Third Millennium BC,” in *Prehistory and History of Ceramic Kilns*, eds. P. M. Rice and D. W. Kingery, *Ceramics and Civilization*, Vol. VII (Columbus, OH: American Ceramic Society, 1997), 41-71.

⁴¹² G. Dales and J. M. Kenoyer, “Excavations at Harappa 1991,” *Pakistan Archaeology* 27 (1992): 31-88.

⁴¹³ Wright, *The Ancient Indus*, 154-6.

and a middle section was added. Finally, an upper section, also produced on the wheel, was added. The joining of the two sections occurred at just the right moment when the drying clays were still wet and pliable but sufficiently dry to be stable. The ability to produce a pot in different sections displays a high level of expertise and knowledge of the clays used. The joins were later smoothed over, both from the inside and outside, to leave minimum signs of joining. Later, after drying, they were coated on both sides with a thick application of fine clay mixed with iron oxide pigment to produce the black exterior and the red interior colour of the pots, a technique based on the manipulation of atmospheric conditions in the kiln.

While the majority of the pottery produced was left plain, a substantial part was treated with a red slip and black-painted decoration. Dr. Mughal remarks that, “Not only the pottery forms but also the painted designs in black on bright red slip were standardized reflecting craft specialization and a measure of control.”⁴¹⁴ Polychrome pottery was rare. Abstract geometric motifs were (scale, leaf or petal designs) comparatively unusual when compared with natural designs (of birds, fish, animals, plants, trees and pipal leaves). The Allchins report,

“Varieties of the ‘animal in landscape’ style are by no means rare. As with the uniform repertoire of forms of the Harappan potter, so the painting often has a utilitarian quality and a kind of heavy insensibility. On the other hand, some pieces show remarkable delicacy of line and artistic feeling, as for the pots from Lothal. This quality may indicate the existence of regional variations.”⁴¹⁵

Towards the end of the Indus civilization the ceramic production and art underwent changes in which new forms and frequent use of bichrome painted designs appeared.⁴¹⁶

The development of pottery in the Indus is evident in its phases. For example, the pottery of the Urban Phase represents a blend of the ceramic traditions of Baluchistan on the one hand, and of those of India, east of the Indus (as exemplified in Fabric A at Kalibangan) on the other. Although the Urban Phase pottery shares its wheel, kiln and firing patterns with Baluchistan, yet it developed its own somewhat stolid character, less sensitive or exciting than the finest Baluchi pottery, but competent and self-assured.⁴¹⁷

The different developmental phases show a growth through time help and this craft evolved into a full-fledged profession, that later played a role in the Indus economy.⁴¹⁸ They

⁴¹⁴ Mughal, *The Indus Valley: 3000-1500 BC*, 53.

⁴¹⁵ Allchin, *The Rise of Civilization In India and Pakistan*, 199.

⁴¹⁶ Mughal, *The Indus Valley: 3000-1500 BC*, 54.

⁴¹⁷ Allchin, *The Rise of Civilization In India and Pakistan*, 198-9.

⁴¹⁸ What role this profession played in the economy of Indus will be discussed later, once I have covered the main crafts of Indus.

also have cultural affiliations with nearby regions towards the northwest and southwest of Indus valley civilization, as shown in the decoration.

Painting on pottery appears almost from the beginning of ceramics in Baluchistan. The most common elements were linear or simple geometric designs, as early as Mundigak III, but animals were also occasionally represented.⁴¹⁹ The art of pottery painting seemed to have reached its peak in the vicinity of Baluchistan in the late fourth and early third millennium BCE, with the graceful fish or animals of the polychrome Nal ware, the naturalistic friezes of animals or pipal leaves of Mundigak IV, the “Animals in landscape” motifs of Kulli ware, recalling the “Scarlet” ware of Diyala and Susa in southwest Persia and many more. This whole development in pottery painting shows strong Iranian parallels, and many of the patterns and motifs, can in a general, rather than a precise way, be paralleled in Iran. Therefore in the broadest terms it can be suggested that Baluchi style of pottery appears as a regional development.⁴²⁰ During the Early Indus Phase, painted pottery included motifs recalling the Togau C ware that were probably contemporary with Anjira III-IV, while from the final phase of this period comes a beautiful painted sherd with a humped Indian bull and another vessel painted with a row of quadrupeds, two of which appear to be goats and one a carnivore, perhaps a cheetah or a dog.⁴²¹ The painted pottery during the early levels of Amri and Kot Diji was of a distinctive character with a restrained use of painted decoration. It was mainly wheel-thrown, and most of it was decorated with plain bands of dark or brownish paint, a motif with bands of loops and wavy lines appear to develop into the well known fish-scale pattern, which later appears on Harappan pottery. In Amri II and in the later levels of Kot Diji I many characteristic Harappan forms occur. Archaeologists have a clear typological evolution of the principal forms throughout the period. As far as the painted pottery is concerned, the common bichromes with red-, sepia- or black-painted decoration on cream slip, parallels were found in Mundigak III and IV. A small number of vessels had distinctive painted motifs.⁴²²

The four final Periods (IV-VII) of Mehrgarh show a further development in pottery styles, for example, period IV shows affinities with Damb Sadaat I and the earliest stages of Amri I, during which fine wheel-thrown pottery with monochrome, bichrome and polychrome decoration is visible. Period V is known for its painted grey ware pottery reminiscent of the

⁴¹⁹ Allchin, *The Rise of Civilization In India and Pakistan*, 103.

⁴²⁰ *Ibid.*, 140.

⁴²¹ *Ibid.*, 141-2.

⁴²² *Ibid.*, 145-6.

Zari ware of Kalat, while during period VI pottery styles are typical of “Quetta style” and “Faiz Muhammad” a grey ware with various decorative designs including some examples of the use of pipal leaf and fish motifs. The seventh and last period of Mehrgarh indicates specialized craft activities. The pottery of this period shows a development of the previous period, that is to say, the developed Quetta characteristics of Damb Sadaat III, relations with Mundigak IV and Shahr-i-Sokhta II, and, most significantly, elements of early Kot Diji and Amri IIB. Therefore, one can see alongside the continuing developments with that of the Quetta valley a new tendency towards a Kot Dijian character. A new interprovincial style was spread throughout a large part of the Indus system.⁴²³ At Rehman Dheri, very large numbers of graffiti occur on the pottery of all periods and excavators have questioned whether these may not be the forerunners of Harappan script. There are many other places in northern and southern Punjab where we find no break in the sequence of pottery development but rather a gradual evolution, with an increase in the characteristics of Kot Dijian pottery. The areas where it is found not only include Harappa and Jalilpur, but according to the field research conducted by Dr. Mughal, include the desert belt area south of Bahawalpur in the Ghaggar-Hakkar dried river beds.⁴²⁴ At Kalibangan pottery development during the same early period was somewhat different.

“The range of forms and painted motifs differs quantitatively from those of either Amri or Kot Diji, although a proportion shares an important element, particularly with the latter. As at these sites some features anticipate the Harappan ware, including the presence of such forms as the offering stand. The predominant pottery (Fabric A) is red or pink with black, or bichrome black and white painting. Among the painted motifs may be noted a distinctive arcading, a ‘moustache-like’ bifold scroll also found at Kot Diji, as well as occasional plants, fish and cattle. A number of features anticipate the Harappan Wares, such as the internal incised decoration upon bowls, and offering stands. One group of pots of Fabric B shows a surface roughening technique somewhat similar to the Quetta ‘Wet’ ware, but sometimes overpainted with animal or other motifs. Another group (Fabric D) has elaborate incised or combed decoration on the inside of open bowls or basins, a technique seen occasionally in Amri II. On the whole the pottery of Fabric A is distinct, while that of Fabric B, C, D and E is closer to that of the Early Indus pottery of Kot Diji, both in point of manufacture and of painted decoration – mainly in the form of plain bands of red and black. One of the most remarkable finds of this period was a ploughed field surface with furrows in two directions.”⁴²⁵

The pottery discovered by Ghosh at many sites in the valley of the Ghaggar (Sarasvati) River and its tributary, was apparently identical to the pre-Harappan pottery of Kalibangan. The excavations done by Professor K. F. Dalal have also revealed further sites, which clearly

⁴²³ Allchin, *The Rise of Civilization In India and Pakistan*, 147-8.

⁴²⁴ *Ibid.*, 151-6.

⁴²⁵ *Ibid.*, 158-9.

establish the existence of an Early Indus complex extending right up to the Indian border, closely paralleling with sites that were reported by Dr. Mughal in the Cholistan area of Pakistan.⁴²⁶

The early phase of Indus ceramics and ceramic painting is summarized by Bridget and Raymond Allchin,

“We have already introduced the concept of varying stylistic provinces in relation to ceramic decoration. We can now take this idea one step further, for in the regional variants of the Indus system we encounter a further province, which is characterized by several elements. On the western borders there is considerable Baluchi influence, while on the eastern there is the development of a style which for the moment we may refer to as ‘Eastern Indus’. During the Early Indus period the painted wares from sites in the Dera Jat, such as Gumla and Rahman Dheri, show individual character which differentiates them from contemporary Baluchistan. Alongside polychrome patterns there are occasional figural representations, and symbolic subjects, including examples of bull’s and buffalo’s horns with accompanying pipal leaves, and remarkable fish motifs. Slightly later, these sites share the more austere painting of the central Indus sites, as represented by Tarakai Qila in Bannu, and by Kot Diji and early Harappa. In all these, plain bands of black or red occur with occasional wavy lines, either singly or in groups. Thus it appears as though there is a development still related to Baluchistan, but increasingly removed from it. On the eastern periphery, Kalibangan shows a somewhat similar combination of the austere style with other elements. The buffalo-horned head or ‘diety’ is common to all three areas, as are flower-petal motifs, fish, cattle and repeated arches or arcades, often with dissecting, wavy or diagonal lines. There are also clear anticipations of elements of the following Mature Harappan style, including the distinctive ‘fish scale’ motif.”⁴²⁷

All the developments in pottery design that occurred during the early phase of Indus civilization must be seen as a formative stage that led to more refinement during the mature or urban phase. The mature phase pottery represents a blend of the ceramic traditions of Baluchistan on the one hand, and those of Pakistan and east India on the other. Culturally to some extent people of Indus have always been connected with areas towards the West (Iran and Mesopotamia)⁴²⁸, as is evident from some of the motifs painted on pottery that are similar

⁴²⁶ Ibid., 160-1.

⁴²⁷ Ibid., 161-2.

⁴²⁸ Dr. F. A. Khan, *The Indus Valley and Early Iran* (Karachi: Ministry of Education, Department of Archaeology and Museums, Government of Pakistan, 1964), 12-3.

Dr. F. A. Khan talks about this connection, keeping in view the southern route between Indus Valley and Iran and Mesopotamia, “Throughout the Iranian plateau a system of caravan routes links the different provinces. The main routes naturally ran from trade centre to trade centre, and the distribution of ancient sites must be related to them. In the north the main line of communication is the west-east highway across the Iranian plateau and along the Elburz range to Merv and Heart. No less important is the southern route which connects Susiana and the Bampur valley, extending to Shahi-Tump and Kulli in Baluchistan and Mohenjodaro in the Indus Valley. Parallel with the northern route to the Oxus and more direct, this southern land route between Mesopotamia and the Indus valley traversed the length of central Iran through Kirmanshah, Hamadan, Sultanabad, Qum, Kashan, Yazd, Kerman, and Bampur, and then passed through central Makran to the basin of the Indus. It was along this line of communication that in antiquity the early emigrants from Iran entered Baluchistan. This is clearly the most important route linking the north-west to the south-east, and along it from Baghdad to Bampur. In Prehistoric times, it would seem that this was an easy route, because it skirted the desert following the slope of the Zagros and passed through flourishing towns and villages. Its possession by the Arabs in later times accounts for their rapid advance into the Indus valley in the 8th century AD. From Susa, along this highway, the province of Fars was reached.”

in both regions, and also because Baluchistan has always been considered to be a part of a greater whole, which also includes Iran.⁴²⁹ Dr. F. A. Khan talks about these similarities and connections,

“Here the ceramic products of Tall-i-Bakun show some features of resemblance to the ‘Quetta Ware’. The early culture of the Bampur valley sites in south-east Iran also shows unmistakable affinities with the cultures of Shahi-Tump and Kulli. The notable feature is the painted pottery, red and buff, with designs such as humped bulls, tiny horned goats and plants with broad leaves. These decorative elements confirm the relation with a similar stage of ware appearing at the Kulli culture sites, and at Karchat, Shahjo-Kotiro and Chanhudaro in the Indus valley. This technique seems to have originated in Sialk III-5 and Hissar IC and to have developed at Nineveh during the Jemdet Nasr period. At a later date, these characteristic features were carried to the east to leave their influence from Kerman to Seistan, Makran, Baluchistan and the Indus valley. Thus, we are dealing with a main route which in antiquity linked south-west and south-east Iran with the former province of Baluchistan and the Indus valley of Pakistan. Extensive surveys and explorations in these areas make it comparatively easier to follow its further course in Pakistan.”⁴³⁰

Beside the painted motifs, the foot-wheel that is still in use in Sind and parts of Punjab, Saurashtra, and the Khyber Pakhtunkhwa, is probably a legacy of the mature Indus Phase, as it closely resembles the modern foot-wheels that are found across Iran and into Mesopotamia today as they were probably in ancient times too.⁴³¹ This foot-wheel is different from the Indian spun-wheel, which was found towards the east of the Indus. Thus, in cloth making the areas west of Indus were most definitely connected with regions towards their west.

Seals

Seal making was another important Harappan craft, but like other crafts of early societies, this craft was also well known in the contemporary of southern Mesopotamia in the Near East and at many Iranian sites. According to Pittman these are the ‘hallmark artefacts’ of these ancient civilizations.⁴³²

Seals were made in many different materials, but the seals made in steatite bear eloquent testimony to the superior craftsmanship and technical achievements of the Indus artisans,

⁴²⁹ Lakshmi Chatterjee, *Heritage of Harappa*, 1 (New Delhi: Global Vision, 2005), 37.

For example, the pipal leaf is a basic motif on pottery in the Helmand Valley (Mundigak Period III) Fort Sandeman area (Periano Ghundai) and the Quetta Valley (Damb Sadaat II) and also occurs regularly in the so-called Kulli culture region of southern Baluchistan. None of the cultural units in these highland regions can be identified as Harappan, but still it is possible that the name for the pipal leaf motif may have been derived from its Indus River Valley name and that this name was common throughout the Borderlands for other parallels in pottery motifs within the Borderlands. This may be the case with many other words, and be as much part of the process of “Indianisation” as was that of its west to east counterpart “Iranisation”.

⁴³⁰ Dr. F. A. Khan, *The Indus Valley and Early Iran*, 12-3.

⁴³¹ Allchin, *The Rise of Civilization In India and Pakistan*, 197-8.

⁴³² H. Pittman, “Glyptic Art of Period IV,” in *Excavations at Tepe Yahya, Iran 1967-1975*, ed. by D. Potts (Massachusetts: Peabody Museum of Archaeology and Ethnology, 2001), 231-68.

because of the realism and vitality of the subjects engraved on them.⁴³³ The imagery on the seals can be studied according to its functions; its role in economic life, as examples of Indus art, as examples of undeciphered Indus Script, and for its religious symbolism.

Seal production was widespread throughout the Indus Valley, as many unfinished seals and blanks are recovered at large and small sites. Among all the seals produced in the Indus, the square and rectangular seals made from fired steatite are the most extraordinary category of objects bearing Indus script.⁴³⁴ They demonstrate specialized skills and the technical knowledge required to produce them.⁴³⁵ Engraved square seals have a broad distribution at Indus sites and are present in the greatest number from the earliest phases of urban development (2500 BCE) to its latest.⁴³⁶

The manufacture of Indus seals was fairly uniform and involved a combination of reductive and pyrotechnological techniques. Dr. Wright explains the process; the seals were cut using copper or special stone tools and carved with ‘thin-pointed copper-bronze chisels’.⁴³⁷ The whitish outer surface (referred to as “glazed”) is thought to be the result of soaking the prepared seals in a chemical solution and subjecting them to heat, possibly in kilns and perhaps at temperatures as high as 1,000 degrees centigrade. This technique hardened the stone, making the seal more durable. Even then, the repeated use of a clay seal eventually wore down the corners and smoothed away the sharp edges of the script. Many worn seals have been found buried in the houses or in the streets of the major cities. The seals were mass produced and over twelve thousand were found at Mohenjo-Daro alone.⁴³⁸

Square seals had a fairly standard composition. They usually have a line of script along the top of the seal (suggesting that the seal carvers were either literate or worked in association with individuals who were),⁴³⁹ and a carved animal in the central portion. The animals depicted on the seals, are usually male, and include domestic and wild animals as well as mythical⁴⁴⁰ or

⁴³³ Mughal, *The Indus Valley: 3000-1500 BC*, 56.

⁴³⁴ J. M. Kenoyer, *Ancient Cities of The Indus Valley Civilization*, 73.

⁴³⁵ Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 160.

⁴³⁶ D. Frenez and M. Tosi, “The Lothal Sealings: Records from an Indus Civilization Port Town at the Eastern End of the Maritime trade Network across the Arabian Sea,” *Studi in onore di Enrica Fiandra, Contributi di Archeologia Egea e Vicinorientale*, ed. Massimo Pernaa (Paris: diffusion de Boccard, 2005), 65-103.

⁴³⁷ Wright, *The Ancient Indus*, 160-4.

Vidale, *The Archaeology of Indus Crafts*, 62.

⁴³⁸ Kenoyer, *Ancient Cities of The Indus Valley Civilization*, 73.

⁴³⁹ Wright, *The Ancient Indus*, 164.

⁴⁴⁰ Kenoyer, *Ancient Cities of The Indus Valley Civilization*, 73.

artistically⁴⁴¹ created creatures such as the so-called unicorn (see Seal III.2.1). Besides the script and animal, a third item is often shown in the bottom corner of the seal; it has been identified variously as a small feeding trough, an offering stand, a cage or a bowl and as having some kind of religious or ritual significance (see Seal III.2.2). On the reverse is a perforated carved knob or boss with a thick cord (see Seal III.2.3). It has been suggested that a large square seals with sharp corners and a boss at the back do not hang in a manner that would have been comfortable; therefore they would have been kept in a pouch, while the smaller ones could have been either hung from the waist or worn around the neck without much inconvenience. During the manufacturing process minute cracks and weakness of the soapstone on the interior of the seal, often later resulted in the snapping of the perforated knob and the seal itself would be lost. The seals of the Indus are found in a variety of contexts that offer different explanations of their usage. These different functions have been outlined on the bases of archaeological evidences as its script cannot be read. Bridget and Raymond Allchin suggest that the importance of the seals is doubtlessly linked in some way with their role in trading activities of the Indus civilization.⁴⁴² This idea is backed by Dr. Kenoyer, who further suggests that the seal was like the credit card of today, once lost it could be reused by any individual for any purpose, if the writing and animal motif on it were intact.⁴⁴³ Dr. Wright writes about the places where Indus seals have been found relating to trade activities. Although seals that travelled great distances are limited, the presence of Indus seals or motifs associated with them extends as far afield as Mesopotamia where sealings, lumps, or “tags” from applying a seal to a pliable material also have been found. At the site of Umma, for example, a clay lump with an impression from an intaglio seal depicting a unicorn and Indus script is one such instance.⁴⁴⁴ Other seal impressions or seals with Indus motifs are found at sites near the Mesopotamian coast (at Ur, Lagash) and inland (at Tell Asmar), accessible on coastal and overland routes. Indus-type seals (some with unconvincing Indus script) have also been found in western Iran at proto-Elamite sites, in Central Asia, and in the coastal Arabian Peninsula. The largest number of sealings impressed with a stamp seal or tablet were discovered at an Indus site of Lothal. Of a total approximately 130 to 140 sealings known in the Indus, 93 have been found at Lothal, a

⁴⁴¹ U. Franke-Vogt, “The Glyptic Art of the Harappa Culture,” in *Forgotten Cities on the Indus*, eds. M. Jansen et al. (Mainz: Verlag Philipp von Zabern, 1991), 179-87.

⁴⁴² Allchin, *The Rise of Civilization In India and Pakistan*, 201.

⁴⁴³ Kenoyer, *Ancient Cities of The Indus Valley Civilization*, 73.

⁴⁴⁴ Asko Parpola, *Deciphering the Indus Script* (Cambridge: Cambridge University Press, 1994), 13.

possible trading port located in Gujarat.⁴⁴⁵ Based on their shapes, they were used for various locking or securing devices, either for doors or storage spaces, while some appear to have been affixed to movable structures like crates or architectural elements. As Dennys Frenez and Maurizio Tosi have noted, the use of seals and sealings at Lothal is conceptually related to a “transcultural administrative sealing system,” used in the storage and safe-keeping of objects and known since the sixth to fifth millennia BCE throughout the Middle East and is widespread among cultures contemporary with the Indus civilization.⁴⁴⁶

Scholars today are not sure what the people of the Indus civilization did once a seal was lost, but a change in seal design during the latter part of the Harappan period suggests that they did change the design of the seals, so they would not snap off so easily. In Mesopotamia, when a seal was lost, a herald announced its loss and the date so that any use of the seal after that announcement would be invalidated.⁴⁴⁷

The long rectangular seals (see Seal III.2.4) were a little different; instead of a boss; they had a hole drilled from the side across the width of the seal for wearing it. Even this did not stop the seal from either been lost or breaking into two pieces. A broken seal was useless for not only its owner but also for any individual who found it and most of the seals that have been found by archaeologists are broken. Some seals may have been intentionally broken by their owners, so that they could not be reused illegally.⁴⁴⁸ Their discard may indicate a kind of death of the seal, the end of its utility, or may reflect the owner of the tablet, their change of status, or death, or the passing of an amount of time during which the seal was considered current. However, the life of seal and its owners most likely differed, and its use may have depended upon the type of seal.⁴⁴⁹

The complete seals found on excavated streets are almost always without the boss, while those found buried in the floor of a room or courtyard are often heavily worn and usually have the boss intact. According to Dr. Kenoyer, this suggests that people occasionally lost their seals while walking or riding through the city, but they usually broke the seals when they were

⁴⁴⁵ D. Frenez and M. Tosi, “The Lothal Sealings: Records from an Indus Civilization Port Town at the Eastern End of the Maritime trade Network across the Arabian Sea,” *Studi in onore di Enrica Fiandra, Contributi di Archeologia Egea e Vicinorientale*, ed. Massimo Pernaa (Paris: diffusion de Boccard, 2005), 65-103.

⁴⁴⁶ Wright, *The Ancient Indus*, 163.

⁴⁴⁷ Kenoyer, *Ancient Cities of The Indus Valley Civilization*, 73-4.

⁴⁴⁸ *Ibid.*, 73-74.

⁴⁴⁹ R. H. Meadow and J. M. Kenoyer, “The “Tiny” Steatite Seals (Incised Steatite Tablets) of Harappa: Some Observation on Their Context and Dating,” in *South Asian Archaeology 1971*, ed. M. Taddei and G. De Marco (Rome: Istituto Italiano per L’Africa E’ L’ Oriente, 2000), 321-40.

no longer useful or buried them in their homes for safekeeping. No seal has ever been found with any human burial in the Indus valley, again contrasting with the civilizations of Mesopotamia and Egypt, where a person's seal was usually included with the burial offerings.⁴⁵⁰ On the basis of Kenoyer's observation, I suggest that an Indus seal was not only useful during the life time of a person, to become useless once that individual was dead, but in all probability it passed on to next of kin for further usage (like carrying the family name or family occupation).⁴⁵¹

Scholars suggest that the long rectangular seals were less likely to fall off a cord than the square seals, but the change in shape resulted in the elimination of the animal motif, and rectangular seals bear only abstract writing. Dr. Kenoyer comments, that rectangular-shaped seals might have altered communication, as impressions made by the square seals carry two distinct messages, one present in the script itself that could only be read by a literate person and the other in the animal motif, which even a child could comprehend. A change in content would have made the life of illiterate workers difficult, when loading or delivering bundles of goods stamped with these seals. It has been suggested by Dr. Kenoyer that rectangular seals might have been used to communicate with literate trading partners only, as few sealings from long rectangular seals have been found (perhaps these seals were not used in everyday trade and that they had an altogether different function). Another notion not yet confirmed is that these two different seal types may represent a chronological change in seal styles.⁴⁵²

Another study of the motifs on the square Indus seals conducted by Paul Rissman concludes, that trading activity of the Indus civilization was in controlled hands, but whether these hands were controlled by an informal arrangement within a family or communities, or was under rigid bureaucratic guidelines of a governing network is not certain.⁴⁵³ For his study Rissman examined 601 seals from Harappa, Mohenjo-daro, Chanhu-daro, and Kalibangan to determine their stylistic conventions and whether workshops could be identified. For his stylistic study he focused on the composition and iconography of the seals with depictions of unicorns, including such details as "the animal's face, the detail of its ear, the deep relief at the hindquarters, the depiction of the junction of chest and front legs, and the modelling of the

⁴⁵⁰ Kenoyer, *Ancient Cities of The Indus Valley Civilization*, 73-74.

⁴⁵¹ This point will be elaborated while discussing the religious beliefs of the Indus people.

⁴⁵² Kenoyer, *Ancient Cities of The Indus Valley Civilization*, 74.

⁴⁵³ Paul C. Rissman, "The Organization of Seal Production in the Harappan Civilization," in *Old Problems and New Perspectives in The Archaeology of South Asia 2*, ed. J. M. Kenoyer (Madison: Wisconsin Archaeological Reports, 1989), 159-70.

rump.”⁴⁵⁴ While Rissman consider several features, Dr. Wright⁴⁵⁵ in discusses just two of them, the treatment of the head and neck, and the upper section of the so-called standard. Rissman found that with few exceptions the head and neck treatments of the unicorns fell into three types: the ‘collared neck’, with a double line at the animal’s neck that was sometimes hatched; a ‘hatched face’, vertical hatching on the face and neck; and a hatched neck, with vertical hatching that extended the length of the neck (see Seal III.2.5). The motifs of the collared and hatched necks were also found by Franke-Vogt, among major clusters of seals from Mohenjo-Daro.⁴⁵⁶ While examining the upper section of the standard Rissman similarly found repeating stylistic elements. One style had a straight cage with a vertical rectangle and straight or concave sides. A second had a similar rectangular shape but was filled in with a zig-zag motif and is known as the ‘zig-zag cage’. A third style, the ‘rounded cage’ was a rectangle with rounded corners bearing a vertical or horizontal motif. He used these results to conduct more studies, comparing seals from various sites and time periods. He was able to verify his observations based upon style in different areas of the Indus during different phases utilizing statistical analyses. His comparisons, for example, demonstrate that certain styles, such as the hatched face and zig-zag cage, occurred most frequently at Harappa, while the collared neck and straight cage were typical of Mohenjo-Daro or the nearby site of Chanhudaro (but were absent at Kalibangan). As Dr. Wright summarizes,

“These variations and clusters of stylistic elements were sufficiently convincing that Rissman referred to them as “schools” of producers recognizable on a regional level. Based on these criteria, he concluded that several of the seals examined were nearly identical and may have been “either made by the same person, or by two people, one apparently copying the work of the other”. In distinction, when he examined another small group, the engravers used different stylistic conventions suggestive of different producers. On the other hand, the fact that Rissman could identify a limited number of stylistic elements across a significant geographical area meant that styles of representation were “extra-local” in scope, either the result of “rigid bureaucratic guidelines” or more informal mechanisms such as visits among relatives or friends who laboured in separate workshops.”⁴⁵⁷

Complementing the research carried out by Rissman is another study conducted by Vidale of a subset of seals on which a short-horned bull is represented. This short-horned bull may have represented the wild, South Asian bovid (*Bos gauru*). Seals with this image are

⁴⁵⁴ Paul C. Rissman, “The Organization of Seal Production in the Harappan Civilization,” in *Old Problems and New Perspectives in the Archaeology of South Asia 2*, ed. J. M. Kenoyer (Madison: Wisconsin Archaeological Reports, 1989), 159-170.

⁴⁵⁵ Wright, *The Ancient Indus*, 164-5.

⁴⁵⁶ U. Franke-Vogt, “Inscribed Objects from Mohenjo-Daro: Some Remarks on Stylistic Variability and Distribution Patterns,” in *South Asian Archaeology 1989*, ed. C. Jarrige (Madison: Prehistory Press, 1992), 103-12.

⁴⁵⁷ Wright, *The Ancient Indus*, 165-6.

widely distributed throughout the Indus region, although they are rare exceptionally rare at main Indus cities. Vidale believes that the animal icons on seals are social makers. As the short-horned bull was used over a broad area, it must have been an easily identifiable symbol – and according to Vidale, it was adopted by the trading families who left the Indus area in the last half of the third millennium BCE for centres in Southern Mesopotamia and the Iranian plateau.⁴⁵⁸

Vidale's study is further backed by Ernest Mackay⁴⁵⁹ (the original excavator of the city of Chanhu-daro), who suggests that it was populated chiefly by artisans, who were spatially segregated by crafts, and that seal production was restricted to the northern quarter of the town. Mackay provides us with lists of small finds in which unfinished seals were discovered there which are unremarkable when compared to artefacts found in the southern portion of the town (pottery vessels, figurines, shell ornaments and cones, net weights, whetstone, faience bangle, carnelian beads, flint saws, copper knives, and chisels). Only one in the northern sector is in a recognizable structure, having substantial walls, and a bathing platform, otherwise nothing more is known. If the interpretation of Mackay regarding the site layout of Chanhu-daro is correct, then it is obvious that seal production took place in a residential area. The presence of net weights with the seals follows Rissman suggestion that seal production may have been organized on a guild structure or within the context of a family group. The separation of seal production from all other crafts, and the fact that seals are themselves record-keeping devices and a measure of social status suggests, that they were used to assert some level of control. When coupled with Rissman's stylistic analyses, one can neither state with certainty nor rule out the possibility that the workshops were state-administrated. We should remember that Kenoyer and Vidale hypothesized that the organization of bead production at Chanhu-daro was "a centralized production controlled by state institutions or important merchants connected with political elites".⁴⁶⁰ These points will be elaborated in our discussion of the Indus administrative structure in the subsequent pages.

⁴⁵⁸ Vidale, "The Short-horned Bull on the Indus Seals: A Symbol of the Families in the Western Trade?" in *South Asian Archaeology 2003*, eds. U. Franke-Vogt and H-J Weisshaar (Aachen: Forschungen zur Archäologie, 2005), 147-58.

⁴⁵⁹ Ernest Mackay, *Chanhu-daro Excavations, 1935-1936* (New Haven: American Oriental Society, 1943), 38-9.

⁴⁶⁰ Kenoyer, "Early City-states in South Asia," in *The Archaeology of City-states: Cross-Cultural Approaches*, eds. D. L. Nichols and T. H. Charlton (Washington, DC: Smithsonian Institution, 1997), 51-70.

Vidale, "The Archaeology of Indus Crafts", 58.

Wright, *The Ancient Indus*, 184-5.

I have discussed the Indus seals in light of their role in the economic life of the Harappan people presenting the several hypotheses given by Indus scholars on their economic functions. But these seals are also outstanding examples of Indus art. In the words of Benjamin Rowland, "The [(Harappan)] animal seals are among the world's greatest examples of an artist's ability to embody the essentials of a given form in artistic shape."⁴⁶¹

There is no doubt that the animal that is most frequently seen on the Harappan seals is the famous unicorn. According to Raymond and Bridget Allchin it is a humpless bull, which is shown in profile with its horns superimposed on each other and pointing forward. From this feature it has generally been called the unicorn.⁴⁶² Franke-Vogt believes that the bull shown with one horn may either represent a mythical creature or an artistic convention in which two-horned animals are shown in profile as the Allchin's say.⁴⁶³ Mackay, who during the excavations of 1927-1931 at Mohenjo-Daro, unearthed 388 seals with one horned bulls, suggests that the artist may have been trying to portray one horn behind the other, but due to the craftsman's limited skills at depicting perspective, only one horn was indicated.⁴⁶⁴ A similar convention was used on Sumerian seals. This quadruped on the seals according to scholars, can be of interest from two points of views; first, because the schema that is used to depict its head and horns is one that was commonplace in Mesopotamia from Uruk times to the Achaemenid period at least, and second that it appears to be a representation of *Bos primigenius* rather than *Bos indicus*. It is at present not clear whether the bull was merely a loan of a Mesopotamian animal image, or whether it is an actual representation from life.⁴⁶⁵ The second alternative should be discussed in the light of research done by two agricultural scientists Frederick and Elizabeth Simoons. They became fascinated with the contemporary sacrificial bovine, the *mithan*, while working in Assam on the northeastern fringes of South Asia. As part of their study of the *mithan*, they suggested that the type of animal on this seal may represent an *urus* (or "*aurochs*"), a large, extinct, longhaired species of wild cattle, *Bos primigenius*, the ancestor of modern domesticated cattle. Geoffrey Cook thinks it is possible that the unicorn may represent a pre-domesticated form of bull and that the collar, garland and necklace may

⁴⁶¹ Benjamin Rowland, *The Arts and Architecture of India: Buddhist-Hindu-Jain* (London: Hammondsorth, 1967).

⁴⁶² Allchin, *The Rise of Civilization In India and Pakistan*, 209.

⁴⁶³ U. Franke-Vogt, "The Glyptic Art of the Harappa Culture", 179-87.

⁴⁶⁴ E. J. H. Mackay, *Further Excavations at Mohenjo-Daro*: Official Account of Archaeological Excavations Carried Out by the Government of India between the Years of 1927 and 1931 (New Delhi: Government of India Press, 1938), pl. ii.

⁴⁶⁵ Allchin, *The Rise of Civilization In India and Pakistan*, 210.

indicate the fact that it was a sacrificial animal.⁴⁶⁶ On the other hand Bridget and Raymond Allchin state that it was a mythical rather than a real beast and that the less common representations of Indian humped cattle in Indus terracotta sculptures must indicate that they were the main breed in the region. In the sculpture portrayal of hump, horns, head and dewlap is Indian, and it is drawn according to a different schema; it is also occasionally seen in the Middle East, generally taken there as evidence of contact with India. The *Bos indicus* is never accorded the honour of a standard, suggesting that a sacred status was given only to the humpless breed.⁴⁶⁷

The third image on the seal also has different interpretations. Geoffrey Cook suggests that the so-called standard manger, which sits in front of the animal, may in fact be a bale of fodder (the upper object) and the lower object resembles wicker work which may have been sealed to hold water.⁴⁶⁸ Dr. Wright sees the standard as a mysterious object consisting of two parts, an upper element that looks like a cage and a lower part, resembling a bowl.⁴⁶⁹ The Allchins have interpreted it as a standard, a manger or even an incense-burner.⁴⁷⁰ Dr. Kenoyer believes he sees a small feeding trough or mysterious offering stand. While Geoffrey Cook in his article sites the other four interpretations. There are four different opinions attempting to identify this object in front of the “unicorn”. First, both Marshall and Mackay say it is similar to a feeding trough or manger a type which they had seen in Sindh. Second, Simoons and Simoons allude to the work of a previous scholar, Wilhelm Koopers, who connected the objects in front of the unicorn to contemporary offering stands used in central India. Third, another opinion of Mackay’s, the object in question may be a cage for insects or birds, and fourth, is yet another opinion by Marshall that it may, be an incense burner and note that the unicorn always is found with this type of “cult” object; other bovines and other quadrupeds depicted on the seals have either a shallow trough or no cult object at all.⁴⁷¹ Joshi and Parpola believe that this object has ritual significance.⁴⁷²

As Parpola says the interpretation of Harappan iconography still remains a major scholarly challenge,

⁴⁶⁶ Geoffrey Cook, “An Harappan Seal at Berkeley: from Sumer to Meluhha: Contributions to the Archaeology of South and West Asia in Memory of George F. Dales Jr.,” ed. J. M. Kenoyer, *Wisconsin Archaeological Reports* 3 (1994), 199.

⁴⁶⁷ Allchin, *The Rise of Civilization In India and Pakistan*, 210.

⁴⁶⁸ Geoffrey Cook, “An Harappan Seal at Berkeley, 199.

⁴⁶⁹ Wright, *The Ancient Indus*, 164.

⁴⁷⁰ Allchin, *The Rise of Civilization In India and Pakistan*, 209.

⁴⁷¹ Geoffrey Cook, “An Harappan Seal at Berkeley, 203.

⁴⁷² Wright, *The Ancient Indus*, 164.

“Looking through the first volume of the *Corpus of Indus Seals and Inscriptions*, it is clear that male bovines were important symbols to the people of the Indus Valley Civilization. The Harappans seem to have been an integral yet marginal part of the ancient West Asian cultural area where the bull was a central motif. Even today in Hindu South Asia, the bull is an important symbol, for example Nandi as the vehicle for Siva. There seems to be continuity in the symbolic importance of the bull/bovine in antiquity from West Asia eastward and especially in South Asia where it continues in the modern era. Please note there are clearly carved collar, garland and necklace on the “unicorn”. Sacrificial animals in village India are often garlanded and decorated in similar ways today.”⁴⁷³

Frederick and Elizabeth Simoons write that several types of cattle had ritual significance to the Harappan people.⁴⁷⁴ They point out that the Rig Veda, the earliest text of the Indo-Aryan speaking communities of India, refers to the capture of wild cattle for ritual sacrificial. In these Vedic texts, the bull is a symbol of masculine virility. The Vedic texts are the earliest decipherable literature from the former area of the Harappan culture, and it is not known how much influence Harappan ideas had upon the people who compiled the Vedic texts. However, it is clear that both cultures had cults in which the bull was a significant symbol. As was true of the bulls of the Vedic period, those of the Harappan period seem to have been involved in fertility rituals to which their slaughter was primary.⁴⁷⁵

There are seals depicting other animals, like the elephant, the bison, the rhinoceros, and the tiger; although they are also part of Indus art such representations are few in number when compared with the bull motif. Of special interest is a considerable group of seals with ‘cult’ motifs evidently containing material of a religious character, such as the meditating yogi (see Seal III.2.6) that will be discussed in Chapter 3.3 and Chapter 3.5. The craftsmanship of these seals is generally excellent, and the cult scenes show originality.⁴⁷⁶

The first focus of any viewer is on the aesthetic quality of the Indus seal, but the inscriptions engraved in the top register of the square seal is very important although the Indus script remains the biggest mystery of this civilization. Over 4000 different objects with the Indus script have been found, and most of these some 3500, come from the sites of Mohenjodaro and Harappa.⁴⁷⁷ Most of the preserved writing appears on seals and sealings (seal impressions), but some is found on copper tablets, copper and bronze implements, pottery, and

⁴⁷³ J. P. Joshi and A. Parpola, *Corpus of Indus Seals and Inscriptions I*, Collections in India (Helsinki: Suomalainen Tiedekatemia, 1987).

⁴⁷⁴ Frederick J. Simoons and Elizabeth J. Simoons, *A Ceremonial Ox: The Mithan in Nature, Culture and History* (Madison: University of Wisconsin Press, 1968).

⁴⁷⁵ Geoffrey Cook, *An Harappan Seal at Berkeley*, 203.

⁴⁷⁶ Allchin, *The Rise of Civilization In India and Pakistan*, 212.

⁴⁷⁷ J. M. Kenoyer and Richard H. Meadow, “New Inscribed Objects from Harappa,” *Lahore Museum Bulletin* (Oct., 1995): 3.

some other objects. Almost all the inscriptions are very short consisting on average of five signs, while the longest one has twenty-six signs. Early studies related to these inscribed objects have led many scholars to assume that the script emerged fully formed and did not show any significant change over time. This is probably a false conclusion, the result of the inadequacies of earlier excavations that did not record the stratigraphic context of objects.⁴⁷⁸

Recent excavations have changed this thinking and now archaeologists suppose that the earliest known use of Indus signs extant were etched on Ravi and Kot Dijian pottery sherds discovered at Harappa (Figure III.2.7-8). The use of script on pot sherds to convey messages continued throughout the Indus periods, but on early sherds there is only one sign etched on a vessel, whereas later there were as many as five signs.⁴⁷⁹

The early use of script signs or graphemes takes the origin of this writing system back hundreds of years to the Chalcolithic period, when the artisans were painting and incising symbols on pottery and other goods. The most common motifs at that time included various plants, animals, and abstract geometric shapes, such as lines, circles and triangles. Two ideas about the meaning of these markings are that they might have either been used for magical protection or as an identification of ownership. Similar types of abstract symbols and simple pictograms appear on pottery and other media throughout the ancient world, from Egypt to China, but according to Richard Meadow and J. M. Kenoyer, there is no direct cultural connection between them and with symbols occurring in the Indus valley.⁴⁸⁰ Dr. Wright and other scholars argue that the presence of this early use of script-sign is a clear indication that writing originated in the Indus among a population in which at least some inhabitants continued to be part of the later civilization - suggesting that from an early set of signs the written language became increasingly complex.⁴⁸¹ This idea is also backed by Kenoyer and Meadow who observe that the early signs continued to be used on pottery even after the appearances of longer inscriptions and clearly shows continuity in the use of the same types of graphic symbols from the Early Harappan to the later Harappan Period.⁴⁸²

⁴⁷⁸ Upinder Singh, *A History of Ancient and Early Medieval India*, 169.

⁴⁷⁹ Wright, *The Ancient Indus*, 186.

⁴⁸⁰ J. M. Kenoyer and Richard H. Meadow, "New Inscribed Objects from Harappa," *Lahore Museum Bulletin* (Oct. 10, 1995): 2.

⁴⁸¹ Wright, *The Ancient Indus*, 186.

⁴⁸² Although we know that Indus script was invented around 2600 BCE, we do not know if it was invented at a single settlement or through the efforts of elites at several different settlements? It appeared at a time when the Indus cities were being consolidated and unified into a single culture, clearly associating writing with the major changes that were occurring in social, political and ritual organization.

J. M. Kenoyer and Richard H. Meadow, "New Inscribed Objects from Harappa," *Lahore Museum Bulletin* (Oct., 1995): 2.

Recent excavations at Harappa have also provided us with a chronology for the script/signs that was missing before. Most decoration on early pottery consists of simple lines and geometric shapes that may have no connection with the later script, but a few others which clearly are related to known Indus writing symbols. The sample of early Harappan inscribed objects is small, but nevertheless, they do represent the earliest forms of writing (and in later years they will be of greatest importance in understanding the evolution of these graphemes/symbols). The earliest example of writing has been recovered on a broken steatite seal in the lowest levels of the Harappan Phase occupation (period 3A) on Mound E, dating to around 2600 BCE.⁴⁸³ The carving on the seal is bold and angular and, consisting of a single sign above the rump of a buffalo or short-horned bull. This exact sign or grapheme has not been found on any later seal, but a more rounded and symmetrical form of it does occur on molded tablets. The animals carved on later seals are more naturalistic with smoother contours that reflect the actual muscles of the animal. Thus, as the style of carving evolved over time, the signs also may have changed over time.⁴⁸⁴

The problem of recording the contexts (stratigraphic recording and chronological ordering by the earlier excavators) in which the graphemes were found has also been countered in the recent excavations at Harappa, which have defined the different contexts. Now we can sort out the complex problems of identifying where seals and inscribed objects were used in the city: whether, it was in the major streets leading into and out of the city gateway, the craft workshop areas or near the houses in the high walled areas. Some houses contained lots of seals and inscribed objects, while others have very few, and some do not have any at all. For example, in one pottery manufacturing area at the northwest edge of Mound E no seals or tablets with any inscriptions were found, while in a bead and shell working area of Mound ET, excavators found a number of inscribed objects.⁴⁸⁵

The Indus script appears on various objects answering the question of what and how it was used, but what the graphemes were used for remains to be answered. Dr. Kenoyer discusses this point,

“After reviewing the different ways in which the script was used, we see several patterns emerge. First, only certain people owned seals and few people were literate. Nevertheless, the script was generally used

⁴⁸³ J. M. Kenoyer, “Urban Process in the Indus Tradition: A Preliminary Model from Harappa,” in *Harappa Excavations 1986-1990*, ed. R. H. Meadow (Madison: Prehistory Press, 1991), 29-60.

⁴⁸⁴ J. M. Kenoyer and Richard H. Meadow, “New Inscribed Objects from Harappa,” *Lahore Museum Bulletin* (Oct., 1995): 3-4.

⁴⁸⁵ Kenoyer, *Ancient Cities of The Indus Valley Civilization*, 77.

in a manner that was openly visible to the general public. For example, seals were probably worn and used in public, and graffiti was openly visible on trade vessels.⁴⁸⁶

Upinder Singh backs this idea by noting, some seal impressions were impressed onto small moist clay tablets known as sealings, probably by merchants to authenticate their bales of merchandise.⁴⁸⁷

“Writing was used in everyday contexts as well as for religious purposes, but the presence of script on gold jewellery, copper tools and stoneware bangles suggests that only the very rich and powerful wrote their names or attributions on personal objects. Objects with writing were scattered n all parts of the city, and almost every settlement of the Indus valley has produced one or more seals or inscribed objects. A large signboard from Dholavira shows large writing, but most inscriptions are small or miniature.”⁴⁸⁸

Upinder Singh adds that this may or may not indicate a high level of urban literacy, but it does indicate a civic use of writing.⁴⁸⁹

Perhaps the most important recent discovery is that the style of writing and carving of seals changed over time: small tablets without animal motifs but with script, come from the middle to late part of the Harappan Phase. These patterns indicate that writing was not static but a dynamic invention that had permeated every aspect of urban life. Landowners, merchants, religious leaders, administrators and professional artisans were probably the only people who owned or used the inscribed seals,⁴⁹⁰ but many of them may not have been able to read or write. Nevertheless, everyone in the society understood the power and authority reflected in writing, and its use throughout the Indus and Saraswati regions reveals a period of cultural and economic integration. The writing would have reinforced this integration and validated the power of the ruling classes. In combination with religious symbols and narratives the writing would have legitimized the power of the people who used it by associating them with supernatural powers.⁴⁹¹ The writing on the seals is associated with symbolic animals representing clans or possibly trading communities. The most common animal, the unicorn, is mythical, and the other animals must have had some important symbolic meaning. On the small tablets, writing and occasional narrative scenes are on a miniature scale, but they probably illustrate public rituals or events that were viewed by the entire community or city. Some tablets may have functioned as ritual tokens or souvenirs,⁴⁹² not unlike the molded or inscribed amulets available at the tombs of saints or at important shrines in Pakistan and India today. In all of the many ways in which writing was used, it is

⁴⁸⁶ Ibid., 77-78.

⁴⁸⁷ Upinder Singh, *A History of Ancient and Early Medieval India: From The Stone Age To The 12th Century*, 170.

⁴⁸⁸ Kenoyer, *Ancient Cities of The Indus Valley Civilization*, 77-78.

⁴⁸⁹ Upinder Singh, *A History of Ancient and Early Medieval India: From The Stone Age To The 12th Century*, 170.

⁴⁹⁰ Ibid., 170.

They might have used them like the modern identity cards of today, worn only by well to do people of the society.

⁴⁹¹ This religious or ritualistic function of the tablets is also backed by other Indus scholars.

⁴⁹² J. M. Kenoyer and Richard H. Meadow, “New Inscribed Objects from Harappa”, 9.

In one of their combined article Dr. Kenoyer and Richard Meadow further state, “Since these tablets were not used for making impressions, they could have served as ritual tokens, credit slips, or contracts for business transactions. Many of the tablets appear to have been snapped in two pieces, and may indicate a custom that is common in later historical times, where the symbol of a contract is broken into two pieces and each party carries one half to verify the agreement. A snapped terracotta tablet with a rhinoceros motif and two script signs was found from Mound E at Harappa, and two identical tablets, one of which is also snapped have been discovered at Mohenjo-Daro, in DK area and in VS area (DK5770, M446, VS 3513, M447). The discovery of this broken tablet at Harappa may indicate that these and other tablets were carried by merchants or officials from one city to the other, but the precise meaning of the tablets remains to be determined.”

closely associated with cities, trade and ritual.⁴⁹³ Writing and seals remained important to the political and ritual elites as long as the trade networks and cities continued to exist.”⁴⁹⁴

Sometimes the stamp seals did not include script, suggesting that certain messages could be conveyed without the written symbols. Other objects had narrative scenes in which script may or may not be included, again leads one to suggest that the motifs themselves conveyed sufficient information. Other devices known as tablets have several sides and are decorated with script. Beside these, graphemes appear on stoneware bangles, pottery, bronze tools, and copper tablets, in addition to one signboard found at Dholavira.⁴⁹⁵ If we count all the graphemes found on these various objects, there are no more than four hundred (a number thought to be too high to indicate syllabic script, where about 100 signs are common; only fifty signs are used in alphabetic scripts).⁴⁹⁶ Therefore it is assumed by some linguists that the script is logo-syllabic, and such a script can only be deciphered if the language that it represents is known. At present no modern language can be directly traced to the Indus script, but most scholars agree that it belongs to the Dravidian language family. Today over twenty-five Dravidian languages are presently spoken in the subcontinent, which include Tamil, Telegu, Kannada, and Malayalam. Most of these languages fall under the category of central and southern Dravidian and are mostly spoken in areas of peninsular India and northern Sri Lanka, areas that were never part of the Indus cultural zone. A branch of north Dravidian, called Brahui is still spoken in Baluchistan and southern Afghanistan today, this region that is at the western edge of the Indus Valley and was also part of the Indus cultural zone. Traces of Dravidian words are still found in the southern Indus Valley in the names of rivers and many Dravidian loan words are found in ancient Sanskrit (the Indo-Aryan language of the Rig Veda).⁴⁹⁷

Some scholars have taken these assumptions as a starting point for the decipherment of the Indus script. For example, Parpola begins with the premise that the Indus script is of a logo-syllabic type and that it belongs to the Dravidian family. Using these two premises as working hypotheses, he has interpreted various Indus pictograms by establishing the meanings of individual signs through a comparison of ancient Indian languages and mythology and

⁴⁹³ Rita P. Wright, *The Ancient Indus*, 185.

Dr. Rita also talks about the power of writing in her book, “Literacy in ancient societies is often presumed to be associated with leadership since the use of writing is considered to have been a means of controlling transactions and management.”

⁴⁹⁴ Kenoyer, *Ancient Cities of The Indus Valley Civilization*, 77-78.

⁴⁹⁵ Wright, *The Ancient Indus*, 186.

⁴⁹⁶ Asko Parpola, *Deciphering the Indus Script: Basic Methodology and Some Sample Interpretations* (Tokyo: Indian Archaeological Society, 2000), 1-16.

⁴⁹⁷ Kenoyer, *Ancient Cities of The Indus Valley Civilization*, 78.

symbolism in Mesopotamia, but there is still no consensus on his findings.⁴⁹⁸ Other scholars disagree with this Dravidian consensus, and suggest that even if this hypothesis turns out to be correct, other languages may have been used for writing the Indus script. Dr. Kenoyer comments about this development,

“In Mesopotamia, Sumerian and Akkadian, two different languages were written with the same cuneiform writing system (as most modern European languages are written in the same script). Today, several different major languages are spoken in regions that were once under the influence of the Indus cities. Austro-Asiatic, Sino-Tibetan and Indo-Aryan are the most important language families, but there are also words belonging to the mysterious language “X” which cannot be associated with any modern linguistic family. If individuals who spoke these other languages moved to the Indus cities and became established as merchants or landowners, their names and the names of their deities may have been written using the Indus script. In addition to the presence of different language families, there were undoubtedly many different dialects spoken throughout the Indus Valley. During the Early Historic period in South Asia many people spoke more than one dialect. For example Sanskrit was spoken in the ritual and administrative contexts whereas regional Prakrit dialects were spoken at home. Although it is possible that the Indus script represents the formal language spoken by elites, some names and words could reflect local dialects that varied from region to region. Consequently, if the writing on the seals does represent more than one language or dialect, we cannot decipher it until a bilingual text or a dictionary has been discovered.”⁴⁹⁹

If according to Dr. Kenoyer, proto-Dravidian is the major language component of the Indus script, we can take a second step by isolating some root words that are shared by all of the different Dravidian languages. As these root words represent a hypothetical language called proto-Dravidian, from which all of the various Dravidian languages supposedly evolved. Root words usually refer to a concrete concept, which is represented by a picture of that object, but abstract concepts must be communicated phonetically by using pictures of objects whose names could be combined to produce the intended word. This technique of communication is based on the rebus principle and the most common English example is the use of the symbol for “bee” and “leaf” to create the word “belief.” This rebus principle of using symbols for concrete objects to create a word for an abstract concept was commonly used in both Egyptian and Mesopotamian writing systems.⁵⁰⁰

Dr. Kenoyer further suggests that Proto-Dravidian root words were originally monosyllabic, therefore using the rebus approach, scholars have identified key words that may represent the general meaning of specific Indus signs.

“The most convincing example is the fish sign. The Dravidian root for fish is “min” and the same word means “to glitter, flash or shine.” The fish sign combined with six single strokes is very common in the

⁴⁹⁸ Rita P. Wright, *The Ancient Indus*, 186.

⁴⁹⁹ Kenoyer, *Ancient Cities of The Indus Valley Civilization*, 78-79.

⁵⁰⁰ Kenoyer, *Ancient Cities of The Indus Valley Civilization*, 78-79.

Indus writing, and could be translated as “aru min” or Six Stars, which would represent the constellation Pleiades. Another common occurrence is the fish sign with seven strokes. In Dravidian this would translate as “elu-min” or Seven Stars, which is the name for the constellation of Seven Sages (Ursa Major or the Big Dipper).⁵⁰¹

This argument sounds plausible, but it can only be accepted when there is some way to check or confirm the meaning or the grammatical sequence of words, which can either be achieved by the discovery of longer texts or a text that is bilingual. Indus scholars await such discoveries. It is known that the Sumerians in Mesopotamia were curious about other languages and that they were bilingual, some knew both the ancient Sumerian and the more modern Akkadian. Around 2350 BCE, during the Akkadian Period, text speak about translators, as “language-turner” or later “word-turner”.

Accounts have also been found that refer to specialists who were engaged in “turning the languages” of Meluhha during the Akkadian period. In later period there were “travelling interpreters”.⁵⁰² A related phrase was “tongue interchange”.⁵⁰³ The scholar I. Mahadevan is also looking for bilingual texts that might correlate the Harappan language with later Indian languages.⁵⁰⁴

Until today scholars have been unsuccessful in deciphering the Indus script and we may never know the specific meaning of the script or who could read or write it. However, there can be no doubt that it played a significant role in the lives of the Indus people. To conclude in the words of Kenoyer and Meadow,

“The Indus script represents a shared set of symbols and a shared system of beliefs that was spread out over an extremely large geographical area and these shared beliefs played an important role in the integration of the urban and rural populations. Continued work on the Indus writing is essential for understanding the complex social, economic and ideological mechanisms used to unify the diverse populations of the Indus cities.”⁵⁰⁵

Recent excavations at Harappa suggested that the Indus script disappeared between 1900 and 1700 BCE. It is further suggested that it disappeared when the elite who used it as means of communication for trade and in rituals were no longer dominant, (it was proposed earlier that the graphemes were used exclusively by a small but powerful segment of the

⁵⁰¹ Ibid., 78-79.

⁵⁰² W. W. Hallo, “Bilingualism and the Beginnings of Translation,” in *Texts Temples and Traditions*, eds. M. V. Fox, V. A. Hurowitz, A. Hurvitz, M. L. Klein, B. J. Schwartz, and N. Shupak (Winona Lake: Eisenbrauns, 1996), 345-57.

⁵⁰³ Wright, *The Ancient Indus*, 186-7.

⁵⁰⁴ For details about this hypothesis, see I. Mahadevan, “Terminal Ideograms in the Indus Script,” in *Harappan Civilization*, ed. G. L. Possehl (New Delhi: Oxford and IBH, 1982), 311-20.

⁵⁰⁵ J. M. Kenoyer and Richard H. Meadow, “New Inscribed Objects from Harappa,” *Lahore Museum Bulletin* (Oct., 1995), 16.

population and did not play a critical role in the lives of the common people). The seal carvers lost their jobs. It seems as people no longer needed it, even when a new elite emerged with the rise of new cities in the Ganges valley around 300 BCE; it was not revived for the Sanskrit-speaking Brahman priests, landowners and merchants who did not write (or did not know how to write), because they believed in memorising the scriptures. When Ashoka (first Emperor in ancient India) set up pillars and massive boulders inscribed with royal edicts to communicate with the masses around 250 BCE, he did not use the Sanskrit language (of the elites), but the edicts were written in two local dialects. 'Kharosthi' and 'Brahmi'. Kharosthi is based on Aramaic (the language of the Achaememid Persian Empire) and Brahmi is derived from a western Semitic script. Brahmi script has been found on postsherds in Sri Lanka, dating back to 500 BCE, which predates the Ashokan edicts in India.⁵⁰⁶ It is still not known how and who invented these two scripts, but when they appeared, they represented fully developed writing system. Scholars believe there is no direct connection of these two scripts with the earlier Indus script, but who knows what surprises future studies might have for us.

Thus, the Indus civilization covered an enormous area within which there was great ecological variety; it included alluvial plains, mountains, plateaux, and sea-coasts. The key to success did not only lay in the ecological resources available, but also in the people of the Indus who exploited these diverse ecological resources not only to meet their needs but were motivated to broaden the agricultural base. The potential of this area was great enough to generate the food surpluses that are an important aspect of urbanization in any society. Diversity may have been an important sustaining factor in the growth of the civilization, as if one food resource failed, people could easily turn to others.⁵⁰⁷ The most dramatic change with respect to food production occurred sometime between 3200 and 2000 BCE, on the alluvial plains, when all the Indus settlements, urban or rural ranging from cities to small villages and towns, riverine or coastal, seemed to be integrated in the food production processes. Two complementary types of agriculture were practiced during a one-thousand-year period in the Harappan region, one in which crops were grown in winter and another in summer, although winter cropping predominated. Animals continued to be used as in the early periods, with principal changes involving greater dependence upon domesticated species, innovations in selective breeding,

⁵⁰⁶ Kenoyer, *Ancient Cities of The Indus Valley Civilization*, 77-78.

⁵⁰⁷ Upinder Singh, *A History of Ancient and Early Medieval India: From The Stone Age To The 12th Century*, 156.

and in the exploitation of animals for their secondary products, such as dairy, traction, and wool.⁵⁰⁸

The continued effort by the people of the Indus according to S. A. Weber, promoted a cultural change: now people had to deal with new issues of storage, trade and the centralized control of food supply.⁵⁰⁹ D. Q. Fuller believes that certain foods during this period might have taken on “prestige associations”⁵¹⁰ as, “... cuisine often functions as a “prestige technology,” it may effectively increase social hierarchy and provide motivations for the adoption of new foodstuffs, including novel forms of preparation and new cultivars.”⁵¹¹

Many new habitats (like the Beas settlements) might have been explored based on the diversification seen in both crops and animals. The changing nature of productive systems might have increased the social relations between the producers and consumers. All these developments might have ensured the long-term survival of engaged communities and given them the ability to face risks of crop. The increased interaction between producers and consumers might have led to the creation of economic exchange systems that became inseparable from the social relationships that underline them.⁵¹² According to M. W. Helms, in ancient settings the control of products and provisioning of food and objects were often major factors in the development of varied political economies, offering the potential to confer prestige, political influence, and symbolic material wealth as had been the case in the Mesopotamian civilization.⁵¹³

Craft technologies grew in pace with the agricultural changes. There was a great variety of standardized, mass-produced craft items at different Indus sites - The artefacts found were far greater in quantity and range and show greater technical finesse than those from earlier periods. It has been noted that some sites specialized in the production of a single or a few items, whereas others, such as Harappa, manufactured a wide range of goods. It has also been noticed that craft activity was often localized in a certain part of the settlement. Therefore, it seems that the Indus economy included large-scale and smaller-scale production systems, a

⁵⁰⁸ Wright, *The Ancient Indus*, 176.

⁵⁰⁹ S. A. Weber, “Archaeobotany at Harappa: Indications for Change,” in *Indus Ethnobiology*, eds. S. Weber and W. R. Belcher (Lanham: Lexington Books, 2003), 175-198.

⁵¹⁰ D. Q. Fuller, “Indus and Non-Indus Agricultural Traditions: Local Developments and Crop Adoptions on the Indian Peninsula,” in *Indus Ethnobiology*, eds. S. Weber and W. R. Belcher (Lanham: Lexington Books, 2003), 243-396.

⁵¹¹ Wright, *The Ancient Indus*, 177.

⁵¹² Wright, *The Ancient Indus*, 177.

Upinder Singh, *A History of Ancient and Early Medieval India: From The Stone Age To The 12th Century*, 157.

⁵¹³ M. W. Helms, *Crafts and the Kingly Idea: Art, Trade, and Power* (Austin: University of Texas Press, 1993).

diversity of products, a vibrant mix of professions and that a significant segment of the population was likely engaged in these craft activities. All of which indicates that individuals and communities at large had broader social roles and different positions.⁵¹⁴

The intensification and specialization during the Mature Harappan Phase, in both the agro-pastoral and craft-producing economies of the Indus, raise many questions about the ways in which these economies were organized, and how the distribution and internal exchange systems of plant, animal, and craft products worked. Questions that occurred to Dr. Wright are:

“What social changes underlie the processes of intensification and specialization and these important advances in the economy? Were Harappans specialist’s independent producers who controlled and distributed their own products or were these controlled by others? And is it possible to discern the exchange systems that had developed around the raw materials and finished products they produced?”⁵¹⁵

According to Dr. Kenoyer, it has been suggested that state control may have been responsible for the high level of standardization in crafts that were considered to have a value in maintaining the socio-economic or ritual order and which used non-local raw materials and highly complex technologies (for example, the making of seals, stoneware bangles, and stone weights).⁵¹⁶ Whereas Dr. Upinder asks,

“What is the explanation of the high level of standardization in crafts such as pottery-making? Does it imply centralized control by merchants or rulers? Some element of central direction is suggested, but its nature and degree are far from certain. If not direct, it may have taken the indirect form of facilitating or controlling the flow of at least some of the raw materials and finished goods. On the other hand, the level of standardization could also indicate the fanning out of hereditary craft specialists over large areas, or a well-developed network of internal trade. It is possible that crafts-men and traders may have been organized in corporate groups similar to guilds, but there is no proof of this.”⁵¹⁷

Lastly Dr. Wright in her latest book on Indus devotes a whole chapter to find answers to these questions and concludes by analyzing that the Harappan agricultural and pastoral system had great variability with respect to the types of networks within which goods and services circulated. Both local and regional patterns suggest that while aspects of agricultural production, for example the communal harvesting and processing of grains, do suggest possible control of resources exercised by a limited segment of the population, but this control need not have been centralized because it might also have involved more limited groupings of people in

⁵¹⁴ Wright, *The Ancient Indus*, 177.

Upinder Singh, *A History of Ancient and Early Medieval India: From The Stone Age To The 12th Century*, 158-62.

⁵¹⁵ Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 178.

⁵¹⁶ Kenoyer, *Ancient Cities of the Indus Valley Civilization*, 149-50.

⁵¹⁷ Upinder Singh, *A History of Ancient and Early Medieval India: From The Stone Age To The 12th Century*, 163-64.

neighbourhood or kin group contexts. Moreover, small-scale processing within individual households most likely must have also existed.

Therefore, the increase in surplus production of plants, animals, and crafts must have provided opportunities for access to new and varied resources, control of production and distribution, and ultimately to the development of social and political hierarchies. This is again a situation of variability, where whether on the local or more global level, there were potentials for hierarchies that must have existed among agriculturalists and pastoralists in urban and rural contexts and among settlers in rural areas. Some good examples in this context are the pastoral nomads and hunter-gatherer groups that moved about the region's ecologically diverse landscape, contributing trade items most likely in exchange for agricultural and pastoral products. These interactions among the producers and consumers, though variable, can very likely be translated into relations of power.⁵¹⁸

While Dr. Wright's stance with respect to craft production indicates that the process of production organization was not uniform.

"Instead, various crafts and production systems were absorbed in the urban economy in different ways. The crafts discussed demonstrate a range of organizational types, including independent (ceramic production on Mound E at Harappa), administered (stoneware production at Mohenjo-Daro), and some type of corporate control, perhaps administered or organized in guildlike groups for seal production. We still lack an understanding of the relative status of craft producers but are closer to more realistic appraisals of the variability in the social and political relations and the degree to which their social identity was linked to the craft in which they were engaged."⁵¹⁹

Further Dr. Wright states that the adoption of new plants and animals and the production of new crafts can be viewed as social choices among various producers and consumers that helped to facilitate linkages and networks within different communities living throughout the Indus zone.⁵²⁰ This leaves us with an impression that the people of Indus were not only aware of the potential for optimising their economic activities in diverse ecologies, but were indeed carrying out their exchanges quite smoothly without technical hitches. So, the "centralized control" of government that was previously proposed by various Indus scholars is now not only under criticism, but according to the latest research patterns, has openly been refuted to a certain extent. A new pattern based on the development of Indus technical virtuosity and its

⁵¹⁸ Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 178.

⁵¹⁹ Ibid., 213-14.

C. L. Costin and R. P. Wright, eds. "Craft and Social Identity." American Anthropological Association, *Archaeology Division Monograph* 8 (1998).

⁵²⁰ Wright, *The Ancient Indus: Urbanization, Economy, and Society*, 214.

relation to social structure has been proposed by Massimo Vidale and Heather M. L. Miller in a joint paper, which on the one hand asserts a guild system, as suggested by both Dr. Upinder and Dr. Wright, but on the other hand also talks about a “varna system” better known later as the Hindu caste system, which might have been born as its consequence.

Vidale and Miller write of four different trends that cover the entire time span of Harappan Civilization.

“Trend 1 represents the basic technological attitude of a stabilized village community to experiment and innovate with their basic, local resources and raw materials. For the Indus, such a trend should have been well defined at the end of the Mesolithic period. Trend 1 is thus responsible for the creation of the basic technological styles and strategies of early settled communities. Trend 2 would be distinguished by the procurement and exploitation of rare and exotic raw materials for the production of status symbols. We witness this trend in the Early Neolithic graves of Mehrgarh and their ornaments made from lapis lazuli and sea shells. In Trend 3, manufacturing techniques become more elaborated and are applied to local raw materials as well as rare and valuable materials. Greyware pottery is an example of the former, while examples of the latter include the introduction of copper/bronze working, the systematic firing of carnelian, and the elaborate sea-shell bangles of the early Regionalization Era at Mehrgarh. For the Indus region, Trend 3 appears fully displayed in the second half of the 4th millennium BC. Trend 4, finally, affecting the whole course of the 3rd millennium BC and brought to its extreme consequences in the Harappan Phase of the Integration Era, is distinguished by unusually high levels of technical elaboration in craft industries based on cheap, relatively local raw materials.”⁵²¹

Vidale and Miller present a generalized model of social structure in which each trend brings important consequences for the society at large (see Figure III.2.9). They conclude, “In Trend 1, adaptation to settled agricultural economies required millennia of experiments and innovations with the local resources and raw materials. This probably allowed a first, basic definition of major production specialization trends in the Indus communities.”⁵²² According to E. Durkheim, all these changes might have resulted in the differentiation of roles, professions, rights, and ranks within these communities that in return may have been the powerful stimulus behind this efficient integration of village and town communities.⁵²³ Vidale and Miller distinguish Trend 2 in this manner “... the use of exotic materials as prestige signs perhaps indicated the capability of establishing and maintaining not only trade networks, but also strategically important alliances with other settled communities and tribal groups.”⁵²⁴ According to Mary Helms, at a symbolic level, the use of foreign exotic materials coming from

⁵²¹ Massimo Vidale and Heather M. L. Miller, “On the Development of Indus Technical Virtuosity and Its Relation to Social Structure,” *South Asian Archaeology 1997*, eds. Maurizio Taddei and Giuseppe De Marco, Vol. 1, Istituto Italiano Per L’Africa E L’Oriente (Rome, 2000): 115-31.

⁵²² *Ibid.*, 129.

⁵²³ Emile Durkheim, “De la division du travail social”, trans. Sylvie Mesure, *Sociologie* [En ligne] 2, Vol. 4 (Paris: 1893).

⁵²⁴ Massimo Vidale and Heather M. L. Miller, “On the Development of Indus Technical Virtuosity and Its Relation to Social Structure”, 129.

far off areas outside the vicinity of the Indus region might suggest a growing consciousness of the cultural boundaries of an ancient society. This in return might lead towards concluding that the community was progressing.⁵²⁵ According to Vidale and Miller Trend 3, "... is dominated by the consequences of the elaboration of pyro-technologies, allowing not only the production of new powerful symbols of status, but also the manufacturing of new tools and weapons, and, ultimately, the storing and managing of exchange value through dynamic, perhaps aggressive strategies."⁵²⁶ This trend witnessed a growing hierarchical differentiation of communities. Trend 4, according to Vidale and Miller "... is permeated by the need to articulate new roles and ranks in urban communities, creating new complex hierarchies but mediating this process with the need to maintain a pervasive social consensus."⁵²⁷ Such a social consensus is backed by article by both Heather Miller and Whitney Davis, as they propose that was reflected in the personal ornaments of the Indus, with status indicated by the hierarchies of materials used and social unity displayed by standardizations in form and shape.⁵²⁸

Vidale and Miller further propose a final trend seen at the beginning of the 2nd millennium BCE, when the craft industries, typical of Trend 4, were almost completely abandoned and forgotten. It is proposed that Trend 5 lies between the two extreme poles of trend 1 and end 3, that is, community integration and community differentiation which can be imagined as complementary trends. These were the "impossible" goals of the "*varna system*" (of the later caste-based social organizations) - to integrate the most different communities not only through occupational specialization, but also through direct social ranking.⁵²⁹ I will come back to this proposal when concluding my views on the organizational structure of this civilization.

Let's take the discussion further from another aspect, according to Bridget and Raymond Allchin, the products produced by the craftsmen of the mature Harappan Phase exhibit a degree of uniformity similar to that found in their town planning and structure plans. In fact, it is so pronounced that it is impossible to typify as to which craft belongs to which

⁵²⁵ M. W. Helms, *Craft and the Kingly Ideal: Art, Trade and Power* (Texas: University of Texas Press, 1993).

⁵²⁶ Massimo Vidale and Heather M. L. Miller, "On the Development of Indus Technical Virtuosity and Its Relation to Social Structure," 129.

⁵²⁷ *Ibid.*, 129-30.

⁵²⁸ Heather M. L. Miller, "Pyrotechnology and societies in the cities of the Indus Valley," Ph. D. Dissertation, Department of Anthropology, University of Wisconsin, Madison, University Microfilms, Ann Arbor (1999).

Whitney Davis, *The Canonical tradition in Ancient Egyptian Art* (New York: Cambridge University Press, 1989).

⁵²⁹ Massimo Vidale and Heather M. L. Miller, "On the Development of Indus Technical Virtuosity and Its Relation to Social Structure", 130-31.

area. It is still unknown whether this feature was achieved by the centralization of production, linked with efficiency of distribution, or whether by other factors, but in either case it calls for special attention.⁵³⁰ Upinder Singh clarifies their ideas further,

“Earlier writings tended to contrast the plainness of Harappan artefacts with the opulence of their Egyptian and Mesopotamian counterparts. Nowadays, the technological sophistication and beauty of some of the Harappan artefacts is recognized. There is a great variety of standardized, mass-produced craft items at Harappan sites. The artefacts are far greater in quantity and range, and show greater technical finesse than those found in earlier cultural phases.”

By Indus civilization I mean the whole area which includes the urban settlements in riverine, coastal, inland sites, and the range of cities, small villages, and towns. Specialization and intensification also occurred with respect to animal husbandry, pastoralism and foraging in the Indus civilization. This specialization and intensification helped the people to increase the long-term survival of their communities. Dr. Wright describes this situation in these words,

“Resource specialization in agriculture and pastoralism increased availability and variability of food supplies, providing a hedge against risk of failure in an economy increasingly capable of withstanding fluctuations in productivity in any one resource. The interaction with hunting and gathering groups also added to the resource base. Additionally, specialist producers necessarily engage in social and economic networks with consumers and other producers, creating exchange systems that are inseparable from the social relationships that underlie them. In other ancient settings, the control of products and provisioning of food and objects were major factors in the development of a varied political economy, offering the potential to confer prestige, political influence, and symbolic material wealth.”⁵³¹

Craft technologies also grew. The wider variety of utilitarian and prestige products consumed and exchanged suggests that a significant segment of the population was engaged in craft production and distribution. A broader social role existed along with a range of associations among individuals and communities. These changes have wide-ranging social and political implications. Taken together, the Harappan economy included both large-scale and small-scale production systems, a diversity of products, and a vibrant mixture.

These observations by various scholars raise many questions related to Indus economy and its social structure. For example, were Harappan specialists in different fields of its economy independent producers who controlled and distributed their own products or were they controlled by elites or a state authority? This question can only be answered in light of the several examples of crafts so far discussed, keeping their spatial layouts (archaeological

⁵³⁰ Allchin, *The Rise of Civilization In India and Pakistan*, 193.

⁵³¹ Wright, *The Ancient Indus*, 177.

For further details also see, M. W. Helms, *Craft and The Kingly Idea: Art, Trade, and Power* (Austin: University of Texas Press, 2003).

indicators) under consideration. They show there were varied types of production even in the absence of any decipherable written records. For example, the makings of ceramic and stoneware bangles are two ceramic crafts which were organized in two different ways. At Harappa, some pottery-producing groups had been employed in ceramic production for several generations in household workshops, while the stoneware bangle producers set up their workshops away from their households, in an abandoned area of Mohenjo-Daro. It is further supposed that seal-making was a more formalized craft in which producers followed well-defined conventions of composition and style. There were also highly skilled artisans, linked together by family ties, by guild-like fraternities, or by an as yet undefined bureaucratic structure, possibly state-administrated. These three craft organizations are found at several different sites; strongly attest a significant variability in the organization of crafts. Beside these, there are many other crafts - chert (Rohri), *lapis lazuli* (Shortugai), limestone (Gujarat), shell (Makran coast, Kutch and Khambhat), and steatite (Hazara area in northern Aravalli range) that also attest to such variability. The organization of these crafts ranged from independent household production to administrated production.

The purpose behind discussing the various economic factors of the Indus civilization was to understand the working of this system and what role it played in the lives of the people. It was assumed by early Indus scholars that the economy was centralized, but at the same time it was not considered as an integral part of the political economy. This notion is no longer supported by Indus scholars, who on the basis of recent excavations, support the idea that possible tensions and competition with respect to resources such as land and water, access to local and nonlocal resources and labour allocation existed among farmers, pastoralists and craft producers. In spite of these tensions, business coordination also existed between these local and nonlocal groups. This idea is supported by W. R. Belcher's research on the sale of marine fish, which were procured and distributed over long distances, and provide us with an evidence of a well coordinated distribution system within the civilization.⁵³² Dr. Wright writes,

"Taken as a whole, the overall impression is that the people of the Indus were keenly aware of the potential for optimizing their economic activities in a diverse ecology. They openly engaged in networks of exchange from which various raw and finished products, along with plant and animal resources, were drawn. By exploiting diverse ecological zones, they constructed a world that not only maintained but enriched their economy."⁵³³

⁵³² W. R. Belcher, "Fish Exploitation of the Indus Valley Tradition," in *Indus Ethnobiology*, eds. S. A. Weber and W. R. Belcher (New York: Lexington Books, 2003), 95-174.

⁵³³ Wright, *The Ancient Indus*, 213-4.

I believe that during the mature phase of Indus Civilization, there were separate groups of people who engaged in professions that their forefathers had been following for many generations. The professions that they were engaged in, and the knowledge related to these professions, was passed on to them by their ancestors, generation by generation. Their social identity was linked to the occupation that they were engaged in. This social identity could also have been the starting point of the later Hindu caste system, as is proposed by Vidale and Miller. This notion is also backed in an indirect way by Dr. Kenoyer in a paper on “Harappan Craft Specialization and the Question of Urban Segregation and Stratification”, in which his aim is to study the Harappan social organization. Lakshmi Chatterjee notes that,

“Mound E at Harappa was quite suitable for this purpose because the surface evidence indicated craft activity in that area. There is no doubt that earlier scholars had assumed that craft specialization existed in Harappan society, but the recent excavation clearly establishes it. It appears that chert manufacture (blades, weight), ceramics, shell cutting, etc. were carried out on the Mound E area. This was not done at the household level but was the result of extremely complex and involved technologies that would have been known only to a limited segment of the urban population. Specialization had reached the stage where potters were involved in producing specific types of vessels, were not producing the entire corpus of pottery vessels used at the site, and that they operated without any direct control by an external authority. A very important conclusion drawn by Kenoyer is that this craft specialization was hereditary and was the result of social stratification and spatial segregation. The author, however, is silent about the existence of a caste system which he had earlier hazarded.”⁵³⁴

On the other hand, Shereen Ratnagar is quite bold in asserting her point of view that the caste system was prevalent in the Harappan civilization, but she has not adduced any supporting evidence from the excavated remains.⁵³⁵ Her stance is that the Harappan society was a class structured society with the people following their hereditary professions and living in well defined areas in an urban settlement, as is the case in India today. But what is doubtful is whether these classes can be identified with castes of the later historical period.⁵³⁶ I will discuss this notion further, while discussing the administration and religious beliefs of the Indus people.⁵³⁷

Trade

Trade is another important element of the mature Phase of the Indus civilization that shows how the flow and exchange of different resources (agro-pastoral and crafts), both in raw

⁵³⁴ Lakshmi Chatterjee, *Heritage of Harappa* (New Delhi: Global Vision, 2005), 51-2.

⁵³⁵ Shereen Ratnagar, *Encounter: The Westerly Trade of the Harappa Civilization* (New Delhi: Oxford University Press, 1981), 170.

⁵³⁶ Lakshmi Chatterjee, *Heritage of Harappa*, 56.

⁵³⁷ See Chapter 3.5 on the religious beliefs of the Indus people for details.

and finished forms, flowed among different settlements within and outside its boundaries and turned into a full-fledge trading network. The trade contacts of a civilization are an important indicator of its strength and mobility, and the more precise we can be about them the better. Keeping in mind the vast geographical area and its elaborate social structure in mind, the Indus people must have maintained a highly organized and developed system of communication and trade in order to sustain their standard of living. Allchin and Allchin question, “How far trade supplied essentials such as food, and how far it was simply a means of obtaining luxury goods is a question of importance.”⁵³⁸ The trading network, which began during the Early Harappan Phase expanded and strengthened during its Mature Phase, could be the result of not just one but many factors: the procurement of raw materials, the distribution of food supplies, the distribution of finished goods, or the obtaining of luxury items. It seems impossible today to identify any one factor responsible for this growth and expansion. During the urban period the volume of trade and interactions increased, both within and outside the Indus sphere via both land and sea routes.

Internal and External Trade via Land Route

In the absence of deciphered Indus records the nature and scale of Indus internal and external trade over land can be reconstruct by evidence of the network of trade routes that links Indus with its neighbouring regions for the procurement of raw materials and for the exchange of specific items, or from a list of the raw materials used by the people of Indus and the possible areas that could have supplied these materials. The production centres for goods made from the important raw material gives clues about their distribution networks. According to Chakrabarti, “The routes which linked the major sites can be inferred partly on the basis of site distribution and partly on the basis of the ethnographic evidence on the routes of concerned areas.”⁵³⁹

On the basis of archaeological evidence, we know that overland trade took the people of the Indus to the region including modern-day Afghanistan, Iran and Central Asia not only during its Mature Phase, but that there is a long history of trade between these regions that goes back to the time when man first settled there. Archaeological evidence from the earliest levels at Mehrgarh in the form of burial goods comprising of objects made of marine shells and *lapis lazuli* verify this, as does the spread of domesticated plants and animals from southwest Asia.

⁵³⁸ Allchin, *The Rise of Civilization In India and Pakistan*, 183.

⁵³⁹ Dilip K. Chakrabarti, *The Oxford Companion to Indian Archaeology: The Archaeological Foundations of Ancient India Stone Age to AD 13th Century* (New Delhi: Oxford University Press, 2006), 172.

This trend continued even when sites expanded beyond the Baluchistan region towards the plains. But it was during the Mature/Urban Phase that the development of both internal and external movements of raw materials and finished products consolidated. About the distribution Dr. Wright writes,

“There is much variability with respect to the internal distribution systems present and their organizations. Several types have been advanced, ranging from trader/craftpersons and merchants involved in chert procurement to possible state-sponsored, centralized production and distribution of long-barrel carnelian beads from Chanhu-daro. Trade is especially plausible when the Mesopotamian textual sources are considered. The scale of the distribution systems far outweighs anything known from previous periods and clearly was a catalyst in the growth of urbanism at mid-third millennium BC.”⁵⁴⁰

In the Indus civilization the internal trade included local village-town trade and long-distance trade within the Indus sphere, both carried out via land routes using carts, pack-oxen and the river systems. It supplied raw materials to urban craft centres in return for finished goods. An important factor was that it was not dependant on long distance supplies of any basic raw material, as it had everything that it needed either in the distribution area itself or in its nearby vicinities. The River Indus and the Ghaggar-Hakra were presumably the lifelines of riverine trade that must have taken care of the movements of bulky goods like grains, pottery, timber, salt, textiles, etc., whereas carts must have transported less heavy items. It is supposed that trade via carts was expensive when compared with boat portage. I believe that this system must have been very effective and the people responsible for controlling it must also have been highly competent.

The expansion of the Indus settlements to areas like Shortugai in north-eastern Afghanistan underlines the fact that the Indus people had a much larger trading sphere via the land route, one that connected it to non-Indus settlements in central and southern Iran. Possehl has called it the “Middle Asian Interaction Sphere”.⁵⁴¹ It included important regions like Tepe Yahya, Jiroft, Shahdad, Shahr-i Sokhta, Siyalk, and Hissar in central and southern Iran; Mundigak and Said Qala in southern Afghanistan; and Altyn Depe and Namazga in central Asia (see Map III.2.1).

The contacts of Indus people with these regions are recorded in the wide-spread distribution of Indus artefacts. An Indus seal found at Altyn Depe, Turkmenistan is

⁵⁴⁰ Wright, *The Ancient Indus*, 231.

⁵⁴¹ G. Possehl, “Harappans and Hunters: Economic Interaction and Specialization in Prehistoric India,” in *Forager-Traders in South and Southeast Asia*, eds. K. D. Morrison and L. L. Junker (Cambridge: Cambridge University Press, 2002), 62-76.

contemporary to phase (V) of the Namazga culture. It along with etched cornelian beads and ivory was probably taken there by Indus merchants. Evidence of Central Asian merchants at Mohenjo-Daro and Harappa can be determined from the possible remains of Bactrian camels (that may have led caravans from Central Asia).⁵⁴² Contacts with Central Asia accelerated toward the end of the third millennium and beginning of second, when artefacts associated with people from the Bactrian Margiana region were present at a number of Indus settlements. This section is known as the Bactrian Margiana Archaeological Complex or BMAC. Scholars, including P. L. Kohl and J.-F. Jarrige have suggested it extended over a wider area, inclusive of eastern Iran and Baluchistan.⁵⁴³ According to Dr. Wright,

“Contacts with the BMAC includes the presence of stylistic elements and objects associated with Central Asian cultures. At Mohenjo-Daro, for example, Alexandra Ardeleanu-Jansen has suggested that although produced in the Indus the style of representation of several Indus stone sculptures bear similarities to images of males seated in the same postures on a BMAC vessel. Elsewhere at the site of Gilund (30 kilometres from Balathal) recent discoveries include other objects in BMAC style. At Gilund, occupied between 3000 and 1700 BC., 100 seal impressions from round seals with design motifs most typical of the BMAC were discovered near the end of Gilund’s occupation. Similar seals and seal impressions have been discovered in northern (Nausharo and elsewhere) and southern Baluchistan (Kulli sites), and eastern Iran (Shahdad, Shahr-i Sokhta, Bampur). Their presence at Gilund is the first evidence for the interaction of this culture with settlements “so deep within India, which significantly expands the geographic picture”.”⁵⁴⁴

Some early scholars suggest that the intrusion of new materials of the BMAC culture may represent a massive migration of new people into new areas. More recent scholars believe that artefact distributions should be based upon a small number of key objects that alert us to interaction of people over a broad zone. This is backed by the anthropological studies of human skeletons, which show no evidence of any massive population replacement of the Indus population by the BMAC people.⁵⁴⁵

Likewise, contacts between Indus and southern Afghanistan are also based on a wide distribution of Indus artefacts. These include etched cornelian beads found at Mundigak. Indus artefacts, including etched cornelian and ivory beads, cornelian long-barrel beads, bronze

⁵⁴² Irfan Habib, *A People’s History of India 2: The Indus Civilization; Including Other Copper Age Cultures and History of Language Change till c. 1500 BC* (New Delhi: Tulika Books, 2002), 48.

⁵⁴³ P. L. Kohl, *The Making of Bronze Age Eurasia*. (Cambridge: Cambridge University Press, 2007).

J. -F. Jarrige, “Continuity and Change in the North Kachi Plain (Baluchistan, Pakistan) at the Beginning of the Second Millennium BC,” in *South Asian Archaeology 1983*, eds. J. Schotsman and M. Taddei (Rome, 1985): 35-68.

⁵⁴⁴ Wright, *The Ancient Indus*, 229.

Wright quoting, V. Shinde, G. L. Possehl, and M. Ameri, “Excavations at Gilund 2001-2003: The Seal Impressions and other Finds,” in *South Asian Archaeology 2003*, eds. U. Franke-Vogt and H-J Weisshaar, *Forschungen zur Archäologie Ausereuropäischer Kulturen* (Bonn, 2005): 159-70.

⁵⁴⁵ B. E. Hemphill and A. F. Christensen, “The Oxus Civilization as a Link between East and West: A Non-metric Analysis of Bronze Age Bactrian Biological Affinities,” *Paper presented at the South Asia Conference 1994*, Madison, Wisconsin.

objects and cylinder seals with images, of zebus and Indus script have also been found distributed over a broad area of Proto-Elamite Iran (3100-2100 BC). Its main seat was at Susa in south-western Iran. "Proto-Elamite influences had spread to Shahr-i Sokhta and to western Baluchistan, where Proto-Elamite pottery has been found at Miri Qalat. On the other hand, Mature Indus seals have been found at Susa and at the Elamite site of Tepe Yahya in central Iran, suggesting the presence of Indus merchants there."⁵⁴⁶ Indus objects have also been found at Tepe Hissar which lies along the northern route of the Old Khorasan Road leading south directly to Tell Asmar in Mesopotamia, where, too, Indus related objects have been found.⁵⁴⁷ Of special importance and interest are the etched carnelian beads with distinctive decoration and kidney shaped bone inlays and gold disc beads with tubular perforation which have been found at several Mesopotamian sites in an Akkadian context. On the other hand, the early levels of Mohenjo-Daro have yielded a piece of chlorite schist of grayish-green color carved with an interwoven matt and hut design. It has parallels in design and material with several examples reported from Syria and southern Mesopotamia, at Khafaje, Ur, Kish, Adab, Lagash and Mari; from Iran - Susa, Tepe Yahya and Shahdad; and from the Gulf and Saudi Arabia. These findings are dated according to their context to Early Dynasty I to III or (between 2900-2334 BCE). Continuity of these contacts is attested through the findings of distinctive bronze or copper pins or rods with animal and spiral heads; shaft-hole axe adze and socketed singlebladed axes at Mohenjo-Daro, Harappa and Chanhudaro that have parallels with those of the late third to early second millennium BCE, in Iran, Mesopotamia and Anatolia.⁵⁴⁸

So far, we have discussed the internal and external trade of the Indus civilization via land routes; another important aspect of Indus trade involves external trade links via sea with western Asia. According to Dr. Dani, this change from overland trade to sea-trade represents an important shift in relations between Mesopotamia on the one hand and the Arab sea coastal countries and sees the beginning of overseas relations between Oman and the Indus area.⁵⁴⁹ This era also saw the waning of northern trade, as G. F. Dales notes,

"The first half of the third millennium was characterized by wide-spread sharing of technological, aesthetic and cultic knowledge and practices.... Then with the middle of the third millennium there was an abrupt and widespread abandonment of sites from Central Asia through Sistan, southern Afghanistan

⁵⁴⁶ Irfan Habib, *A People's History of India 2: The Indus Civilization; Including Other Copper Age Cultures and History of Language Change till c. 1500 BC* (New Delhi: Tulika Books, 2002), 48.

⁵⁴⁷ Wright, *The Ancient Indus*, 228-9.

⁵⁴⁸ Mughal, *The Indus Valley: 3000-1500 BC.*, 43-4.

⁵⁴⁹ A. H. Dani, "The Indus Civilization and its inter-Relation with Oman in Maritime Perspective," *Journal of Central Asia*, Vol. 15, no. 2 (Dec. 1992): 27.

and northern Baluchistan. This was accompanied by an almost total break in trade and significant cultural interactions across these northern land-routes. Simultaneously we see the rise of the fully urban Harappan civilization in the Indus valley and the establishing of coastal sea trade activities in the Arabian Sea and Persian Gulf.”⁵⁵⁰

There is evidence of simultaneous shifting trading patterns in all regions from Mesopotamia to the Indus valley about the middle of the third millennium BCE. The trade between these two urban civilizations also brought the Persian Gulf region into the sphere of Indus maritime interaction.

The first evidence of Indus sea contacts with the Persian Gulf and Mesopotamia occurred during the mature Indus phase that is in the later part of the third millennium BCE. This was a period of great change and increasing social and cultural diversity in which materials and ideas were exchanged over a broad geographical area. One effect of changes due to the new maritime trade was the establishment of many bridge settlements between diverse ecological zones, landlocked cities, and multiple cultural groups.⁵⁵¹ New geographical connection along the coastal route necessitated new sea-ports that, according to Philip Kohl, interconnected and made an interdependent world extending west to the eastern Mediterranean Sea - including Mesopotamia and Iran - to beyond the boundaries of modern-day India, and from central Asia to the Arabian Peninsula.⁵⁵² The overall effect of these changes was to enlarge economic prospects by placing raw materials and greater trade benefits at their disposal to persuade them to evolve new practices of commerce. The evolution of all these aspects helped in the growth that took place in the Mature Phase of Indus Civilization. It included not only extensive trade linkages but also agricultural and industrial growth. It was necessary to take administrative measures to maintain the pace of growth, such as the promulgation of standard weights and measure, a system of numeral notation and writing practice of sealing commercial goods and the opening of commercial colonies in distant lands, for example, Shortughai and Ras-al-Junayz. As said by Dr. Nilofer Shaikh,

“This eastern extension of the Indus civilization (towards Gujarat and eastern Punjab) as well as wider direct connection by sea with distant lands not only changed the character of the Bronze Age civilization in the Indus land but also gave rise to intermediate sites along with Persian Gulf making them international and there is no doubt that it was the Indus contacts with Mesopotamia (where objects of

⁵⁵⁰ J. Deshayes (Ed), “Shifting Trade Patterns between the Iranian Plateau and the Indus Valley in the Third millennium BC,” *Le Plateau Iranien et l’Asie Centrale des Origins a la Conquete Islamique* (Paris, 1977): 67-78.

⁵⁵¹ Wright, *The Ancient Indus*, 217.

⁵⁵² P. L. Kohl, *The Making of Bronze Age Eurasia* (Cambridge: Cambridge University Press, 2007).

Mature Indus origin have been found) which for the first time involved sea route connections that gave rise to the Persian Gulf.”⁵⁵³

Literary and archaeological evidence from both Mesopotamia and the Indus persuaded the archaeologists to explore the Persian Gulf region. Excavations and researches carried out in Bahrain, Failaka, Tarut, Oman, and eastern Arabia have yielded evidence of the direct trade links of these regions with both Mesopotamia and Indus during the Mature Indus Phase. This interconnected maritime trading world of the late third millennium BCE, is evident from a broad range of sources, but the most reliable are the Summerian and Akkadian cuneiform texts. These Mesopotamian texts (both literary and commercial) cover a long span of history from the mid-third to the early second millennium BCE. The documents refer to a number of places, such as Aratta, Anshan, Dilmun, Magan, Meluhha and Gupin. Out of all these places Dilmun, Magan and Meluhha (see Map III.2.2) seem to have held great importance and, on the basis of literary and archaeological evidence, these places have been identified as Dilmun (Failaka and Bahrain), Magan (Southern Iran, and Oman) and Meluhha (the Indus and the Ghaggar-Hakra valley). Opinions differ among researchers as to the precise location of the polities referred to in the texts as sometimes two names appear at once or a name appear to describe one place, or a name appears to have more than one location, leading to conflicting interpretations. According to Timothy Potts, it is unclear whether textual references are to countries, cities, or towns or whether they are for regions of varying size and definition, for trivial and other ethnically-based territories, as well as for national-states, empires and transnational entities.⁵⁵⁴

The coastline from Mesopotamia to the Gulf along the Arabian Sea is littered with sites bearing evidence of the Indus Mature Period. According to literary texts, copper, *lapis lazuli*, stone beads, ivory items, sissoo wood, mulberry wood, fish-eyes (pearls), peacocks, cotton garments, date palm and onions were imported into Mesopotamia by the seafaring merchants from Dilmun or Tilmun.⁵⁵⁵ Sargon of Agade, a Mesopotamian emperor (ruling 2334-2279 BCE), boast of his ships that came from Dilmun, Magan and Meluhha docked at his bay. Bahrain which has been identified as Dilmun may have served as an entrepot between the Indus and Mesopotamia. This notion is backed by the discovery of a circular stamp seal at Lothal

⁵⁵³ Nilofer Shaikh, “Maritime Contacts of Indus Civilization with the West,” *Journal of Asian Civilizations*, Vol. 27, no. 1 (July 2004): 1-13.

⁵⁵⁴ Timothy Potts, “Maritime Contacts of Indus Civilization with the West,” *Journal of Asian Civilizations*, Vol. 27, no. 1 (July 2004): 1-13.

⁵⁵⁵ Shereen Ratnagar, *Encounters: The Westerly Trade of the Harappan Civilization* (New Delhi: Oxford University Press, 1981).

depicting designs characteristic of Gulf seals but comparable in shape to ones from Chanhudaro in Sindh.⁵⁵⁶ Beside these items, the Mesopotamian texts clearly state that gold and silver was also imported from Meluhha. Textual references about goods imported into Mesopotamia are in line with the archaeological evidence found there. Products include both raw and finished goods, such as pure and arsenical copper, etched carnelian and long-barrel beads, *lapis lazuli*, silver, and shell although none have been archaeometrically sourced. The objects found in Mesopotamia made of lapis were ornaments, statuary, ceremonial gifts, foundation tablets (found in temples), and cylinder seals that were most likely produced by Mesopotamian artisans from imported *lapis lazuli*.⁵⁵⁷ The cubical dice found in a royal cemetery are stylistically the same as those that were known in the Indus valley.⁵⁵⁸

It is commonly believed that many of the objects discovered in Mesopotamia are from Indus centres near the mouth of the Persian Gulf, and therefore that they most likely arrived by sea. Other objects discovered in Mesopotamia might have come by land following the northern track via Iran (the old Khorasan Road), or possibly via Shortugai. The site of Tell Asmar (Eshnunna) in the Diyala region (near modern Baghdad) has yielded several artefacts including two seals indicating Indus contact, as well as *lapis lazuli*, a crystal pendant representing a monkey, inlaid and stamp seals, etched carnelian beads, and a distinctive type of ceramic referred to as “knobbed ware” (see Map III.2.3). Another important discovery, which was noted by Possehl, is that one of the buildings at Tell Asmar has a “privy” comparable to those at Mohenjo-Daro and a drainage system normally associated with the Indus civilization.⁵⁵⁹ Certain motifs such as the bull on Mesopotamian seals have been cited as reflecting Harappan influences.

On the other hand, materials of western origin reported in the Indus are almost negligible, and the texts, too do not refer to exports from Mesopotamia to Meluhha. Dr. Nilofer remarks about this aspect, the only findings showing similarity or actual imports include a few cylinder seals from Mohenjo-Daro, Harappa, and Kalibangan.⁵⁶⁰ Beside these, two seals have

⁵⁵⁶ S. R. Rao, “Shipping and Maritime Trade of the Indus People,” *Expedition*, Vol. 7, no. 3 (Philadelphia, 1965): 30-7.

⁵⁵⁷ Shereen Ratnagar, *Encounters: The Westerly Trade of the Harappan Civilization* (New Delhi: Oxford University Press, 1981), 137.

⁵⁵⁸ *Ibid.*, 146.

⁵⁵⁹ G. Possehl, “Seafaring Merchants of Meluhha,” *South Asian Archaeology 1995*, eds. R. and B. Allchin (New Delhi: Oxford University Press, 1997), 87-100.

⁵⁶⁰ Mackay also discovered three cylinder seals at Mohenjo-Daro, which carried images that were unknown from the Indus seals. They carried images of gharials, short-horned goats, a tree and a bird, possibly a scorpion, and two antelopes. According to him the Harappans had seen the cylinder seals but did not find them useful for the type of packaging that they had developed and that the Mohenjo-Daro cylinder seals were among the few seals produced in the Indus valley. This

been reported from Sibri according to Dani and Snaton, which show local workmanship rather than being actual imports. While one round seal has been found from Lothal in Gujrat (of late Persian Gulf type Dilmun seal) and is considered to be an actual import. Other objects include actual imports such as the chlorite vessels in what is called the "Intercultural style" from Mohenjo-Daro, according to Kohl. Similar vessels copies of these were also found at Tepe Yahya in Iran, where they were manufactured as at Tarut a Persian Gulf Island, where again there is indication of them being manufactured. Such copied vessels are also reported from Susa. One vessel of chlorite with a dot-in-circle design was found during major excavations at Mohenjo-Daro. Such vessels of chlorite were characteristic of Persian Gulf chlorite vessels, called "Serie Recente" and probably had travelled via sea route from the Gulf. As for the intercultural style vessels, which are early probably, they came through Tepe Yahya via the southern land route, as connections by sea were only a later development - when Tepe Yahya's connections ceased and so did its production industry. One pottery jar was also reported from Balakot an Indus site and is considered to be a Persian Gulf import by the excavator Dales; non-Harappan in shape and decoration.⁵⁶¹

Among other items from Mesopotamia found in the Indus lands were barrel weights found at Mohenjo-Daro and Harappa; animal-headed metal pins at Mohenjo-Daro; a toilet set of copper implements at Harappa, and copper axe-adzes at Mohenjo-Daro and Sibri.⁵⁶² Some scholars believe that three motifs found on some Indus seals reflect Mesopotamian influence- the whorl design, a man grappling with two animals, and the gatepost motif.⁵⁶³ According to Ratnagar⁵⁶⁴ and Crawford⁵⁶⁵ other so-called invisible products that do not preserve well include woollen cloth, barely and oil were also imported from Mesopotamia.

interpretation is in line with the cylinder seals found at Kalibangan, where several of the images on that seal are replicated on square seals, suggesting it was not imported.

Wright, *The Ancient Indus*, 223.

⁵⁶¹ Nilofer Shaikh, "Maritime Contacts of Indus Civilization with the West," *Journal of Asian Civilizations*, Vol. 27, no. 1, (July 2004): 3.

A. H. Dani, *Recent Archaeological Discoveries in Pakistan* (Tokyo: UNESCO, 1988), pl. 9.

M. Santoni, "Sibri and the South Cemetery of Mehrgarh: Third Millennium Connections between the Northern Kachi plain (Pakistan) and Central Asia," in *South Asian Archaeology*, ed. B. Allchin (Cambridge, 1984): 52-60.

P. L. Kohl, "The Balance of Trade in South Western Asia in the Mid-Third Millennium BC," *Current Anthropology* 19, no. 3 (1978): 463-92.

G. F. Dales, "The Balakot Project: Summary of Four Years Excavations in Pakistan," in *South Asian Archaeology 1977*, ed.

M. Taddei (Naples: Istituto Universitario Orientale, 1979): 241-74.

⁵⁶² G. Possehl, "Meluhha," in *The Indian Ocean in Antiquity*, ed. Julain Reade (London: Kegan Paul and the British Museum, 1996).

⁵⁶³ Upinder Singh, *A History of Ancient and Early Medieval India: From The Stone Age To The 12th Century*, 168.

⁵⁶⁴ S. Ratnagar, *Encounters: The Westerly Trade of the Harappan Civilization* (New Delhi: Oxford University Press, 1981).

⁵⁶⁵ H. E. W. Crawford, "Mesopotamia's Invisible Exports in the Third Millennium BC.," *World archaeology* 6 (1973): 242-71.

These examples show a significant degree of contact between people living in southern Mesopotamia and the Indus. It is evident that Indus people actually travelled to Mesopotamia and a few may have immigrated to Mesopotamia. Dr. Wright mentions one individual named as Shu-ilishu, whose name is mentioned on a sealing bearing Mesopotamian script (see Seal III.2.7), and he is identified not only as the owner of the seal but as a Meluhha interpreter. The details on the seal depict a seated goddess (an identification based upon her headdress and the throne on which she sits), and two people, perhaps to be identified as Shu-ilishu and his wife, approaching the goddess. The approaching woman is carrying a bucket, which is normally carried by a priest. The two people approaching the goddess are wearing clothing known from Mesopotamian statuary and other seals. They are represented as locals and not foreigners. Someone is seen brewing a drink behind the goddess. This seal belongs to a well-established iconographical group and it has been suggested that it was ready-cut from a seal maker's workshop to which an inscription was later added.⁵⁶⁶ Another interpretation of the image is that the two figures are bringing offerings to a goddess, the man brings a deer and the woman brings a bucket. According to some, the bearded figure, on the knees of the goddess, may evoke the birth of a young god,⁵⁶⁷ while others have suggested that he is Shu-ilishu, symbolically represented as a dwarf seated on the lap of a person of higher rank.⁵⁶⁸ Whatever the seal might represent, the important fact is that it was owned by an individual who belonged to Meluhha and reinforces the idea that commercial or diplomatic relations with the region of Meluhha (Indus) were regular enough to justify the existence of a professional interpreter.⁵⁶⁹

Around twelve other Mesopotamian texts dating from Ur III period (2112-2004 BCE) that refer to a village named *Me Luhha* (written with a determinative ki), suggesting that the village was a trading settlement (a village of trading merchants), whose inhabitants from *Me Luhha* (Indus region) had become acculturated.⁵⁷⁰ These texts cover a time span of approximately forty-five years, suggesting that by the end the inhabitants had become

⁵⁶⁶ R. M. Boehmer, "Die Entwicklung der Glyptik während der akkad-zeit," *Untersuchungen zur Assyriologie und vorderasiatischen archäologie* 4 (Berlin: Walter de Gruyter, 1965).

A. Parpola, *Deciphering the Indus Script* (Cambridge: Cambridge University Press, 1994).

⁵⁶⁷ Joan Aruz, *Art of The First Cities: The Third millennium BC. from the Mediterranean to the Indus* (New York: The Metropolitan Museum of Art, 2003).

⁵⁶⁸ Maurizia Tosi, "The Indus Civilization beyond the Indian Subcontinent," in *Forgotten Cities on the Indus*, eds. M. Jansen, M. Mulloy and G. Urban (Mainz: Verlag Philipp von Zabern, 1991), 111-28.

⁵⁶⁹ Joan Aruz, *Art of The First Cities: The Third millennium BC. From the Mediterranean to the Indus* (New York: The Metropolitan Museum of Art, 2003).

Wright, *The Ancient Indus*, 223-4.

⁵⁷⁰ Asko Parpola and R. H. Brunswig, "The Meluhha village: Evidence of Acculturation of Harappan Traders in Late Third Millennium Mesopotamia?" *JESHO* 20, no. 2 (1977): 129-65.

permanent residents. “These arrangements and the acculturation of Indus traders living in a former trading settlement, now a proper Mesopotamian village, differ from the norm for Mesopotamian’s who lived abroad. Mesopotamian texts tell us that their merchants lived in garrisons and Mesopotamian style households apart from local people.”⁵⁷¹ An Akkadian text of an earlier period also refers to a “man of Meluhha” who was fined due to his involvement in some kind of a dispute. All these texts lead us to suggest that the Meluhhans travelled to Mesopotamia over several generations and that their acculturation took place over several hundred if not a thousand years. On the other hand it is evident that Mesopotamians also travelled to the Indus lands as we find a young woman buried at Harappa in Summerian fashion, wrapped in reed-matting within a wooden-lidded coffin.⁵⁷² Mesopotamian fashion is displayed in the beard and robe-decoration in the famous sculpture of the ‘Priest King’, again strongly suggesting familiarity with Mesopotamian culture.⁵⁷³

According to textual references, after the time of Sargon sea trade dwindled for some years but revived under the kingship of Ur-Nammu about 2100 BCE, the year that also marks the climax of sea-faring activities between the two great Bronze Age civilizations. Sea contacts of Mesopotamia with Meluhha terminated by the middle of the second millennium BCE.⁵⁷⁴ However, the discovery of a Harappan seal at the site of Nippur in a fourteen century BCE context suggests that Harappan contact with Mesopotamia may have continued, although in a diminished form even into the Late Harappan Phase. Some amount of trade also continued with the Gulf region, as Harappan seals have also been found at Failaka in a fourteen century BCE context, and a late Harappan seal has been found at Bet Dwarka. The latter seal has Harappan writing but a three-headed animal motif similar to ones on certain Persian Gulf seals.⁵⁷⁵ All these later discoveries lead scholars to suggest that at a time when the Indus civilization was near its end, and had lost influence in many different areas, local groups in these areas were busy establishing contacts with regions that were even beyond those with whom the Indus had previously interacted. Individuals like Shu-ilishu with worldly experiences clearly were limited to a very small number in the third millennium BCE, but it is also clear that it was not an experience that was reserved for royalty or the priestly class only.

⁵⁷¹ Wright, *The Ancient Indus*, 224.

⁵⁷² *Ibid.*, 224-5.

⁵⁷³ Irfan Habib, *A People's History of India 2: The Indus Civilization; Including Other Copper Age Cultures and History of Language Change till c. 1500 BC*, 50.

⁵⁷⁴ Mughal, *The Indus Valley: 3000-1500 BC*, 43-4.

⁵⁷⁵ Upinder Singh, *A History of Ancient and Early Medieval India: From The Stone Age To The 12th Century*, 168.

The scale of the distribution system along with the installation of new settlements at Shortugai, Sutkagen-dor, Sotka-koh, and Lothal in Gujarat far out-weighs anything known from previous periods. They clearly were conscious attempts on the parts of traders and merchants to gain control of new avenues of trade. The enterprise served as a catalyst for the growth of urbanism during mid-third millennium BCE. Despite the expansion of maritime trade with western Asia, overland trade via the northern route passing through northern Afghanistan, north Iran, Turkmenistan and Mesopotamia, and crossing sites such as Shortugai, Tepe Hissar, Shah Tepe, and Kish and the southern route passed through Tepe Yahya, Jalalabad, Kalleh Nisar, Susa, and Ur remained important during this phase, too, as they were during earlier phases with regions towards the north and northwest.

The civilizations of Mesopotamia and Indus were contemporary, yet it is evident through archaeological finds and literary texts that they were quite different in character with respect to various aspects of life. One such aspect related to trade is highlighted by Dr. Wright,

“The evidence clearly indicates that the organization of trade in the Indus differed from that of Mesopotamia. Although trade arrangements shifted with time in Mesopotamia, it was dominated overall by the temple and palace organizations that directed “traffic in finished objects and the transshipment of resources”. Traders were sponsored by these organizations. They obtained goods on consignment and a percentage of profit was paid to them by the temple or palace. In Indus, trade organization was more varied. There are hints of official control in the presence of Indus standardized weights on the Arabian Peninsula, long-barrel and etched carnelian beads in Mesopotamia (based on the evidence for specialist artisans at Chanhudaro, establishment of outposts near source areas specific to long-distance trade (Shortugai, Sotka-koh, Sutkagen-dor), and the presence of Mesopotamian seals in Indus contexts. In contrast, the evidence for shell working at Kuntasi and Negaswar may indicate that trade was conducted by independent groups, such as merchants or individuals acting on their own on an occasional basis. The presence of people of Meluhha in a former merchant town in Mesopotamia and others taking up seasonal residences in Oman is more suggestive of an independently organized merchant group, though we know little about their status in the Indus community.”⁵⁷⁶

On the basis of these observations we may say that people living in the Indus were together as one nation for their own benefit, yet at the same time there is no evidence of any state body controlling their trading actions.

D. D. Kosambi and Francis Watson in their respective books talk about an ingenious system of navigation that was used by the sailors of the Indus along the deadly inhospitable coasts.⁵⁷⁷ If the sailors were driven out of sight of the land, they released a crow, which would

⁵⁷⁶ Wright, *The Ancient Indus*, 232.

C. C. Lamberg-Karlovsky, ed., “Introduction,” in *Archaeological Thought in America* (Cambridge: Cambridge University Press, 1989), 260.

⁵⁷⁷ D. D. Kosambi, *The Culture and Civilization of Ancient India in Historical Outline* (London: Routledge and Kegan Paul, 1965), 60.

fly towards the nearest point of the coast. This is precisely the same method that was used by Noah and is narrated in the Bible and the Quran and also in the Sumerian Epic of Gilgamesh. Noah, upon the ceasing of the rain, released a crow from the Ark to find out in which direction the land lay, and then released a homing pigeon to make sure if the land was fertile. A seal found at Fara in Iraq shows a boat with a compass-bird on it. These observations suggest that both the Mesopotamian and Indus people were familiar with this system, and hence leads to further suggest that their links are much older. This story of the sailors finding land through the crow is also included in a later Buddhist Jatakas story narrating how sailors reached Babylon using this system. I will discuss this point further in the chapter on Indus religious beliefs.

Weights and Measures

The Harappan weights and measure system is considered to be a marvel of the third millennium BCE. Their level of standardization and uniformity achieved and maintained during Harappan times was remarkable. This system was so well developed and efficient for both trade and economy that it was also used in neighbouring Dilmun (Bahrain), where a number of weights and seals with Indus motifs have been found.

Weights were usually made of chert, limestone, steatite, chalcedony or other stones and in many different sizes (see Figure III.2.10). Their most common shape was cubical, but some were spherical, cylindrical and barrel-shaped.⁵⁷⁸ They are all well finished with polished surfaces and occasionally with bevelled edges. Indus weights were made with much greater accuracy and consistency than those of Susa and Iraq.⁵⁷⁹

A complete weighing scales was rarely found, as it is supposed they were composed of pans and that wood was used for the scale bars. However, one bronze or copper bar has been found with a pair of pans.

This system of weights was unmatched with those at any other contemporary ancient civilization, as they strictly followed a system which is both binary and decimal. The lower denominations are binary: 1, 2, 1/3 x 8, 4, 8, 16... to 12,800 with a unit ratio of 16 equal to 13.625 grams. The higher denominations are in decimal system with fractions in thirds.

Francis Watson, *A Concise History of India* (London: Thames and Hudson, 1974), 27.

⁵⁷⁸ Mughal, *The Indus Valley: 3000-1500 BC*, 57-8.

⁵⁷⁹ Dilip K. Chakrabarti, *The Oxford Companion To Indian Archaeology: The Archaeological Foundations of Ancient India: Stone age to AD 13th Century* (New Delhi: Oxford University, Press, 2006), 186-7.

This Indus system of measures was revealed by the finding of a graduated piece of shell from Mohenjo-Daro and a fragmentary bronze rod from Harappa. The shell scale has nine subdivisions of 0.264-inch unit. Five divisions make an Indus inch of 1.32 inches making a foot of 13.2. In addition to foot measurements cubic systems were also used. The Harappan foot varied between 13.0 and 13.2 inches. The measurement of the buildings at Mohenjo-Daro and Harappa attest to the fact that both these systems of measurements were in use.⁵⁸⁰

Administrative and Social Systems

Having studied various important segments of the Indus economy that might have been responsible for its organizational structure, it's time that we view all these developments together in order to understand the social implications that were caused by them directly or indirectly. For this I will present the views of various Indus scholars on the subject and will end the discussion with my own concluding observations and suggestions.

I will begin with the concluding observations of Bridget and Raymond Allchin, who believe that the Indus civilization in its maturity was the result of the concurrence of three major factors. The first, and perhaps the most important in terms of its actual character, was its direct development from the cultures and existing population of the Early Indus Period in the Indus plains and on their margins. These included many incipient urban communities, and centres of local trade and craft specialization, already involved in long-distance trade. They also included a wide spectrum of semi-urban and non-urban communities engaged in a variety of activities with widely differing life-styles. This pattern and the interrelationships it involved was already very ancient. The second factor was the environment offered by the Indus River system, whose principal character is that of a great river flowing through a desert: One is inevitably reminded of Egypt and Mesopotamia in this respect, but it is important to remember that the Indus and its major tributaries have laid down a much larger area of alluvial plains than the other two, extending through other contiguous auxiliary plains into adjacent regions, and interlocking with a variety of other regions, notably the western mountainous borderlands and the Thar desert. The third, and perhaps least important factor, must have been the stimulus offered by contacts with other societies outside the Indus system, and particularly by those of Mesopotamia and Central Asia. It cannot be mere chance that the Early and Mature Indus stages coincide with the Early Dynastic and Sargonid Periods in Sumeria.

⁵⁸⁰ Mughal, *The Indus Valley: 3000-1500 BC*, 57-8.

There are however, many indications that by the Mature Indus Period urban society had evolved considerable social stratification and divisions. The varied and often highly specialized crafts alone indicate this, and some scholars have seen in the variety of house sizes and the localization of blocks and barrack-like dwellings further evidence of class divisions, perhaps even amounting to slavery. Whether we should speak of class divisions, or rather of something akin to the later caste system of India, is also worthy of consideration. In addition to craft specialists and artisans, there must have been an agricultural population, whether living wholly in villages or also in part living in the urban centres. There must also have been a ruling group; they supposedly combined the roles of administrators and priests. There is growing evidence of the extent and variety of trade. Examples are the “granaries” or warehouses at Harappa, Mohenjo-Daro and Lothal, implying great concentrations of wealth. Then there is the evidence of unprecedented trade in goods produced within the Indus culture region, such as stone, metal, shell, etc. Thirdly, there is also evidence of very widespread trade with distant parts, both in the form of exports to Mesopotamia and of the trading “colony” at Shortughai, in northern Afghanistan, and in the form of evidence of exotic imports. As we have already noted that this aspect of Indus civilization was already extremely old, and contacts with Central Asia for such purposes already went back several thousand years, to the pre-ceramic Neolithic of the western borderlands. But in this new context of the Indus civilization it is evident that this aspect is more sophisticated and more highly organized than ever before. This is shown by the presence of regulated weights and measures, and of a script which was evidently used for trading purposes, as were the elaborate and well-made seals. This widely diffused use of uniform script, and the extent of the trade, indicate that there must have been a well organized network of communications both between the cities of the Indus civilization and beyond to other major centres. This also implies the use of pack-animals and the organization of caravans, and the presence of further specialized groups who must have carried out this function. Recent evidence suggests that such communities may have been clearly divided, in terms of their way of life and domicile, from those who inhabited the major settlements of the plains, perhaps as pastoral nomads or semi-nomads, not unlike the modern Powindahs who combine with their nomadic and pastoral way of life a major role in the trade of Afghanistan and the Indus region today. The cultural uniformity of the settlements over such a wide area leaves no doubt that the relationship between the city-centred communities of agriculturists and craftsmen, and those who provided the means of transport and communication, must have been a stable one. This,

in turn, indicates a strong and firmly based system that held them all together and maintained their relationships. Precisely what this system was and from where it drew its authority is not yet clear, but of its existence there can be no doubt. It represented a special achievement in the world of the third millennium BCE.

Finally, the superimposition of a uniform language and script (which seems to be the inescapable inference we may draw from the distribution of the seals and inscriptions), and of a uniform mythology and iconography, over so vast an area, are still and must remain a source of real wonder. They remind us of the similar indications of the rule of Ashoka Maurya in the third century BCE, or of the Mughal Empire at its height, although neither survived for so long as did their “first model”. The Indus civilization is the first great promulgation of an interprovincial “Indian style”, and as such it carries profound implications for the future of Indian thought and culture.

However, the system came into being, it must have been built upon remarkably sound foundations, since the Indus Empire lasted for around five thousand years as a major cultural entity and included a number of major cities and regions in other parts of the world and the largest effective unit was little more than a city state. We may envisage throughout the period a continuing growth of population that resulted in a variety of encounters with other cultures. In the central regions, the Mature Indus culture appears to have completely taken over all aspects of urban life although in some peripheral centres local Early Indus cultures continued to exist alongside, or in combination with, that of the centre. In each region the situation appears to have been somewhat different, and at present we do not know exactly what was involved – military conquest, colonization, or economic and ideological takeover.⁵⁸¹ In conclusion, according to Allchin’s view,

“...the Indus civilization arose as a social, economic and cultural phenomenon, produced by the building-up of population on the fertile Indus and Punjab plains. The resultant urban society was a delicate balance of internal relations between cities, towns and villages, and of external relations with neighbouring peasant societies and more distant urban societies.”⁵⁸²

Dr. Mughal’s observations on the subject are, “The Harappan society was fully stratified socially as illustrated by the differential size of dwelling places in the major cities, workmen’s quarters and dichotomy of “citadel” with public and religious buildings and

⁵⁸¹ Allchin, *The Rise of Civilization In India and Pakistan*, 221-5.

⁵⁸² *Ibid.*, 221-5.

“lower” town containing residential buildings. The sharp division into various social and occupational classes is well marked by the existence of specialized craft related activities areas at Mohenjo-Daro, Harappa and other cities. These activities related to the production of beads, shell, bangles and other objects, presence of kilns for firing ceramics and smelting or melting of copper, flint knapping, mass production of pottery, making of seals and flint tools. A high degree of standardization is revealed by the quality of metal objects, seals, weights and measures, pottery, cultic objects, size of bricks and an elaborate drainage system. Such evidence forces the conclusions that the Harappan administrative system was highly efficient to enforce standards and maintain uniformity in the production of materials for use. Important segments of the Harappan society were agriculturalists who effectively utilized the flood plain of the rivers for cultivation of cereal crops. The location of Harappan sites in the desert tracts of Cholistan is suggestive of graziers existing in the peripheral areas raising cattle, goats and sheep and living in economically symbiotic relationship with the settled communities. These graziers or nomadic people may have also acted as traders and transporters of goods from one place to another.

For such a high level of economic, commercial and social organization as that of the Indus Civilization, a strong centralized political or administrative system is a prerequisite. The fact that such an authority was exercised not only at the major cities but also throughout the Indus Valley is obvious from the uniformity, regularity and discipline in almost all cultural manifestations. The system of Harappan government or administration is not yet certain, although hierarchy of government is implied with central authority with “provincial” or regional governments. Whatever the definition of central authority may be, the maintenance of an efficient network of communication within the entire Indus Valley and uniformity so well expressed in material remains and the cultural integration of the Indus Valley achieved is unparalleled in the history of oriental civilizations.”⁵⁸³

Shereen Ratnagar’s conclusion on the subject is based on the analysis of all the available archaeological data and she boldly concludes that the Harappan society was a “veritable Harappan Empire”.

“The study opens with an analysis of the relevant characteristic features such as public structures, their identification and the problem of surplus. She rightly points out that it was not chiefdom because in a chiefdom society, the chief receives tribute, not tax, and that the chief coordinates rather than imposes labour. A state can enforce its decisions because it possesses the coercive power and can use force at its

⁵⁸³ Mughal, *The Indus Valley: 3000-1500 BC*, 63-5.

command, however, hard to agree with the author when she argues that the Harappan civilization was a state because it was urbanised for the simple reason that there are instances of non urbanised state societies, and hence urban status need not be taken as a *sine qua non* of a state society. She is equally bold in asserting that the caste system was prevalent in the Harappan civilization but she has not adduced any supporting evidence from the excavated remains. What is possible is that Harappan society was a class structured society with people following their hereditary professions and living in well defined areas in an urban settlement as is the case today in India. It is doubtful whether these classes can be identified as castes as happened later in the historical period.”⁵⁸⁴

Lakshmi Chatterjee comments that the degree of homogeneity seen in Harappan products - the uniform town and city planning, the rigorous enforcement of trade and municipal regulations and the distribution system - all confirm that there was a highly effective and centralised administration. All this must have been achieved over a long period by integrating heterogeneous socio-religious or socio-economic groups, whose identification Chatterjee believes can be traced in the animal deities engraved on the seals. But the question then arises, how was this integration, whether social, political, economic or cultural, brought about and then how was it enforced over such a vast area without using force or a strong army? Was religion responsible for bringing together the “Bull people”, the “Elephant people”, the “Tiger people”, the “Rhino people”, or the “Buffalo people”? (see Seal III.2.8-11) If so were they really tribal in character? Alternately can the cultural integration be attributed to a common danger?⁵⁸⁵

No definite answer to the question can be given till the seals are deciphered. One might suppose that the mythological scenes of battle suggest occasional skirmishes between these socio-religious groups and their subsequent unification. For instance, the seals showing the bull-man fighting the tiger or the attack on the buffalo may indicate clashes among different clans or tribes who venerated different animal deities. But the number of such “conflict” seals is not more than a dozen, while there are more than twenty seals that suggest the integration of ideological or socially different groups, symbolically represented as two-headed, three-headed, and four-headed animals, such as the bull-goat-unicorn, the bull-elephant and the elephant-bull-tiger. Such seals can be interpreted or read as “protector of 3”, “protector of 4”, and so on (see Seal III.2.12).

⁵⁸⁴ Shereen Ratnagar, *Encounter: The Westerly Trade of the Harappa Civilization* (New Delhi: Oxford University Press, 1981), 170.

⁵⁸⁵ Lakshmi Chatterjee, *Heritage of Harappa* (New Delhi: Global Vision, 2005), 56.

Lakshmi Chatterjee is also of the opinion that the Harappan society was a stratified society in which the highest form of socio-political organization, namely the state played a vital role. She further asserts that it must have been a strong centralised government, in which the ruling elite always lived separately, but there is no information as to whether it was divorced from the bond of kinship which characterises simple societies. The ruler was treated like a common man after death. There is hardly any evidence to support the view that force was used to maintain law and order, maybe that was the concern of the rulers (elders). A hierarchy of administrative officers is suggested, who were responsible for enforcing the state as the centre of economic power and maintaining a vast network of distribution systems, whose responsibility was to ensure the efficient production of essential commodities and luxury goods for internal consumption and exports.⁵⁸⁶

Chatterjee raises a second tier of important questions. “What was the mechanism of such an efficient administrative system? What was the source of strength which enabled the State to enforce the laws uniformly and maintain the homogeneity of culture overcoming ecological, social and ethnic differences? How was peace, which is a prerequisite for economic prosperity and stability of social institutions, maintained? Some clues to these questions may be found in the artefacts left by the Harappans. The tools and weapons which they produced were functional and utilitarian and not symbolic as in the Sumerian cities. There is no sign of any mass production of offensive weapons and the few that were produced were technically outdated when compared with the Sumerian weapons such as the shaft-hole axe and sword with a midrib. It appears that the Harappan rulers feared on invasion and did not produce superior weapons of war. Peace-loving as they were, they did not resort to any violence while making new settlements. The occupation was peaceful since they were interested in trade and procurement of raw materials. We have to rule out the use of force for ensuring the smooth running of the administration in the far-flung empire mainly because there is no evidence of violence anywhere. The so-called massacre of Mohenjo-Daro was a stray local phenomenon exaggerated beyond proportions by the excavators. The tribal clashes on the border appear to have had no effect on the maintenance of peace.

If force was not used for maintaining peace, an alternate source from which the State derived its strength to demand obedience to law may be religion. In that case, the head of the

⁵⁸⁶ Lakshmi Chatterjee, *Heritage of Harappa*, 63-7.

state may be a Priest-King or God-King as in other contemporary civilizations. But strangely enough, there is no archaeological evidence to show that there was a State religion or that the ruler was the High Priest. No imposing religious structure comparable with the Ziggurat or a Big Temple is built in any Harappan citadel or Acropolis, where the ruler lived. The only religious structure found in the citadel is a fire temple at Banawali, a very small town when compared with Harappa and Mohenjo-Daro. At Kalibangan fire-altars have been found in the citadel. The Rulers at both the places must have been fire-worshippers. At Lothal, Harappa and Mohenjo-Daro no monument of religious significance is found in the citadels. It is the common man who built altars for fire-worship and animal sacrifice in private homes and occasionally in public places. Michael Jansen of Aachen University (West Germany) has reported that outside the citadel of Mohenjo-Daro there was a sacrificial altar which Wheeler had recorded. In the absence of imposing public buildings for religious worship in the citadels the ruler cannot be considered a Priest-King.

The motivation for the State was primarily economic. The religious significance of the motifs of animals venerated by the respective clans or politico-religious groups need not be over, emphasised especially when the ruler did not think of impressing the people by building massive religious structures. On the other hand, the state seems to have paid greater attention to the maintenance of public works such as drains, granaries, warehouses, docks and peripheral walls of the city. By stages the central authority seems to have incorporated new areas producing metals and other raw materials which were not available within the geographical limits of the Empire at a given time. Lothal, Bhagatrav, Manda and Shortugai are such instances of occupying new areas for procuring raw materials. The entry of the Harappan in different provinces was not simultaneous. They moved southward to Gujarat first, Sarasvati Valley next and finally into the Oxus Valley. The overseas, settlements in Ur, Kish, Brak, Failaka and Oman were mostly merchant colonies.”⁵⁸⁷

I would like to add to the discussion the observations of Dr. Wright, “I reviewed evidence from various Indus sites to discuss aspects of social differences within Indus society. My focus was on landscapes as practiced places in which community identity; social order, status, and wealth were formed, recognized, and maintained. In many earlier works, researchers considered the Indus civilization to be a homogeneous society that was socially

⁵⁸⁷ Lakshmi Chatterjee, *Heritage of Harappa*, 67-8.

undifferentiated or one in which differences were masked. In that view, the argument was advanced that the Indus was at best a two-tiered society dominated by a single individual who ruled an undifferentiated mass of novelties. The Priest-King statute is the idealized signature for this idea.

These interpretations no longer seem tenable, considering the recent research on artisanship, craft specialization, advances in agriculture and husbandry, extensive internal exchange systems, and relations over a broad territory involving the founding of new settlements and trade with neighbouring cultures.

As a consequence, in Indus studies, many recent discussions have turned away from the homogeneity model to a more complex understanding of the civilization. Throughout this book, I have focused on identifying the infrastructure of a complex and diverse society inhabited by farmers, pastoralists, craft producers, traders, merchants, rulers, planners, and other involved in maintaining extensive public works.

My focus on Mohenjo-Daro drew from our best evidence available for Harappan conceptions of cities, in which I stressed aspects of its plan that suggest the city was built by a civic authority. They included the planned nature of the settlement, now better understood based on the recent research at the site; the construction of major building projects, including substantial structures like the Great Bath; the erection of the “founding platforms”; and its uniquely complex public works. These community projects argue for an investment of authority and a multi-tiered social structure that permits some level of access by most citizens, simultaneously creating harmony and difference.

At the same time, the layout of the city and its public works forged a community identity that reached into neighbourhoods and households. The orderly nature of Mohenjo-Daro and its layout provided numerous spaces that served as markers on the landscape. Individual neighbourhoods, walled and made distinct from others by empty spaces, served as practiced places in which social identities were formed. Public amenities drew neighbourhoods together, providing links between household, neighbourhood, and communities and their leaders.

These linkages by no means imply that people living within blocks and houses of various sectors of the city were homogeneous. In fact, the evidence discussed in this chapter demonstrates significant variation in wealth and status based upon house size, types of amenities, and possessions. House I in the HR-A area, in which rare stone statuary and large

numbers of seals of the same type were discovered, provides convincing evidence for these differences.

Speaking generally, these differences were encountered throughout the city. Many would undoubtedly have been perceptible to people living in the city as they moved about its neighbourhood streets, taking full account of the odours and debris visible in certain locations. Material goods were displayed, at least on certain occasions, and perhaps worn only at celebratory times. Otherwise, they were stored and virtually hidden. The scarcity of metals, especially gold, and semiprecious stones argues for a society in which there was a differential access to wealth and status.

There is, therefore, spatial variation in the loci of the various materials discussed. When the locations of different objects – rare statuary, seals, scarce and highly valued ornaments and raw materials, and those less-valued items – have been identified, we see differences in their spatial contexts. In households, the presence of rare statuary, seals, and ornaments correlate with the size structures, the level of amenities such as public works, and/or the building design elements with which they were constructed. Hoards also occur in these private spaces. Some of these may contain the materials of craftspeople in the process of reshaping previously used, discarded materials, in view of the presence of lapidary tools and sheet metal in some. Others appear to signal the storage of items of value that conceivably were used in public contexts at appropriate occasions and/or for exchange purposes.

The fact that few of these differences are visible at burial sites makes sense from a number of perspectives. Our best available evidence is from the R37 cemetery, where analysis of skeletal remains suggests that the burial ground housed a limited segment of the population. Outside of quantities of pottery, few rare objects are present. An exception is the case of an older male individual who is wrapped in a shroud and placed in a coffin. Like some interred males, he wore personal ornaments, including steatite beads, which are found in other graves, but he was also adorned with beads made of onyx, jasper, turquoise, and gold that single him out when compared to others. The presence of an older male at Kalibangan accompanied by elaborate grave goods may be indicative of status differences with respect to age and leadership. In either event, special interment of elderly males in cemeteries of related individuals would serve to cement trans-generational affiliations and solidify family and kinship relations. Whether a society buries vast quantities of wealth, essentially taking

materials out of circulation, requires a basic understanding of general conceptions about life and death. Taking material out of circulation has economic and political implications, but it also reflects on people's understanding of the meaning of "goods" and materials in their lives.

A final aspect of the built environment and the goods identified in its spaces are the symbolic associations that metamorphosed natural landscape elements. The creation of the Harappan landscape emphasized the relationships between the mindset employed in the creation of small objects which I have referred to as its technological style and the structures and amenities built into Harappan cities. Aspects of this mindset can also be perceived in Indus imagery, ..."⁵⁸⁸

Jim Shaffer also questions the level of homogeneity in the Harappan civilization and suggests that it could have been the result of a well-developed network of internal trade rather than a strong, centralized government. He underlines the absence of huge royal tombs, palaces, and temples, and the absence of marked social differentiation of the kind visible in ancient Mesopotamia and Egypt. For we find, artefacts of various types distributed throughout the occupational levels of different Harappan sites, rather than clustered in elite residences or structures. These artefacts have even been found in the village settlements, suggesting an equality of access to wealth or the symbols of wealth among village and city dwellers, which goes against the idea of a centralized empire.⁵⁸⁹

Upinder Singh believes that some form of state structure did exist in this civilization and that the absence of marked social or economic differences and tombs or palaces of the Egyptian or Mesopotamian kind does not mean that a state did not exist, but rather that it was a different kind of state. The communication system, standardization in the artefacts, mobilization of labour for building public structures, site specialization and establishment of outposts - all indicate a level of economic complexity and the existence of a state. On the other hand, cultural homogeneity can be seen in the use of a common writing system over such a vast territory. Social differentiation also indicates class stratification. All these observations lead one to conclude that some kind of centralized control was apparent. Here Upinder Singh raises two questions, if there was some kind of centralized control, how much of it was there

⁵⁸⁸ Wright, *The Ancient Indus* 271-73.

M. Jansen, *Mohenjo-Daro: City of Wells and Drains, Water Splendor 4500 years ago*. Bergisch Gladbach (Bonn: Frontinus Society Publications. 1993), 120.

Kenoyer, *Ancient Cities of The Indus Valley Civilization*, 124.

⁵⁸⁹ Upinder Singh, *A History of Ancient and Early Medieval India: From The Stone Age To The 12th Century*, 177.

and, more importantly, by whom? In order to answer these questions, she gives opinions of various scholars. “Jacobson suggests that the Harappan state was an early state with the following characteristics: a sovereign or sovereigns closely linked to a mythical character and seen as benevolent; a military component lacking the dominance characteristic of more mature states; and weakly developed economic stratification. According to Possehl, Harappan society was highly disciplined and had a strong corporate element; the Harappans may have been ruled by councils rather than kings. Kenoyer suggests that the Harappan state must have comprised many competing classes of urban elites, such as merchants, ritual specialists, and those who controlled resources such as land and livestock, with different levels and spheres of control.

Kenoyer also suggest that the animals on the square stamp seals represent totemic symbols standing for a specific clan, perhaps along with some additional information. At least 10 clans or communities are represented by these animals – the unicorn, humped bull, elephant, water buffalo, rhinoceros, humpless bull with short horns, goat, antelope, crocodile, and hare. The unicorn motif is found at almost all sites where the seals have been found, including Mesopotamia. At Mohenjo-Daro, over 60 per cent of the seals have this motif, while it occurs on about 46 per cent of the seals at Harappa. The large number of unicorn seals at major cities led Ratnagar to suggest that the unicorn was the symbol of the Harappan ruling elite. Kenoyer, on the other hand, argues that the ‘unicorn clan’ probably represented the aristocracy or merchants who had an important executive role in the government. It is in fact the less frequent motifs such as the bull, elephant, rhinoceros, and tiger that may have been symbols of the most powerful rulers at the apex of the Harappan power structure.

While Mohenjo-daro stands out in some ways (for instance, no other site has a structure comparable to the Great Bath), there are other large Harappan cites such as Rakhigarhi, Lurewala, Ganweriwala, and Dholavira. Were they provincial centres knit together through a well-worked-out system of political control? Were they the capitals of separate states? Were they city-states? In the past, scholars tended to simply presume highly centralized political structures, whereas now there is a greater acceptance of the possibility of decentralization. It is not, however, certain whether we need to think in terms of a Harappan empire or a number of separate, perhaps inter-related states. Another possibility that cannot be ruled out is that there may have been several states with different kinds of political organization.”⁵⁹⁰

⁵⁹⁰ Upinder Singh, *A History of Ancient and Early Medieval India: From The Stone Age To The 12th Century*, 177-9.

I have presented before you the interpretations and beliefs of renowned Indus scholars on the organizational structure of the Indus civilization. Almost all scholars today reject the earlier hypothesis of a centralised Indus state, yet at the same time all agree that there was some kind of an Indus Empire that bound all sites together, which not only held them together but was strong enough to take them generation by generation to the height of economic and cultural prosperity during the urban phase. Various scholars have suggested that this binding could be dependent upon economic (Allchins, Shaffer and Chatterjee), political, social cultural (Allchins, Chatterjee, Wright and Mughal), traditional (Ratnagar), or religious factors. I believe that if it were only dependant on economic factors, then conflicts should have risen (as they rise today between economic powers), and as conflicts apparently did not under the circumstances it would be wise to reject this suggestion. Now we are left with the other factors, which are very closely interrelated, and I suggest that they work best if taken together; in other words, they all come under one word “ideology”. Therefore, on the basis of observations given by our scholars, I suggest that people living in the Indus were regulated under one ideology for their own benefits, as there is no clear evidence of any state body controlling their actions, activities or engagements.

I believe that the Indus people were religiously bound together under one force that had always been with them since the beginning, and that had kept not only everything together but also in control since its beginning stages at Mehrgarh, and that it eventually spread with them generation by generation, to the greater plains of the Indus region during the Pre-urban phase and continued during the Urban period. This control was not implemented by any physical force but was spread by a single strong ideology shared by all the people living in a very vast spread of land, over many generations. This ideology helped to unite them together, and to avoid fighting over worldly gains. Such an ideology could be the only reason why the Indus people excelled to the extent they did. The people did not need any common or elaborate structures to prove their binding, like the ones that we see in Mesopotamia or Egypt, where one ruling elite was in control, for these people were not ruled by any one elite but were bound by the much greater force of religion. At the same time, they were free to fulfil their civic needs and requirements for their own betterment and growth, without been answerable to any one single authority.

That could be one reason why we witness social differences in the Harappan society during Urban Phase; perhaps they were not intentional but just happened over generations.

Some people followed their ancestor's occupation but became richer (with corresponding differences in house sizes and differences in quality and quantity of ornaments) and had more, in comparison with people of other professions. Hence classes of different occupations might have been established as has been proposed by Kenoyer, Miller and Vidale; these later resulted in the Hindu caste system as we know it from the historical period.

If we look at the history of the sub-continent, only those rulers became strong and successful in holding it together for longer time spans, who followed some kind of an ideology close to the hearts of the people they ruled such as Ashoka, Buddhism. History has shown that the Hindu people of the sub-continent are very strong in their convictions and beliefs and have lived peacefully and followed their convictions and religious beliefs. Therefore, it becomes extremely important to understand the religious beliefs of the people of the Indus valley civilization whose beliefs and convictions lasted many generations and centuries.

I have intentionally omitted discussion of the religion of the Indus people, while discussing the organizational structure of Indus civilization, though indirectly I have touched upon it several times. The purpose behind all previous writings in this dissertation was to reach a point, where I could suggest just how important religion must have been in the lives of the people of the Indus civilization.

Chapter 3.3

Birth of Religious Beliefs: Comparative and Contemporary Religions of The Indus Valley Civilization

The search for God is not new. It began thousands of years ago, with man's (*Homo sapiens*) presence on earth. Since that day man has been trying to find his true purpose on earth and who was responsible for his very existence. As mentioned in Chapter 2.2, man is blessed with the best of attributes and qualities among all living species. He is the most intelligent specie ever to be born on earth and can control all other species. He is the only specie who has the ability to reason and think rationally, who wants to find answers. Despite the best of man's qualities, there are certain things that are still beyond his reach, control and comprehension. Even humans have limitations, as was well understood, even by early man: he had no control over the elements and he believed that there was some "Divine Force" somewhere, which had everything under its control. Hence, a *Homo sapiens* was born a man with a new awareness to understand "the divine" and the quest for finding God began a quest that led him to different pathways in different regions at different time periods.

Karen Armstrong states, "...my study of the history of religion has revealed that human beings are spiritual animals. Indeed, there is a case for arguing that *Homo sapiens* is also *Homo religiosus*."⁵⁹¹ The Latin dictionary gives words like, wise, sensible, prudent, and judicious for the meaning of sapiens. There is no theoretical way of understanding the reality of this God, nor can any analysis or reasoning make it any better. It is a feeling that only the soul can feel; it is a light that only the soul can see; it is an experience that only the soul can have.

While on the other hand, the Holy Books – the Bible and the Quran claim that the first man on earth was God's Messenger, Adam and that God from the very first guided him, but man time and again has gone astray; therefore, God at different time intervals send his chosen messengers to guide mankind.

The birth of religious belief is as old as is the birth of humanity itself and is considered to be inherent in our very being. The first thing to remember about the word "belief" is that it is always taken in a collective sense or is ascribed to people belonging to a certain group. Most scholars proclaim that beliefs are directly dependent on rationality as it is the defining

⁵⁹¹ Karen Armstrong, *A History of God* (London: Vintage Books, 1999), 3.

characteristic of humanity. Thomas Aquinas,⁵⁹² echoing Aristotle on this issue, remarks that man had the power of reasoning and an immortal soul, whereas animals had neither. Human behaviour is rationally determined after reflection, while animal behaviour is always governed by instinct. On the bases of this fundamental difference Descartes says that man would have no greater right to eternal life than gnats or ants.⁵⁹³ In other words this claim would seem to openly refute Darwin's theory that human reason must have evolved by natural selection.

Religious belief is not one thing, but a complex of ideas, attitudes and feelings. It is common notion that much in religion is learnt from others and shared. If ideas are empirically indeterminate - for example, life after death or doctrines of rebirth - then knowledge of them must depend on learning about them from others. These ideas would only gain credibility if many people believed in them, as numbers persuade and reinforce belief further. Hence, belief becomes representative of a group, a community, a church, or a mosque.⁵⁹⁴ It is also a fact that virtually since one's birth religious or ethical ideas are implanted in our minds by our parents and relatives and as a result, we often follow their religious ideas. Therefore, religion has become almost a matter of family tradition, chosen for us even before our birth or, as historian Arnold Toynbee indicates, that an individual's adherence to a certain faith is often determined by the geographical accident of the locality of his birth-place.⁵⁹⁵

Gilbert Lewis lays stress upon this concept by stating views of different scholars,

"Various authors have stressed the serious and obligatory quality of religious belief. Durkheim connected it with the functions he ascribed to religion: to reflect, maintain and reinforce the social rules and values on which the society depended. Marxist views of religion have stressed the ideological element – that religion fosters the political and economic interests of a dominant class or section of society and stifles dissent. It inspires devotion to beliefs and attitudes that secure the continuing dominance of that class or section of society at the expense of others whose members are misled or mystified by the illusory promises and persuasions of religion. In the search for correlations between social structure and cosmology, Richard recommended that it might be most fruitful to investigate the differences in social mechanisms for preserving knowledge of religious symbols, myths and categories of experience, and for passing it on to the next generation. These views suggest that we should consider the importance of indoctrination in establishing belief, the techniques of persuasion and the stimuli involved."⁵⁹⁶

⁵⁹² Gilbert Lewis, "Magic, Religion And The Rationality of Belief," in *Companion Encyclopedia of Anthropology*, ed. Tim Ingold (London and New York: Routledge, 1994), 563.

⁵⁹³ Bernard William, *Descartes: the Project of Pure Inquiry* (Harmondsworth: Penguin, 1978), 287.

⁵⁹⁴ Gilbert Lewis, "Magic, Religion And The Rationality of Belief," in *Companion Encyclopedia of Anthropology*, ed. Tim Ingold (London and New York: Routledge, 1994), 567-8.

⁵⁹⁵ *Mankind's Search For God* (New York: Watchtower Bible and Tract Society, 1990), 8.

⁵⁹⁶ Gilbert Lewis, "Magic, Religion And The Rationality of Belief", 583.

It was mentioned in Chapter 2.1 that without exception, Asia is the birth place of all great established religions of the world, whether it be Judaism, Christianity, Islam, Hinduism, Buddhism, Jainism or Confucianism. The reason behind its evolvement there is that Asia was man's first home even long before the foundations of civilizations were laid. Man, who was born with a consciousness of a divine force, became more aware of this fact when he started settled life within groups and as civilizations grew. Domestication of both plants and animals brought man closer to nature and elements. He knew that despite doing everything right on his end, he sometimes had good yields, sometimes bad, and sometimes failed altogether. He learnt that some things where natural forces were at work were beyond his reach and comprehension. He also learnt the benefits of communal work and its profitable results. It was the unknown that brought man closer to the concepts of the Divine.

Since man's beginning the idea of a divine force has prevailed in different forms in different areas - sometimes in the form of a mother goddesses as found in Spain; in female or male sculptures as found at Catal Hoyuk; in the painted pictures of man, beasts and vultures found in shrines in the same vicinity, or in the plastered skulls probably to be associated with ancestor cult found all over the Near East. Burials with elaborate grave goods and painted red ochre were indeed indications of man's capacity to seek a divine force. Archaeologists and anthropologists tell us today that even among the most primitive, underdeveloped peoples, there is evidence of worship of some form. *The New Encyclopaedia Britannica* says that "as far as scholars have discovered, there has never existed any people, anywhere, at any time, who were not in some sense religious."⁵⁹⁷

Before addressing the various early religions, let's examine this concept further - why is man religious? In the book, *Mankind's Search For God*, various scholars give their ideas on the subject.

"John B. Noss points out in his book *Man's Religion*; "All religions say in one way or another that man does not, and cannot, stand alone. He is vitally related with and even dependent on powers in Nature and Society external to himself. Dimly or clearly, he knows that he is not an independent centre of force capable of standing apart from the world." Similarly, in the book *World Religions-* From Ancient History to the Present says: "The study of religion reveals that an important feature of it is a longing for value in life, a belief that life is not accidental and meaningless. The search for meaning leads to faith in a power greater than the human, and finally to a universal or superhuman mind which has the intention and will to maintain the highest values for human life."⁵⁹⁸

⁵⁹⁷ *Mankind's Search For God*, 19.

⁵⁹⁸ *Ibid.*, 19.

Hence one can conclude that religion satisfies a basic human need, much as food satisfies hunger.

Despite of the fact that many different nations of men are living on the earth, all mankind belong to the same stock, as I have already discussed this point in detail in Chapter 2.2 and 2.3, about the biological and genetically similarities among all nations, backed by evidence of sufficient genetic contact to make all humanity a single lineage sharing a common, long-term evolutionary fate.⁵⁹⁹

The Prophet Muhammad quotes about one genetic lineage of man in the Quran,

O Mankind! Be dutiful to your Lord, Who created you from a single person (Adam) and from Him (Adam) He created his wife (Eve), and from them both He created many men and women. (Quran 4:1)

According to the latest research, a specific part of genetic heritage of everyone on the planet today can be traced to one woman through a unique part of our genetic makeup, the mitochondrial DNA (mtDNA). This DNA is passed down through the centuries from mother to daughter (men are carriers, but they don't pass it on) and exists within all people living today. This is called the "mitochondrial Eve" theory.⁶⁰⁰

The singular lineage of man is further enforced, when we try to trace the history or origin of language. Unlike what evolutionists, once thought that the cave-dwelling men in Africa, Europe and Asia started with their grunts and growls and eventually developed their own languages - today evidence refutes their claims. Scholars, who have studied and compared the world languages, group them into families or classes of speech, but all these families seem to have started from one common source. This stance is further backed by the Quran, He taught Adam all the names of everything (Quran 2:31). We, as children of Adam, thus belong to one lineage and have inherited our skill of language from it. Although linguists estimate that more than 3000 separate languages exist in the world today that all are distinct and that the speakers of one cannot understand those of another, yet researchers believe that all these languages are fundamentally so similar that it is possible to classify them as one human language.

⁵⁹⁹ Alan R. Templeton, "A Genetic and Evolutionary Perspective," *American Anthropologist*, New Series, 100, no. 3 (1998): 632-50.

⁶⁰⁰ Aisha Stacey, "The Story of Adam (part 5 of 5): The First Man and Modern Science", *The Religion of Islam*, April 14, 2008, <http://www.islamreligion.com/articles/1198/>.

Language exists on the basis of two simple principles - word and grammar. A word is considered to be an arbitrary pairing between a sound, symbol and its meaning. For example, there are many words which do not have any sound or feel link with the subject, yet we name them like that because they are taught to us since our childhood and we have memorised their pairing. While grammar refers to a set of rules that combine words into phrases and sentences. It is pretty surprising that speakers of all 3000 languages learned the same four rules of language, regardless of where in the world they are. The famous linguist Noam Chomsky says that all languages share a common universal grammar, and that children inherit a mental programme to learn this universal grammar.⁶⁰¹

If this is true for something as personal as human language, would it be wrong to assume that the same could be true for man's ideas about God and religion. They could also have one common source. Therefore, while it would not be wrong to presume here that all world religions can be traced to some common origin or pool of religious ideas, this does not mean at all that all religions grew out of one religion.⁶⁰² Father Wilhelm Schmidt in his book *The Origin of the Idea of God*, first published in 1912, has suggested that there had been a primitive monotheism - the belief that primitive religion in almost all tribal peoples began with an essentially monotheistic concept of a high god—usually a sky god—who was a benevolent creator, before men and women had started to worship a number of gods. Originally, they believed in only one Supreme Deity, who had created the world and governed human affairs from afar. He further argued that all primitive cultures in the world have that notion of a supreme god. They worship a single, high deity, omniscient, and essentially similar to the God in Christianity. Here are some typical beliefs that he noted among primitive people:

God lives in, or above, the sky; He is like a man, or a father figure; He is the creator of everything; He is eternal; He is all-knowing; All that is good ultimately comes from Him and He is the giver of moral law; He judges people after their death; People are alienated from him due to some misdemeanour in the past; and, therefore He is often supplanted in religions by gods that are "more accessible," yet religions often carry a distant memory of this "Sky-God" with whom they have lost contact.

⁶⁰¹ Aisha Stacey, "The Story of Adam (part 5 of 5): The First Man and Modern Science", *The Religion of Islam*, April 14, 2008, <http://www.islamreligion.com/articles/1198/>.

⁶⁰² *Mankind's Search For God*, 31-2.

Based on his findings, Schmidt maintained that all peoples originally believed in one God. However, due to the rebellion against Him, people alienated themselves from Him, and their knowledge of Him was lost. This is also what is claimed in the Old Testament, Quran and Bible. At intervals God had sent his messengers to guide mankind who time and again had gone astray.

Karen Armstrong takes the discussion further by stating that a common feature among the many indigenous African tribes even today is their belief in a High God (sometimes called the Sky God, since he is related to the heavens), whom they yearn towards in prayer, whom they believe is watching over them and who will hold them accountable for their wrong doings.⁶⁰³ According to an African myth, the Maker of this dynamic universe, after setting the world in motion, withdrew and now remains remote from the concerns of human life. “The Dinka of the Sudan recount a myth, reiterated in many traditions across the continent that explains that when the first woman lifted her pestle to pound millet, she struck the sky, causing God to withdraw. The story explains that although this withdrawal introduced toil, sickness, and death, it also freed humans from the constraints of God’s immediate control. In fact, cults to the “high God” are notably absent from many African religions. Instead, prayers of petition or sacrificial offerings are directed toward secondary divinities, who are messengers and intermediaries between the human and sacred realms.”⁶⁰⁴ Therefore it can be suggested that in the beginning there was just one God and if this is so, then the claims of the geneticists and linguistic experts are also true - that all humanity sprang from one single source.

All the preceding discussions now takes us one step further, where we need to trace the journey of the origin of religion on earth. Like it has been said before, it seems that creating gods is something that humans have always done. It was an inherent need that sought fulfilment; therefore, when one religious idea failed to inspire, it was simply replaced by another more appealing idea. This idea of God filled a part of man’s consciousness that helped him to do what was right, irrelevant though it might seem in certain quarters; it has played a crucial role in the history of humanity and has been one of the greatest ideas of all time. When this idea of God started to disappear from the human mind complications arose. Like in our own day, many people would say that the God worshipped for centuries by Jews, Christians and Muslims has become as remote as the Sky God of the African tribesmen. Some claim

⁶⁰³ Karen Armstrong, *A History of God* (London: Vintage Books, 1999), 9.

⁶⁰⁴ *Britannica Encyclopedia of World Religions* (Singapore: Encyclopedia Britannica, INC, 2006), 17.

God's death, while some notice that He seems to be disappearing from the lives of a large number of people living in Western Europe. His disappearance is creating a vacuum in the lives of many people. They unfortunately are unable to understand what they are losing by this disappearance. According to Karen Armstrong, in order to understand this concept, we need to see what people were doing when they began to worship God in the first place, what he meant and how he was conceived. For this purpose, she thinks that we need to go back to the ancient world of the Middle East, where the idea of one God emerged about 14,000 years ago.⁶⁰⁵

Humans realizing the importance of a God have tried to perceive it in different ways at different time periods. The most famous perceptions of God are derived from natural or unseen forces: they are associated with wind, sun, sea and stars, and given human characteristics. In this way man has tried to express his sense of an affinity with the unseen in the world around him. A German historian, Rudolf Otto was one of the most influential thinkers about religion in the first half of the twentieth century.⁶⁰⁶ In his book *The Idea of the Holy*, he presents his analysis of an experience that, in his view, underlies all religion. He calls this experience "numinous," and says it has three components. They are expressed by three Latin modifiers: *mysterium*, *tremendum*, and *fascinans*. As *mysterium*, the numinous is "wholly other"- entirely different from anything we experience in ordinary life. It evokes a reaction of silence. But the numinous is also a *mysterium tremendum*. It provokes terror because it presents itself as overwhelming power. Finally, the numinous presents itself as *fascinans*, as merciful and gracious. In short it means that different humans can have different feelings and reactions about the concept of God under different circumstances. God has a mysterious presence in our lives, but at the same time is inherent in every aspect of life within us too. This is the very reason, according to Karen Armstrong why humans at different time periods devised their own myths and different methods to worship their Gods.⁶⁰⁷ They were not seeking to find a literal explanation for a natural phenomena but were indeed expressing their wonder and trying to link themselves to it in their own way.

On the surface many religions in existence today seem quite different from one another, but if we strip them of the things that are mere embellishments and later additions, or if we remove those distinctions that are the result of climate, language, or peculiar conditions of their

⁶⁰⁵ Karen Armstrong, *A History of God* (London: Vintage Books, 1999), 10.

⁶⁰⁶ Rudolf Otto, "The Idea of the Holy - An Inquiry into the Non-Rational in the Idea of the Divine and Its Relation to the Rational", trans. John W. Harvey (London: Oxford University Press, 1923), 5-25.

⁶⁰⁷ Karen Armstrong, *A History of God*, 11.

native land, and other factors, it is amazing to see how similar most of them turn out to be. For example, we find that certain teachings and beliefs are almost universal among them, such as the doctrines about the immortality of the human soul, eternal torment for the wicked, heavenly reward for good people, purgatory, or a mother-of-god or queen-of-heaven goddess. There are many legends and myths that are also common among them. For example, man's fall from divine grace due to his illicit attempt to attain immortality, the need to offer sacrifices to atone for sin, the search for a tree of life or fountain of youth, gods and demigods who lived among humans and produced superhuman offspring, and a catastrophic flood that devastated nearly all of humanity. Those who believed in these myths and legends not only lived far from one another geographically, but their cultures, traditions and social customs were also very different and distinct from one another. Yet, when it comes to their religion, they believed in many similar ideas. It is also true that not every one of these peoples believed in all the things mentioned, but all of them believed in some of them; all of them drew their basic beliefs from a common pool, some more, some less. As time passed these basic beliefs were modified and other teachings developed from them, still the basic substance is instantly recognizable. The basic substance of many world religions is enough evidence to claim that they all have a common origin and did not begin in their own independent and separate way.⁶⁰⁸

The most common legend among many religions of the world is one that narrates that humankind began in a golden era, when man was guiltless, was free from sickness and death and was living happily and peacefully in close communion with God.

In the Avesta, the sacred book of the ancient Persian Zoroastrian religion of Persia there is a good shepherd, known as "the fair Yima", who was the first mortal with whom Ahura Mazda (the creator) conversed. He was instructed by Ahura Mazda to nourish, to rule, and to watch over his world. So, Yima built "a *vara*," an underground abode for all living creatures. This abode was free from any kind of poverty, violence, deceit or physical deformation. The inhabitants were free of any kind of defilement from the evil spirit. They dwelt among odoriferous trees and golden pillars; the largest, best and most beautiful on earth; they were a tall and fine-looking race.⁶⁰⁹

⁶⁰⁸ *Mankind's Search For God*, 35-6.

⁶⁰⁹ *Ibid.*, 36-40.

In the history of ancient the Greeks, Hesiod's poem "Works and Days" also speaks about a golden age of men (which he sees as among the Five Ages of Man), when he enjoyed total happiness. The poet writes:

"The immortal gods, that tread the courts of heaven,
First made a golden race of men.
Like gods they lived, with happy, careless souls,
From toil and pain exempt; nor on them crept
Wretched old age, but all their life was passed
In feasting, and their limbs no changes knew."⁶¹⁰

But according to the Greek mythology that golden age was lost when Epimetheus accepted as wife the beautiful Pandora, a gift from the Olympian god Zeus. When she opened a box from there escaped from it troubles, miseries, and illness from which mankind could never rid itself.

Chinese legends also talk about a golden age during the days of Huang-Ti (who is also known as "the Yellow Emperor"), who is claimed to have ruled for a hundred years circa BCE. All good things and inventions occurred during his time, clothing and shelter, vehicles of transportation, land management, manufacturing silk culture, music, language, mathematics, the calendar, and so on. It is also believed that his reign was a time of peace and tranquillity when there were neither thieves nor any wars in China. There was abundance of rain and good harvest each year. Even the wild animals did not kill; in short, it is believed that the Chinese history began in paradise. Even today the Chinese claim to be the descendants of the Yellow Emperor. Similar accounts of this perfect period can be found in the religions of the Egyptians, Mexicans, Peruvians, Tibetans and others.

Let us now look at those elements about the beginning of mankind that are common in different religions of the world. These elements include how God created the first man and woman and placed them in paradise, where they were happy and content. Later they became rebellious, due to which they were expelled from paradise. This led to a life full of hardship, labour, toil, pain and suffering. In due course they became bad, because of which God punished them by sending a great flood and only the chosen righteous survived. Eventually these people multiplied and dispersed to the far-off corners of the world.⁶¹¹

⁶¹⁰ Ibid., 36-40.

⁶¹¹ Ibid., 36-40.

The point to be noted here is that this story about man's early life, narrated or presented before us in the Old Testament, Bible and Quran are also found in many world legends. These records reveal that as man, dispersed, he carried with him his memories, experiences and ideas everywhere he went. With time, changes occurred in these narratives, some were elaborated, others diminished, and they became the foundation of religions in every part of the world.

In order to further emphasize the unity of these early accounts, we can trace the common threads in the mythology of different people of the world. By myth we mean a story usually of unknown origins by which a group attempts to express its culture, its place in the universe, and its sense of identity and purpose, while the term mythology refers both to the study of myths and to the collected myths of a culture. Thus, we speak of Greek mythology, or Asian mythology. The most common themes of myths are the stories related to creation, stories of gods and goddesses or the stories of the heroes of that culture. They are so important that often religion, because of its innate mythological nature, lends authority to it. This stance is valid for the so-called primitive animistic cults as well as the equally arbitrarily defined great world religions. A religious story is a holy scripture to a believer, but it is just a myth to someone of another culture or belief system. For example, Muslims and Christians believe in the virgin birth of Jesus, while to a Buddhist or Hindu this story and its events are clearly mythical, as it describes a phenomenon that is beyond human comprehension and experience. The same is true for Muslims and Christians who find the story of the elephant-god Ganesha or the resurrection of the ancient Egyptian god-man Osiris as perhaps religious, and even beautiful, but certainly bizarre and definitely mythological rather than literally true. Therefore, it is really difficult to separate myths from religion. Also, religion is often concerned with ritual, theology, ethics, and other elements as well as myths - for myths are considered to be the sacred stories of religion. They are those narratives that are used to support, explain, or justify rituals, theology, ethics, and so forth.⁶¹² It is true that many myths may be based on fiction, but there are others, that are based on fact, for example, the myths and legends that are found worldwide giving the story of a great flood.

A main reason for examining myths is that they are the foundation for beliefs and rites still found in many religions today. A good example "the immortal soul", a concept which can be traced from ancient Assyro-Babylonian myth to Egyptian, Greek and Roman mythology to

⁶¹² *A Dictionary of Asian Mythology*, 1st., s.v. "Introduction";

Christendom, where it has become an underlying principle of theology.⁶¹³ Stories about creation, flood, false gods, immortal soul, and sun worship are some of the most common threads in the large patchwork of world mythology today. When we strip away details, common themes emerge. If this is the case, one might suggest that maybe all these myths are either a distortion or exaggeration of a historical fact or to believers, God's word, sent to us through Adam and a succession of Prophets for man's guidance. Almost all these myths can also be traced back to the historical events mentioned first in the Old Testament of the Bible and later in the Quran.

Let's begin the discussion about myths with the creation of the world. The first Greek to put all these myths together in a systematic way was Hesiod, who wrote his *Theogony* in the eight century BCE. The *Theogony* is basically a poem concerned with the origins of the world and the gods who rule it. Hesiod starts off with Gaea, or Gaia (Earth), who gives birth to Uranus (Heaven). Then a succession of sky gods enters the scene and a battle for supremacy begins. When Hesiod was asked where the Greeks got their strange ideas about the creation of the world he replied, "Its ultimate origin seems to have been Sumerian. In these eastern stories we find a succession of gods, and the motifs of castration, of swallowing, and of a stone recur in ways which, though varying, show that the resemblance with Hesiod is no coincidence." In short Greek mythology shows strong affinities with Near Eastern creation myths and has many similarities with Indo-European mythology too. Thus, we can presume that either the earlier was the influenced or the later both shared a common source.⁶¹⁴

It is believed that Chinese mythology emerged from an oral tradition preserved in the form of classical texts in the Age of Philosophers and with the dawn of early literature (China had no Hesiod, Homer or Ovid to retell the mythic oral tales). Chinese narratives were different in the sense that they were fragments of passage and, in order to give authority to these, they were often illustrated. China has a rich tradition of cosmogonic myths. In one there is the world picture of a primeval earth covered by a sky cupola fastened together by cords, mountains or pillars. Then there is one in which the universe is formed from a vapour. Another myth relates that the world was created from matter like a chicken's egg that separated into sky and earth. While another tells how the Woman goddess Gua created all things through her seventy

⁶¹³ *Mankind's Search For God*, 41.

⁶¹⁴ *Mankind's Search For God*, 42-3.

Encyclopedia of World Mythology, 1st ed., s.v. "Greece";

transformations. Among all the creation myths, the most colourful one derives from a minority ethnic group in south-western China, which most probably was transmitted from Central Asia. This narration talks about how the world and humans were formed from the dying body of the first-born, a semi-divine human, the giant Pan Gu. Pan Gu's breath became the wind and clouds, his voice thunder, his eyes the sun and moon, and his limbs mountains. His body fluids turned into rain and rivers and his flesh into soil. His head hair became stars, his body hair vegetation, Teeth, bones and marrow became minerals, while the bugs in his body turned into humans. This myth is in metamorphose form and is also referred to as the myth of the Cosmological Human Body.⁶¹⁵

The Vedic creation story of the Hindus describe Vishnu as the one whose existence spans the cosmos. According to this myth when the universe first came into being it was one of the countless seeds springing from the body of Vishnu. The seeds that floated in the Ocean of Creation were like clusters of bubbles. Each seed became a golden egg into which Vishnu entered as Purusha (the cosmic man). Purusha eventually transformed primeval matter into earth, water, fire, air and ethereal space. The development of his universal body led to the creation of the elements of both the physical and the mental worlds. The Vedic hymns repeatedly talk about Purusha's sacrifice at the dawn of the universe. When the gods prepared to sacrifice, the principal offering was the giant Purusha himself. His different body parts produced the different elements of the universe: his mouth became speech and was presided over by the fire god Agni; his nostrils became breathing and the sense of smell controlled by the wind god Vayu; his eyes became the sense of sight controlled by the sun god Surya; movement appeared along with his legs, rivers along with his veins, and mind along with his heart. Shiva and Brahma became his intellect and ego. While the four divisions of Hindu society (priests, rulers, merchants and workers), came from his mouth, his arms, his thighs and his feet.⁶¹⁶

An Inca legend of South America explains how a mythical creator gave speech to each nation. According to it, He gave each nation the language it was suppose to speak. He also gave being and soul to each one of the men and women as well and commanded each nation to sink below the earth. As a result, each nation passed underground and came up in the place to which

⁶¹⁵ *Encyclopedia of World Mythology*, 1st ed., s.v. "China"; *Mankind's Search For God*, 43-4.

⁶¹⁶ *Encyclopedia of World Mythology*, 1st ed., s.v. "India";

he assigned them. This Inca myth is thus similar to the Bible's account of the confusion of languages at the tower of Babel.

Both the Biblical and Quranic accounts of creation, are similar to the ones examined above. The Biblical creation account first which is set within a sequence of seven days. The act of creation takes place through the direct command of God. It begins with the division of heaven and earth, where earth is empty and in darkness. Then God causes light to appear, which divides night from day. Then He places a solid barrier between the waters of above from the waters of the deep, making the upper part the sky and the lower part the earth. On the coming day he assembles the waters below the sky to form seas which leave dry land, to be called earth. Next is the self-propagation of plants through seeds. Then he fixes lights on the heavenly bodies of stars and planets to regulate time. Then he fills the sea and the sky with watery creatures and birds, followed by the animals that live on land, wild beasts and domestic animals, clean and unclean. At last he creates human beings, both male and female, and gives them domination over all the creatures of heaven, earth and sea. He makes man in His image. On the last and seventh day God surveys his work, seems satisfied and hence, rests from his labours.⁶¹⁷

Although scattered the Quranic account are closely similar to the Biblical one:

Your lord is Allah, who, in six days created the heavens and the earth, and then willed to the throne. He throws the veil of night over the day. Swiftly they follow one another. The sun, the moon, and the stars are compelled to his order. His is the creation, His is the command. Blessed is Allah, the Lord of the worlds. (Quran 7:54).

Then He turned to the heaven when it was smoke... (Quran 41:11).

And the heaven We created with might, and indeed We are (its) expander. (Quran 51:47).

Have not those who disbelieved known that the heavens and the Earth were one connected entity then We separated them, and made from water every living thing? (Quran 21:30).

He is the one who has set free the two kinds of water, one sweet and palatable, and the other salty and bitter. And He has made between them a barrier and a forbidding partition. (Quran 25:53).

Let us now proceed towards another famous myth, of the flood. The question is was it just a myth, because its Biblical account and Noah were both accepted by the the Prophets who came later - like Isaiah, Ezekiel, Jesus Christ and Muhammad the Apostles Peter and Paul. It

⁶¹⁷ *Encyclopedia of World Mythology*, 1st ed., s.v. "Ancient Near East";

is also supported worldwide in the mythologies of Mesopotamia (Epic of Gilgamesh), the Chinese, the Maya, the Incas and the Aztecs.

The Flood account takes us back some 4,500 years to about 2,500 BCE. The account in the Bible begins with God been displeased with having created man. It further tells us that rebel spirit sons of God materialized in human form and went on taking wives for themselves and multiplying. This unnatural interbreeding produced the violent Nephilim race. God was so unhappy with their conduct that He decided to annihilate them all from the face of the earth. Noah is the only person who finds grace in the eyes of God because he is without fault. God speaks to him, warning him that He is going to destroy all flesh and instructs him to build an ark, a box-like craft of pine wood, to make it water-tight with bitumen, and to have several decks since he will destroy everything on earth. Noah thus is to save himself and his family along with a pair of each animal, and enough food for them all. For forty days and forty nights rain falls and floods everything on earth except Noah's craft. After forty days God stops the waters and they gradually begin to diminish. Noah then lets out a dove to see if there is land close by, but the dove returns to the ark. Seven days later he sends it out once again and this time she returns with the twig of an olive-tree in her beak. Noah still waits for another week before sending it out once again. This time the dove does not return indicating dry land nearby. The ark comes to rest on Mt Ararat and God instructs Noah and his family to leave the ark. Keeping the biblical account in mind let us consider the Assyro-Babylonian mythology and its references to the flood.

The Assyro-Babylonian account of the flood takes us some 4,000 years back. This famous Akkadian myth is better known as the *Epic of Gilgamesh*.⁶¹⁸ Our main source of knowledge about this myth is based on a cuneiform text that came from the library of Ashurbanipal, who ruled from 668-627 BCE, in ancient Nineveh. The Epic begins with the exploits of Gilgamesh. The different things he builds around the city of Uruk, but in reality, he was not a pleasant creature to have around. The inhabitants of Uruk complained to the gods that his lust leaves no virgin to her lover, neither the warrior's daughter nor the wife of the noble. In reply to the complaints of the inhabitants, the goddess Aruru created Enkidu to be the human rival of Gilgamesh. However, instead of becoming enemies, they became close friends. The Epic takes a turn when Enkidu dies leaving Gilgamesh devastated. He fears death now and

⁶¹⁸ For more information also see, Felipe Fernandez-Armesto, *Civilizations* (London: Macmillan, 2000), 219-20.

in order to attain the secret of immortality he sets out to find Utnapishtim, a deluge survivor, who had been given immortality with the gods. When Gilgamesh finds him, Utnapishtim, recounts the instructions given to him concerning a great flood. These instructions included he was to build a ship, give up all his possessions and seek life aboard the ship and take with him the seed of all living things. Utnapishtim also tells Gilgamesh that he cannot bestow immortality upon him; disappointed Gilgamesh returns home to Uruk and eventually dies. The account of Utnapishtim is very similar to the pre-Flood details given in the Bible.

A Sumerian myth, which is even earlier than the *Epic of Gilgamesh*, talks about a pious, god-fearing king, named Ziusudra, who is constantly on the lookout for divine revelations in dreams or incantations. He is also considered to be a counterpart of Noah. This myth offers the closest and most striking parallel to Biblical material as yet uncovered.⁶¹⁹ In accordance with the Sumerian narrative of an illustration on one of the tablet, Ziusudra, the pious hero who survived the flood, was settled by the gods in Dilmun (present day Bahrain), which is said to be in the direction towards the place where the sun rises. This could also apply to the Zagros or Khuzistan area or to anywhere that was east of Mesopotamia.⁶²⁰

Chinese literature also talks about the flood legend. According to it one ancient ruler of China named Yu, was known as the conqueror of the Great Flood. It was he who channelled the flood waters into rivers and seas to resettle his people.⁶²¹ Joseph Campbell who is a renowned mythology expert, talks about the Chinese “Period of the Great Ten,” during which ten emperors were assigned to the early Chou Period, which terminates in a Deluge. Thus, he thinks we might be looking at the local transformation of the list of an old Sumerian king. He further quoted other items from the Chinese legends that appeared to reinforce the argument for a Mesopotamian source. There is a strong possibility that the basic source of many myths was in fact Mesopotamia.

However, it is also a reality that a flood story is found in the myths of American Indians, the Aztecs and others. For example, the Aztec mythology speaks of four previous ages. During the first age, the earth was inhabited by giants (a reminder of the Nephilim giants mentioned in the Bible). It included a primeval flood legend in which the waters above merged with those

⁶¹⁹ *Mankind's Search For God*, 46-50.

Encyclopedia of World Mythology, 1st ed., s.v. “Ancient Near East”;

⁶²⁰ Daniel T. Potts, ed., *Dilmun - New studies in the archaeology and Early History of Bahrain* (Berlin: Dietrich Reimer Verlag, 1983), 44-5.

⁶²¹ Bradley Smith and Wan-Go Weng, *China- A History in Art* (United Kingdom: Littlehampton Book Services Ltd, 1973).

below, obliterating the horizons and making of everything a timeless cosmic ocean. The god who is supposed to be controlling the rain and water was Tlaloc, however it is said that his rain was not obtained cheaply but was given in exchange for the blood of sacrificed victims whose flowing tears would simulate the flow of rain. There is another Aztec legend that states that the fourth era was ruled by Chalchiuhtlicue, the water-goddess, whose universe perished by a flood, but men were saved by becoming fish.

Similar accounts of the Great Flood are found in the South American mythology today. According to the British writer Harold Osborne, the most ubiquitous feature of these myths are the stories of the deluge. These myths are common among both the people of the highlands and the tribes of the tropical lowlands. The story is sometimes also regarded as a divine punishment, wiping out all humanity in preparation for the emergence of a new race. Similarly, the Maya in Mexico and Central America had their Flood legend that involved a universal deluge, or *haiyococab* ("water over the earth").

A Catholic bishop, Las Casa, once wrote that the Guatemalan Indians called the flood, *butic*, which means flood of many waters and the final judgement. They also believe that another destruction and judgement is about to come but this time instead of water it would be fire.⁶²²

A Great Flood event is also mentioned several times in the Quran,

And indeed We sent Noah to his people and he said O my people! Worship God! You have no other god but Him(Quran 23:23).

He said: 'O my Lord! Verily, I have called my people night and day (secretly and openly to accept the doctrine of Islamic Monotheism), but all my calling added nothing but to their flight from the truth. Verily! Every time I called unto them that You might forgive them, they thrust their fingers into their ears, covered themselves up with their garments, and persisted (in their refusal), and magnified themselves in pride (Quran 71:5-7).

Indeed We sent Noah to his people (he said): 'I have come to you as a plain Warner that you worship none but God, surely, I fear for you the torment of a painful Day.' The chiefs of the disbelievers among his people said: 'We see you a man like ourselves, nor do we see any follow you but the meanest among us and they too followed you without thinking. And we do not see in you any merit above us in fact we think you are liars (Quran 11:25-7).

My Lord! Leave not one of the disbelievers on the earth. If you leave them, they will mislead Your slaves and they will beget none but wicked disbelievers (Quran 71:27).

And construct the ship under Our Eyes and with Our Inspiration and address Me not on behalf of those who did wrong; they are surely to be drowned (Quran 11:37).

⁶²² *Mankind's Search For God* (New York: Watchtower Bible and Tract Society, 1990), 51-2.

Until when Our Command came and the lowlands gushed forth, overflowing, We said: 'Load it with two of each kind of animal (male and female), and embark your family, except against whom the Word has already gone forth, and those who believe.' And none believed him except a few (Quran 11:41).

Embark therein: in the Name of God will be its course and its anchorage. Surely, my Lord is Oft Forgiving, most Merciful. So it sailed with them amidst waves like mountains... (Quran 11:41).

And Noah called out to his son, who had separated himself (apart), 'O my son! Embark with us and be not with the disbelievers.' The son replied, 'I will betake myself to a mountain; it will save me from the water.' Noah said: 'This day there is no saviour from the Decree of God except him on whom He has mercy.' And a wave came in between them so he (the son) was among the drowned (Quran 11:42-3).

O Earth! Swallow up your water, and O sky! Withhold (your rain). The water was diminished (made to subside) and the Decree (of God) was fulfilled (the destruction of the people of Noah). And it (the ship) rested on Mount Judi, and it was said: 'Away with the people who are wrongdoing (Quran 11:44).

Many archaeologists and anthropologists have tried to find traces of this flood and Noah's ark. In recent times expeditions have set out to find the remains of Noah's ark in the numerous mountains ranges of the Near East. The Bible names Mount Ararat (now on the Turkish – Armenian border) as the final resting place for the ark, whereas the Quran gives the name of Mount Judi; some have even named Mount Nisir, which lies near Kirkuk in Iraq (ancient Mesopotamia), east of the old Assyrian homeland in the Zagros Mountains. Dr. Charles Willis, a modern-day explorer who had been searching for the remains of Noah's ark, recently made an adventurous solo incursion into the remote region of south-eastern Turkey, a region kept in turmoil by renegade local terrorist groups. In this region he believes that he had located for the first time the tomb of Noah. Before this incursion, he had led four expeditions up Mount Ararat, which is considered to be the resting place for the ark in the Bible, yet his results did not yield any evidence. He now believes that the Ark is not intact, due to time, harsh topography, geology and meteorology of the region and it is only natural not to find any major portion intact. According to him, "Those who continue to look for the Ark on Ararat are looking in the wrong place for the wrong thing." His research suggests that Mount Cudi is the best possibility for the landing of the Ark, in addition to the subsequent settlement of Noah and his family (see Map III.3.1-2). According to him it is here that Noah died and is buried. It was also on this mountain's "Ark Plateau" in 1953, a few miles from the site, which Dr. Willis identifies as Noah's tomb that the German professor Friedrich Bender discovered pieces of wood that he believes come from Noah's Ark (see Figure III.3.1). The samples have been carbon-dated to

4500 BCE. According to Dr. Willis, he has found the facade of Noah's tomb (see Figure III.3.2). In this origin story, the human race comes from Noah and his three sons.⁶²³

Another discovery that gives further insight about the Flood narrative. A new and fascinating theory is proposed by two distinguished American geophysicists, William Ryan and Walter Pitman who have discovered a catastrophic event that changed history. According to this theory a gigantic flood 7,600 years ago occurred in what is today the Black Sea (see Map III.3.3). The Black Sea was then a freshwater lake, called the New Euxine Lake by modern geologists. At that time its surface was some 150 meters (500 ft) below sea level.⁶²⁴ Around 6200 BCE a giant Laurentide ice sheet in Canada began to melt; as it melted, it fed icebergs into the Atlantic Ocean. This event resulted in an overall drop in the earth's temperature, resulting in a mini ice age that lasted for about 400 years. The climate change made Anatolia and the Levant much drier than before; farmers could no longer count on being able to grow their crops. All this led to the abandonment of numerous inland settlements, as people moved closer to the Euxine Lake. Around 5800 BCE, when the climate once again became warm and wet, it resulted in the increase of population around the lake shores.⁶²⁵

The melting glaciers also caused a rise in the sea levels worldwide. The Mediterranean Sea (fed from the Atlantic via the Straits of Gibraltar) poured its salt water through the Dardanelles into the Sea of Marmara. At the eastern end a piece of land blocked the way to the New Euxine, but gradually, as the sea levels continued to rise, water flowed across that area, perhaps slowly at first but then more rapidly. Then, it is supposed that aided possibly by an earthquake which are so common in Turkey yet today, the piece of land split apart and millions of gallons of salt water roared into what is today the Bosphorus and crashed eastwards through it, cascading down with immense violence into the lake far below. The two geophysicists have estimated that about ten cubic miles of water poured west to east through the narrow channel each day for about two years, downcutting its bed and carrying all before it. As a result, it would have raised the level of the whole of the Black Sea by only about 15 cm (6 in) each day,

⁶²³ Gary A. Byers, "Is This The Tomb of Noah?", *Bible and Spade* (Second Run), BSPADE 11:3, 1998, <http://www.galaxie.com/article/bspade11-3-02?highlight=noah%20and%20the%20flood>

⁶²⁴ Brian M. Fagan, ed., *The Seventy Great Mysteries of the Ancient World: Unlocking the Secrets of Past Civilizations* (London: Thames and Hudson Ltd., 2001), 28-9.

⁶²⁵ Peter Bogucki, ed., *Encyclopedia of Society And Culture in The Ancient World* (New Delhi: Viva Books, 2010), 247.

but the flat land around the lake shore would have disappeared at the rate of perhaps a mile a day.⁶²⁶

Ryan and Pitman's theory was tested by an expedition that used remotely operated submersibles with cameras to explore the bed of the Black Sea. The pictures that were sent by the camera show possibly remains of buildings and fresh water snails at a depth of 91 meters (300 ft). These items date back to about 5000 BCE, providing enough evidence to back this theory. It is certain that people were living in farming villages around the rim of the lake, which had served as an oasis for farms and villages in a vast region of semi-desert, when it became a sea of death, dispersing their languages, genes, and memories.⁶²⁷

I would close the account of the Great Flood myth, by adding that it would be difficult to refute the authenticity of certain common details in all these accounts, from a variety of perspectives, whether it is historic, genetic, linguistic, mythological, scientific or religious. We humans since eternity are hungry to find our origin. Another difficult thing to refute is the existence of a pious man, who was religiously known as Noah (Old Testament, Bible and Quran), historically or mythologically known as Utnapishtim (Epic of Gilgamesh), Ziusudra (Sumerian myth), or Yu (Chinese myth), and who is also the saviour of humanity, as is proven genetically that we *Homo sapiens* belong to one race. The language we speak belongs to one linguist group. Therefore, it is difficult to prove wrong the stance of the Quran that God saved Noah and the pious people with him and drowned the rest. If this is true than I would take the liberty of establishing another important point here, that God's word lived with Noah and spread later through him, to every corner of the world, from pole to pole. And if this is true than I suggest that the people who settled in the Indus Valley civilization must either have been Noah's direct descendants or his pious companions, who carried with them God's message not only to the Indus Valley region but to every corner of the world, as is shown through the myths of far off regions of the world.

The next myth under discussion is of an immortal soul. Man, since eternity has been trying to find god, it is for this purpose that he has clutched at straws, or is deluded by the illusion of immortality of the soul. We will see whether it is a myth or a belief in an immortal

⁶²⁶ Ellis L. Krinitzsky, "Earthquakes and Soil Liquefaction in Flood stories of the Ancient Near East," *Engineering Geology* 76 (2005): 295-311.

⁶²⁷ Brian M. Fagan, ed., *The Seventy Great Mysteries of the Ancient World-Unlocking The Secrets of Past Civilizations* (London: Thames & Hudson Ltd., 2001), 28-9.

Peter Bogucki, ed., *Encyclopedia of Society And Culture in The Ancient World* (New Delhi: Viva Books, 2010), 247.

soul with many variations that are a legacy of man that has come down to him through generations and his ancestors.

The Babylonian culture believed in an afterlife. The surviving version found at the library of Nineveh is considered to be a condensed variation of the Sumerian myth 'Inanna's Descent to the Underworld'. In the myth the goddess decides to go to the land of no return that is dark and gloomy, which is ruled by Ereshkigal (princess of the great earth). She demands entry into this place by threatening to smash the gates down and let out the dead who would then eat the living. As in the Sumerian myth she is stripped of her accoutrements. As a result of Ereshkigal fatal curses, Ishtar dies. Her death has drastic consequences on earth: all copulation among beasts and man comes to an end. Ea also known as the Sumerian Enki, creates a handsome eunuch to visit Ereshikigal; he wins Ishtar's corpse through flattery and revive it with the Water of life. According to this myth, Ereshkigal ruled the subterranean world.⁶²⁸

The Egyptians also believed in the immortality of the soul. Every soul had to be weighed against Maat, the goddess of truth and justice, who was symbolized by the feather of truth. Some gods like Anubis (the jackal-headed god) and Horus (the falcon) helped during this procedure. Osiris final approval would take the soul to the blissful land of the gods.⁶²⁹

In old Chinese mythology it is also believed that there is survival after death, and also the need to keep one's ancestors happy. The ancestors were believed to be living and to have powerful spirits, who were concerned with the welfare of their descendants, but at the same time were very much capable of punitive anger if displeased. They also believed in giving sustenance to the dead. Therefore, some Shang kings were found buried with anywhere from a hundred to three hundred human victims, who were supposed to be his attendants in the next world. A point to be noted here is that this practice links China with many other places across the world that include Egypt, Africa, Japan, India and many others.⁶³⁰

Likewise, the Greeks were also concerned with the dead and their destination. Having formulated many gods, they had assigned Hades (the son of Cronus and brother of Zeus and Poseidon), to be incharge of the realm of murky darkness. In the myth he appears as the

⁶²⁸ *Encyclopedia of World Mythology*, 1st ed., s.v. "Ancient Near East"; *Mankind's Search For God*, 52-3.

⁶²⁹ *Ibid.*, 52-68.

⁶³⁰ *Ibid.*, 52-68.

common grave-digger of mankind. The Greeks often buried their dead with a coin under the tongue, so that their soul could be carried to the underworld land of the living. The Greek mythology not only influenced its own scholars, like Plato, but also left its marks on Romans and Christian thinkers too.

The myths of the immortality of the soul are also found in South America, in the myths of the Aztecs, Incas, Maya and many more. Death was also a mystery to them as it was to other people living in the various corners of the world. They performed various rituals and participated in ceremonies to help them reconcile themselves to this concept. A famous archaeologist, Victor W. Von Hagen in his book "The Ancient Sun Kingdoms of the Americas" says, "The dead were in reality living: they had merely passed from one phase to another; they were invisible, impalpable and invulnerable. The dead ... had become the unseen members of the clan." Further he says, "the [Inca] Indian believed in immortality; in fact, he believed one never died, ... the dead body merely became undead and it took on the influences of the unseen powers."⁶³¹ According to Mayan mythology, there existed one soul, thirteen heavens and nine hells in every human.

The African mythologies also believe in the surviving soul and also in the continuity of the soul after death. *The New Larousse Encyclopaedia of Mythology* states, "This belief is bound up with another - the continuing existence of the soul after death. Magicians are able to call on souls to aid their powers. The souls of the dead often transmigrate into the bodies of animals or may even be reincarnated in plants." Thus, the Zulu do not kill some snakes as they believe that they are carrying the spirits of their relatives. On the other hand, the Masai of southeastern Africa believe in a creator called Ngai, who places a guardian angel by the side of each Masai soldier for protection, and at the time of death this angel takes the warrior's soul to the hereafter. With variations this myth also exists in other African tribes, such as the Bechuana, Basuto and Baronga.⁶³²

The Quran also speaks about the immortality of the soul; according to it, when the body dies the soul is preserved till the day of judgement, at which time every soul will be judged for its deeds. Those who were righteous are promised heaven and eternal life, while those who are

⁶³¹ Ibid., 52-68.

⁶³² Ibid., 52-68.

found guilty would be sent to hell, which is full of fire and snakes. Some verses from the Quran describe this;

The righteous will be amid gardens and fountains of clear flowing water. Their greetings will be 'Enter ye here in peace and security. And we shall remove from their hearts and lurking sense of injury. They will be brothers, joyfully facing each other. There no sense of weariness shall touch them, nor shall they ever be asked to leave (Qur'an 15:45-8).

This is what you were promised - for every returner [to Allah] and keeper [of His covenant]. Who feared the Most Merciful unseen and came with a heart returning [in repentance]. "Enter ye therein in Peace and Security; this is a Day of Eternal Life! (Qur'an 50:32-4).

Anyone who comes to His Lord guilty will deserve Hell, wherein he never dies, nor stays alive (Qur'an 20:74).

There are still many myths - like that of sun worship, human sacrifice - which have common threads among the mythologies of different people of the world. This brief view was presented to give you an idea about the similarities and common features among not only these mythologies but also among some of the monotheistic established religions of the world today. These links indicate common features, many of which can be traced back to Babylon, the Mesopotamian cradle of most religions. We can see common threads, whether in creation, myths, in accounts of the Great Flood, or in the basic concept of the immortal soul.

Therefore, I believe that all religious thoughts developed or evolved from one common pool of ideas, as is found in the mythologies of different regions. The Black Sea theory further helps us in suggesting that all mankind, except Noah and his pious people died in the Great Flood (see Map III.3.4-5), which is assumed to have taken place around 5800 BCE, and if this is true than all humanity spread to different parts of the world after that, took the righteous wisdom with them, wherever they went. We have suggested that Noah's Ark landed on Mount Judi, and, if this is true, then it further helps us in stating that the Near East and Asia are in fact not only the cradle of civilization but also home to the birth of all religious thoughts after the Great Flood.⁶³³ Archaeology proves today that people were living in the Zagros Mountains and the Baluchistan area not later than 6000 BCE, possibly as part of a dispersal after the Great Flood of the Euxine Lake.

Let us very briefly discuss some of the religions contemporary with the Indus Valley civilization, keeping in view those aspects of religious thought that lead to the belief in one

⁶³³ The origin of the Sumerians is also not known, would it be wrong to suggest that they also might have been Noah's companion or his off shoots who brought with them the story of the Great Flood.

God or one Supreme Being. Let us begin with the prayer of Egyptian Pharaoh Akhenaten (r. 14th Century BCE) (see Figure III.3.2) to Aten “the one and only God” (see Figure III.3.3):

Creator of the germ in woman,
 Maker of seed in man,
 Giving life to the son in the body of his mother,
 Soothing him that he may not weep,
 Nurse (even) in the womb,
 Giver of breath to animate everyone that he maketh!
 When he cometh forth from the womb...on the day of his birth,
 Thou openest his mouth in speech,
 Thou suppliest his necessities.
 When the fledgling in the egg chirps in the shell
 Thou givest him breath therein to preserve him alive...
 He goeth about upon his two feet
 When goeth about upon his two feet
 When he hath come forth therefrom.
 How manifold are thy works!
 They are hidden from before us
 O sole God, whose powers no other possesseth.
 Thou didst create the world according to thy heart.

(Translated by Appleton, 1985, p. 13)

This Pharaoh is the first documented person in human history to establish a cult of the worship of one God, whom he called “Aten” (the light that is in the sun, which brings the world into being and sustains it). To show and give respect to this one God Akhenaten moved the capital of Egypt from Thebes, which was at the junction of Upper and Lower Egypt, to a new capital, named Akhetaten. This step did not win him any favours in the eyes of his contemporaries or those who came after him, for they were used to believing in many deities, an act they followed again after Akhetaten’s death (he was probably murdered, while he was relatively young). After his death his city was abandoned and was buried in the sands of the desert for centuries. He was rarely mentioned by his successors, who erased his symbols and figure from monuments wherever they could. If his reign had to be mentioned out of compulsion, he was designated “that criminal of Akhetaten”. The reason for this extreme reaction was that most believed that he had repudiated the deities of Egypt’s long past, which had been responsible for sustaining Egypt and causing her to flourish for well over one thousand years. His successors proclaimed that Akhenaten had turned Egypt *seni-meni*, (“passed by and sick”) and that under his rule, “the deities turned their backs on the land.”⁶³⁴

Both during Akhenaten’s lifetime and after his death, it has been questioned again and again, why he did what he did. Was it for some worldly gain? Was it for the fulfilment of a

⁶³⁴ Martin Forward, *Religion-A Beginner’s Guide* (United Kingdom: One World Publications, 2001), 52-3.

political gain? Was it aimed at destroying the power of the increasingly influential priests? Or was it to accrue more power for himself. Historians suggest that his imaginative and reverent prayer speaks for itself. Archaeologists excavating his few artistic remains show him as a realistic moving away from the stylized grandeur of his predecessors (and of his successors - not least Rames II a few decades later, whose depictions at Abu Simbel show him towering over friend and foe alike. Akhenaten is portrayed as an ungainly man, with wide hips and thick lips. It seems that he was a painfully honest man, allowing and even encouraging such realistic depictions of himself. It is true that his contemporaries were not happy with his experiment and considered him as erratic and deluded ruler. On the other hand, later generations have been a little more considerate towards his actions and have categorized them as religious advancements.⁶³⁵

Akhenaten ruled from 1365 to 1355 BCE; this is the only period in the history of the Egyptian Pharaoh's, when monotheism flourished. It is supposed by some historians that Moses also might have lived during this time period. These historians further suggest that Akhenaten might have transferred his worship of the Sun to worship of Yahweh (the God of the Jews). Perhaps there is something to this thought, because there is no doubt today that Moses's influence is not limited to Hebrew theology only. Today both Christians and Muslims have adopted him as a significant figure. Therefore, it is difficult to deny either his existence or his teachings about one God.

Asher Ginzburg who gives the name Ahad Ha' Am, to Akhenaten is an author, philosopher, and a great leader of the Zionist movement. He has written these words about Moses in the book *An Anthology of Living Religions*;

"In my heart I dismiss all these questions [concerning the historical Moses] with one short and simple answer. This Moses, this hoary figure whose reality and essence you are trying to clarify, is not a matter for scholars such as you. We have a different Moses, our own Moses, the one whose form is writ large on the heart of our people from generation to generation and whose influence on our national life has not ceased from ancient times to now. Moses' historic reality does not depend upon your learned treatises. For even if you managed to prove beyond a shadow of a doubt that Moses the man never lived, or that he was not as he is depicted, this would not diminish by one iota the historical reality of the Moses ideal - the one who led us not only forty years through the Sinai desert, but thousands of years, through every desert we have crossed from the Exodus from Egypt to the present."⁶³⁶

⁶³⁵ Ibid., 52-3.

⁶³⁶ Jim Wills, *A To Z of World Religions - Places, Prophets, Saints and Seers* (Mumbai: Jaico Publishing House, 2007), 355-6.

Another historical figure of utmost importance in the monotheistic religious history of mankind is Abraham. He is one figure, who is looked upon as a mentor by again the three monotheistic religions, Judaism, Christianity and Islam. As was said about Moses, nobody can deny the historical significance of Abraham, as more than half of the world's population believe in his very existence. A significant fact yet again is that the Near East (Mesopotamia) is considered the birth place of Abraham. Through archaeological research conducted in the area it is believed that he lived in Ur (a Sumerian capital of the Chaldees) in what is now Iraq around 2000 BCE. It is further believed that a people called Hapiru, lived in Ur until about the time of the biblical narrative. These people apparently migrated to Haran, in northern Mesopotamia, and then, it is assumed, to Canaan (later called Palestine, but which is now Israel) on God's command. From there Abraham goes to Egypt because of famine; on returning from Egypt he promises to remain faithful to his covenant with God and circumcision will be the physical sign of this covenant (in order to set apart his descendants forever). Abraham is promised by God that his son's ancestors will grow to become a great nation, even this fact is accepted by the three monotheistic religions. Then there is another narrative about Abraham sacrificing his son on God's command; if we set aside the small details, even this narrative is accepted by all three monotheistic religions. It is also said in the Quran that Abraham and Ishmael together rebuilt (the holy shrine of the Muslims) the Kaaba in Mecca, which some say had been destroyed by Noah's Flood. There they both prayed that God would raise up from their descendants a messenger who would declare God's revelations and teach wisdom to humanity. While Christians believe this messenger was Christ, Muslims believe that the messenger was Muhammad. Abraham is the most sacred patriarch of the three major monotheistic religions. Although it is true that some details about his life differ widely depending on which religion's scriptures one consults, whether it is of the Jews, Christians or Muslims, yet his story has undeniably affected the course of human history.⁶³⁷

Another monotheistic religion of Middle East is Zoroastrianism, which is considered to have begun about five centuries before the Common Era. Although it has few living representatives today, it has considerable historical significance because for more than a thousand years it was the official religion of the vast Iranian empire, which extended from Iraq and Turkey to India. Therefore, in some way's Zoroastrianism is considered a bridge between the Eastern and Western religions. Cyrus the Great (c. 585-c. 529 BCE) was king of Persia

⁶³⁷ Jim Wills, *A To Z of World Religions-Places, Prophets, Saints and Seers*, 6-10.

when Zoroaster or Zarathustra, as he was later called by the Greeks, began to preach (c. 628 – c. 551 BCE). Zoroaster's beliefs are very similar to Jewish, Christian and Muslim ones. They include the concept of heaven and hell, an evil force, judgement of individuals, the resurrection of the body after death, and a dramatic apocalyptic end of the world with a final rebirth of the dead after which, humans would either be awarded heaven or hell depending upon their deeds. Heaven would be eternal, whereas once the evildoers had been purified in the fires of hell, which are not eternal in their beliefs; they would eventually end up in heaven.⁶³⁸

Zoroastrianism is a surviving religion with a living legacy, yet people raise questions about the existence of Zoroaster. Did he really live, or was he a mythological character? Was he born around 600 BCE or does his birth occur all the way back to 6000 years ago,⁶³⁹ and if later is true he might either have been Noah's direct descendant. The point to be noted here is that again and again, while tracing the history of religions, especially in the area of Middle East, we come across individuals with strong historical significance, whose existence cannot under any circumstance be denied because of the rich legacy that they have left behind; whether it is Noah, Abraham, Akhenaton or Zoroaster. Another point of utmost significance is that they all believed in one God, with variations about the rest of their teachings. Most of these significant people are also mentioned in the holy books of the three monotheistic religions and are also known because Zoroastrianism became the official religion of Persia for a long time period. It is believed that the Zoroastrian priests, who were called "Magi", studied the skies for signs and portents.⁶⁴⁰ From their Ziggurat towers, they would nightly scan the stars and constellations. In the Gospel of Matthew in the Bible, it is narrated that some of the "Magi" travelled to Bethlehem at the time of the birth of Jesus, following a star that signified to them that 'the King of the Jews' had been born.

It would not be wrong to suggest that the three monotheistic religions, which are today followed by more than half of the world's total population, are in fact off-shoots from the legends of these great personalities. The search for God had been with humanity since the birth of mankind. God has time and time again sent his prophets to guide all mankind. In the coming chapter I will discuss the religion of the Indus people in the light of all that we have covered so far.

⁶³⁸ Mary Pat Fisher, *An Encyclopedia of The World's Faiths-Living Religions* (London: I. B. Tauris Publishers, 1997), 202-3. Jim Wills, *A To Z of World Religions - Places, Prophets, Saints and Seers*, 469-70.

⁶³⁹ *Ibid.*, 470.

⁶⁴⁰ From them we get the word 'magic'.

I conclude this chapter with a vision that Zoroaster held for the whole human race. He believed good will triumph and these are some of the words from his final prayer;

And then may we be those who transfigure this world. O Mazda (and you other) Lords, be present to me with support and truth.' Amen.⁶⁴¹

Doesn't this sound Familiar? Isn't this our prayer too?

⁶⁴¹ Jim Wills, *A To Z of World Religions - Places, Prophets, Saints and*, 470.

Chapter 3.4

Post dated-Established Religions of the Indus Land

In the preceding chapter I discussed how religious beliefs began, how they spread and who was responsible for spreading them. There were some figures whose links can be traced in the religions, mythologies, and history of more than one nation. The several arguments lead us to the suggestion that there was one genetic lineage, one common language, and one pool of thoughts concerning God at the earliest time of *Homo sapiens*' development. The pool of religious thought changed as time passed, the concept of one God became worship of many gods. We also noted how God, time and again sent his Prophets to guide mankind and how the message of one God spread to different regions of the world at different time periods. The area of God's chosen messengers (that we know) had always been the Middle East and all monotheistic religions originated from this area, whether it was Judaism, Christianity or Islam, while monotheistic individuals like Akhenaton and Zoroaster belonged to this and nearby regions. I only discussed those religious movements or those individuals who believed in the oneness of God and intentionally left behind polytheistic movements of this area. The purpose of not highlighting them was not to ignore them, but to emphasize the point that in between God's messengers the people of this region time and again believed in more than one God or divided the attributes of one God into different personifications (which were mostly associated with either the basic elements or super natural forces that were beyond their control). In the preceding chapters about the to and fro movement of people in and out of this region we have also discussed how the message of God might have reached this region.

I will begin the discussion with the established religions of this land and later,

I will discuss the religious beliefs of the Indus people with reference to their contemporaries. What religion was practiced by the people of this land in ancient times and during the Indus time period is what is still unknown and the topic of my dissertation. We find a lot of suggestions and assumptions on this subject by various Indus and religious scholars of the world, but no one has ever taken this aspect of the Indus people very seriously. By saying this I do not want to demean the efforts of others or be disrespectful towards anyone, but to emphasise that many of us take this aspect of the Indus civilization very lightly or for granted, but I want to suggest that religion was the main element on which the very foundation of Indus civilization stood. It not only kept the civilization united but also prosperous for a long time,

and that also without the use of any armaments or force. This factor differentiates the Indus region from its contemporary counter parts.

The documented religious history of the sub-continent begins with the *Vedas* scriptures of the Hindus written in approximately 1500 BCE, but the question that arises is who were the Hindus? When and where did they live? In order to answer questions about the origin of the Hindus, Jim Wills⁶⁴² gives us two theories based on recent archaeological discoveries. According to one theory the Indo-European Aryans either invaded or migrated to India through the Khyber Pass (into present-day northern Pakistan), where they found a stone-age people whose agricultural way of life was already ancient. Archaeologists have discovered many goddess figurines associated with these people, indicating religious affiliations with agricultural and fertility practices. But they also found an ancient seal engraved with a figure sitting in a yoga position. According to another theory based on more recent archaeological excavations and data found in the northwest of India (present day Pakistan) Hinduism just might prove to be much older than what scholars initially thought and might have arisen completely independent of the Aryan cultural influence. In short, Hinduism predates the Aryans by centuries and could have a historical identity with the Indus Valley civilization.

Warren Matthews is of the opinion that Hinduism formed before anyone kept contemporary written records of its development.⁶⁴³ For a long time its precepts may have been orally transmitted, from one generation to the next, while later on they were collected and preserved in the Vedas. Archaeologists have used Vedas as sources to reconstruct the initial stages of the Hindu religion. According to them the Dravidian people lived in cities that were well planned with underground plumbing, and other refinements of a developed urban population. These features include a large tank, or pool, similar to the ones now used in Hindu temples. While some figurines indicate a concern with human fertility and other forces of nature, yet archaeologists do not know the full nature of their religion. About 1000 BCE, the Aryan tribes migrated into both Greece and India. They belonged to an Indo-European group and had entered the India sub-continent through Iran, bringing with them the language and religious concepts of both Persia and Greece. These Aryans (a word meaning noble men) were basically herders and nomads who drove their animals ahead of them. Their deities were based

⁶⁴² Jim Wills, *A To Z of World Religions - Places, Prophets, Saints and Seers* (Mumbai: Jaico Publishing House, 2007), 268-9.

⁶⁴³ Warren Matthews, *World Religions*, 3rd (Ed) (Toronto: Wadsworth Publishing Company, 1999), 83-5.

on nature, like the phenomena of heaven and earth. They paid tribute to their gods by sacrificing animals and sharing the flesh with them in a meal. The god's portion was sent through smoke rising from the sacrificial fire; worshippers ate their portions during the service. Devas represented things that were good for humans, while Asuras were evil powers that represented things harmful to humans. It was the ethical duty of religion to keep things on the right path and for good to prevail over evil. As, time passed these Aryans mixed with the native people. They started sharing with them, their customs, traditions, rites, symbols and myths. Hence each contributed, and each received. Even the earliest hymns of Hinduism reveal a worship that retained many Aryan practices; for example, the later worship of Shiva reflects traditions of the Dravidians.

Scholars cannot pin point the exact time when Hinduism began, but they believe that it developed in an early stage of the interaction between Aryans and Dravidians.⁶⁴⁴ They further propose that it was during this time that groups and strata of Hindu society began to form. According to them this proposition can be based on two theories; one theory is that the organization of Hindu society began as a result of *varna* (colour). The invaded people were dark, while the invading Aryans were light, because the conquerors were of lighter colour; therefore, they were superior to the dark-skinned locals. While according to the other theory this class differentiation developed due to psychological preferences. The Aryans were militants and ruling in nature, while the locals were settled urbanites who preferred artisan and merchant activities. It is difficult for scholars to determine which is right, for in the second millennium BCE this differentiation was neither rigid nor universally recognized; it developed in a firm caste system at a much later stage. A *varna* system was also proposed by Massimo Vidale and Heather M. L. Miller in a joint paper in which they stated that the community differentiation might have occurred due to occupational specialization that was pretty obvious during the Mature Indus Phase.⁶⁴⁵ Kenoyer also suggests that some people following their

⁶⁴⁴ Many scholars today negate the "Arrival of the Aryan Theory", according to them such a movement never occurred. Upinder Singh in her book talks about the Kenneth Kennedy's analysis of the skeletal record, which reveals that the first phase of discontinuities in physical types in the north-west occurs between 6000 and 4500 BCE, and the second one after 800 BCE. There is no evidence of any demographic disruption in the north-west during and immediately after the decline of the Harappan civilization. It is pretty obvious that no invasions took place during the period when the Indo-Aryans were supposed to have entered India, nor were there any large-scale migrations, but a series of small-scale inflows is a more likely possibility. Many archaeologists have tried to identify the Indo-Aryan migration with the help of archaeology but have been unsuccessful so far. Dr. Mughal further emphasizes the point by stating cultural continuity rather than discontinuity. Upinder Singh, *A History of Ancient and Early Medieval India: From The Stone Age to the 12th Century* (New Delhi: Pearson Longman, 2008), 254-5.

⁶⁴⁵ Massimo Vidale and Heather M. L. Miller, 2000, "On The Development of Indus Technical Virtuosity and Its Relation to Social Structure", *South Asian Archaeology 1997*, eds., Maurizio Taddei and Giuseppe De Marco, Vol. 1, 130-31, Rome: Istituto Italiano Per L' Africa E L' Oriente.

ancestor's occupation may have become richer in comparison to others, which could have led to the beginning of the Hindu caste system or a wide class differentiation by the Mature Indus Phase.⁶⁴⁶

Historians, archaeologists and scientists have approached the problem from several perspectives. One method is to examine the ancient texts, literature and archaeology collectively as it reveals a varied cultural mosaic of the sub-continent between 2000 and 500 BCE. Previously most of the stories were considered to be mythological in nature, but recently they have been examined scientifically too. For example, one such myth describes a mythological causeway⁶⁴⁷ that connected India and Sri Lanka (see Map III.4.1).⁶⁴⁸ It enabled Hanuman, the monkey god, free access to rescue a captured Hindu princess (Sita wife of Rama). The very mention of a monkey god allows one to dismiss it as anything to do with reality, but satellite images (whose veracity is questioned by some) have revealed what has been labelled as Hanuman Bridge, thought to have existed in ancient times, validating that a causeway did indeed exist.⁶⁴⁹ If there is some truth in these ancient stories that describe an early Hindu culture that predate a supposed Aryan invasion, then surely the Aryans did not invent early Hinduism, they simply conquered early practices of it. A similar view is expressed by V. Gordon Childe,

"India confronts Egypt and Babylonia by the 3rd millennium with a thoroughly individual and independent civilization of her own, technically the peer of the rest. And plainly it is deeply rooted in

⁶⁴⁶ J. M. Kenoyer, *Ancient Cities of The Indus Valley Civilization* (Karachi: Oxford University Press, 1998).

⁶⁴⁷ Archaeological studies reveal that the first sign of human inhabitants in Sri Lanka date back to a primitive age, about 1,750,000 years ago and the bridge's age is also almost equivalent to it.

⁶⁴⁸ "Space images taken by NASA reveal a mysterious ancient bridge in the Palk Strait between India and Sri Lanka. The recently discovered bridge currently named as Adam laqno Bridge is made of chain of shoals, about 18 miles (30 km) long. The bridge and laqno unique curvature and composition by age reveals that it is manmade. The legends as well as Archaeological studies reveal that the first signs of human inhabitants in Sri Lanka date back to the a primitive age, about 1,750,000 years ago and the bridge and laqno's age is also almost equivalent. This information is a crucial aspect for an insight into the mysterious legend called *Ramayana*, which was supposed to have taken place in more than 1,700,000 years ago. In this epic, there is a mentioning about a bridge, which was built between Rameshwaram (India) and Srilankan coast under the supervision of a dynamic and invincible figure called Rama who is supposed to be the incarnation of the supreme. This information may not be of much importance to the archaeologists who are interested in exploring the origins of man, but it is sure to open the spiritual gates of the people of the world to have come to know an ancient history linked to the Indian mythology."

NASA Images Find 1,750,000 Year Old Man-Made Bridge, *The Hindustan Times*: Mumbai, 10-10-2.

<http://rensee.com/general30/nasa.htm>

⁶⁴⁹ "Adam's Bridge, also called Rama's Bridge, chain of shoals, between the islands of Mannar, near northwestern Sri Lanka, and Rameswaram, off the southeastern coast of India. The bridge is 30 miles (48 km) long and separates the Gulf of Mannar (southwest) from the Palk Strait (northeast). Some of the sandbanks are dry, and nowhere are the shoals deeper than 4 feet (1 m); thus, they seriously hinder navigation. Dredging operations, now abandoned, were begun as early as 1838 but never succeeded in maintaining a channel for any vessels except those of light draft. Geologic evidence suggests that Adam's Bridge represents a former land connection between India and Sri Lanka. Traditionally, it is said to be the remnant of a huge causeway constructed by Rama, the hero of the Hindu epic *Ramayana*, to facilitate the passage of his army from India to Ceylon (Sri Lanka) for the rescue of his abducted wife, Sita. According to Muslim legend, Adam crossed there to Adam's Peak, Ceylon, atop which he stood repentant on one foot for 1,000 years."

Encyclopaedia Britannica: <http://www.britannica.com/EBchecked/topic/5208/Adams-Bridge>.

Indian soil. The Indus civilization represents a very perfect adjustment of human life to a specific environment. And it has endured; it is already specifically Indian and forms the basis of modern Indian culture.”⁶⁵⁰

Furthermore, if Aryans were the true originators of Hinduism, where does the mediating yogi of the Indus fit in, which is not only a symbol religiously adapted by Hinduism but by Buddhism and Jainism too - religions that purely originated in India. There are also pre-Aryan tree spirits and the objects resembling the *linga* (a phallic device symbolic of the god Siva). All these symbols endure in later Hindu civilization.

The Hanuman Bridge is also known as Adam's bridge; according in Muslim legend, it was crossed by Adam to reach Adam's Peak, which is in Ceylon (see Figure III.4.1), where he stood repentant on one foot for 1,000 years.⁶⁵¹ This Peak has religious significance not only for the Muslims and Christians, who believe in Adam, but also for the religions that originated on this land. They all have their own legends and stories to show their religious affiliations with this Peak; in short, the Peak is a holy place for all four religions; Hinduism, Buddhism, Christianity and Islam.⁶⁵²

According to a Buddhist's legend, the Buddha is believed to have left the print of his left foot on Adam's Peak, and then, in one stride crossed to Siam (now Thailand) where he left the impression of his right foot. The Thai version is called *Phra Sat*, and it is supposed to be the companion of the foot print on Adam's Peak and it is of similar size. Other, footprints were found in Laos (Pha Baat Phonsan), Cambodia (Phnom Santuk) and China (Wu-Tai Shan). Buddhists attribute its large size to the fact that the Buddha was believed to be about thirty-five feet tall. The real footprint on Adam's Peak is believed to be set in jewels hidden beneath the visible rock (see Figure III.4.2). According to the Islamic version, the Arabs record it as being the solitary footprint of Adam where he stood for a thousand years of penance on one foot. An Arab tradition tells that when Adam was expelled from heaven, God put him on the peak to make the shock of leaving Heaven less terrible and thus send him to Ceylon, it being the place on earth closest to and most like heaven. In view of this belief at the top of the mountain lies the sepulcher of Adam, *Adam-malai* (Mount of Adam).

⁶⁵⁰ *The New Encyclopedia Britannica*, Vol. 21, s. v. "The Indus Civilization."

⁶⁵¹ *Encyclopaedia Britannica*: <http://www.britannica.com/EBchecked/topic/5208/Adams-Bridge>.

⁶⁵² "Whose footprint is on the peak?" UN Special, N 631, July-August 2004, http://www.unspecial.org/UNS631/UNS_631_T26.html

The Christian are of the view that the Portuguese, who came to Sri Lanka in 1505, called the mountain *Pico de Adam* (anglicized Adam's Peak). They believed that St. Thomas the Doubter came to India and Sri Lanka, where he baptized Gondophorus, the Indo-Parthian king, and after leaving his footmark on the mountain, St. Thomas ascended to Heaven.

The Hindus believe the footprint to be the footmark of Lord Shiva, the third member of the godhead of the Hindu Holy Triad. The God is supposed to have settled on the summit to shed his divine light upon mankind. Hence, they call the mountain *Sivanolipadam* (Foot of Shiva's Light). Devotees of Shiva ascend the mountain beseeching divine help and the providence to be born in the celestial abode (i.e., Mt. Kailas, in Tibet). There exists a deeper connection between Adam's Peak and Mt. Kailas as both are located on the same geographical axis and have similar pyramidal shapes. Therefore, Adam's Peak is sometimes also considered as a natural and spiritual "replica" of Mt. Kailas, one of the holiest and the most enigmatic places on the planet.

No one is sure about the significance of Adam's Peak, but since ancient times until today it has attained a legendary status as a destination of mystic pilgrimages for several world religions. Whose footprint is there? Is it a real footprint of a giant? Is it a natural phenomenon? Why then are these phenomena repeated in several places in the world in the same size? Who made this print? Humans? Nature? And who made it in Thailand? in Laos? in Cambodia? Is there any connection between all these footprints? Does the pyramidal shape have special meaning? Why should it be called a perfect triangle when the mountain does not have such perfect slopes? Is there any connection between these triangles and the giant footprints?⁶⁵³ These are some of the questions asked by the author of this article. The point to be established here is that while we might never be able to understand or unravel the true significance of this Peak, yet it has since ancient times held not only historical significance but religious ones too and all the major known religions of the Near and Middle East own this spot. I believe that all the religions of this region own this place because all mankind is of one lineage and due to the vast time span that the humans have spent on this earth the true story or legend about Adam's peak has been lost somewhere in the past, yet all four religions do not deny it to be a place of religious significance (see Figure III.4.3). Doesn't this remind one of the Flood Myth - where myths of different and distant regions all believed that a Great Flood came and one pious man

⁶⁵³ "Whose footprint is on the peak?" UN Special, N 631, July-August 2004, http://www.unspecial.org/UNS631/UNS_631_T26.html

saved some of the people? The roots of religion in the Indian sub-continent are much deeper and older than what was previously thought by archaeologists and certainly predate the so-called arrival of the Aryans in this part of the world. Another important question is who were the true originators of Hinduism, are they the Aryans, whose turbid migration or arrival on a large-scale in our part of the world is unprecisely known; or the people that predate them – the people of the Indus civilization. I will discuss this point further as I proceed. Now let us discuss major features of the religious beliefs of the Hindus.

Although it is said that there are more than thirty-three million gods in India, still it must be remembered that since Brahma is All, therefore all the gods are ultimately faces of Brahma (see Figure III.4.4).⁶⁵⁴ He can take male, female or animal form. A point to be noted here is that Brahman is not even a god but is an undefined principle and all the other gods are ways of expressing or visualizing the inexpressible. Therefore, a question arises, whether Hinduism is polytheistic, pantheistic, or monotheistic? The answer may vary, depending on how one wants to interpret it.⁶⁵⁵ Most scholars today believe that it is a monotheistic religion, whose adherents believe in one God, Brahma (the absolute spirit), who is beyond human reach and understanding. There are a multitude of different images that make Brahma visible and knowledgeable to worshippers.⁶⁵⁶ I will not discuss the details of all the gods, but where needed, their references would be given. Let's now briefly discuss the attributes of the Hindu God.

“God is the primary cause of all True knowledge and of everything known by its means. God is All-Truth, all-knowledge, All-beatitude, Incorporeal, Almighty, Just, Merciful, Unbegotten, Infinite, Unchangeable, Without a beginning, Incomparable, the Support and Lord of all, All-pervading, Omniscient, Imperishable, Immortal, Exempt from fear, Eternal, Holy and the Cause of the universe. To him alone is worship due.” (Ten Principles of the Arya Samaj)⁶⁵⁷

There is no doubt that like other traditions of the world, Hinduism has also divided and changed, has been added to and adapted. It also has fostered social evils, such as the caste system, but it has also bettered countless lives. It predates the modern, scientific explanations for the origin of the cosmos and modern psychology by thousands of years, as it is considered to be one of the oldest surviving, living tradition of the world. Although it has changed over

⁶⁵⁴ Jim Wills, *A To Z of World Religions - Places, Prophets, Saints and Seers* (Mumbai: Jaico Publishing House, 2007), 268-9.

⁶⁵⁵ *Ibid.*, 271.

⁶⁵⁶ Michael Keene, *World Religions* (Oxford: Lion Publishing, 2002), 15.

⁶⁵⁷ Michael Keene, *World Religions* (Oxford: Lion Publishing, 2002), 15.

the years, yet at the same time it has retained essential human truths, such as the various stages of life, that go a long way toward explaining how to live in today's world. Some scholars describe it as an organic system, rather than a religion.⁶⁵⁸

The Hindu scriptures reveal the slow development of its philosophy and tell about their gods and myths. These scriptures are compiled into four books, known as *Rig-Veda*, *Sama-Veda*, *Yagur-Veda*, and *Atharua-Veda*. The *Rig-Veda* consists of religious poetry, while the other three are compilations of incantations and spells. Later, sometime around 500 BCE, the Upanishads began to be written, probably as a response to the teachings of Buddhism. These scriptures include details about the Brahman-Atman philosophy, the practice of Om meditation, and about the four levels of consciousness. Thus, they became the philosophical section of the *Vedas*, moving Hinduism inward to the mind and embodying it in what is known as "intellectual" Hinduism. The resulting compilation describes two great principles: (the Laws of Manu), (the way of society), (the way of the Yogi) and (Yogi Sutras).

According to the Laws of Manu, there are four stages of a man's life: *kama* (pleasure), *artha* (gain), *dharma* (righteousness), and *moksha* (liberation). In simpler words they can be designated as; student, householder, hermit, and renunciant. These four stages in a man's life work somewhat like this; when he is young, he gets educated and does things that young people usually do, like gathering with like-minded friends, going to parties, debating with elders, meeting potential mates: in short, generally having a good time. Then a time comes when he wants to settle down; he gets married, has kids, moves to the suburbs, buys a house, gets a dog, puts up a white picket fence: all these things show that he has reached the second stage of life, the householder. Then he reaches a stage when all these things somehow seem strange and meaningless, the inner thriving to acquire more starts to fade and he start to wonder, what is life all about. It is now that he discovers a spiritual side that was hidden within him. The charms of life and the quest for more begins to disappear, for he has reached a point where he understands that life is not eternal. In short, he has reached the third stage of his life, where, now he prefers to read a book beside a fireplace at home and understands why some people go off to become hermits. The fourth and final stage of man's life - when retiring from activity may not be enough - occurs when he wanders off somewhere, to seek the spiritual meaning of

⁶⁵⁸ Jim Wills, *A To Z of World Religions - Places, Prophets, Saints and Seers* (Mumbai: Jaico Publishing House, 2007), 273.

life, leaving family and belongings behind. It is said that this stage is complete, only when he is given food and sustenance by one who was formerly his servant.

Some scholars suggest that understanding the four stages of life helps to explain the vast differences found between the social attitudes of the people of India and those living in America or western societies. According to Indian people westerners have never reached beyond stage two: throughout their life spans they have only learned to depend on materialistic gains for happiness. Indian people according to this doctrine believe that it is impossible to accumulate enough goods and wealth to provide one with happiness. Westerners think that wealth would help them in their lives; Hindus believe this attitude towards life quite immature and backward. For them a lifetime of accumulated wealth represents spiritual poverty, which needs to be pitied. Meanwhile, many westerners think of India as being full of impoverished people who can and should better themselves. This is the basic difference in the religious mentality, understanding and comprehension of traditional Hindu society. In comparison, to those of the western (Judeo-Christian) Islamic beliefs consider wealth as a sign of god's blessings.⁶⁵⁹

A core belief of the Hindus is in the endless cycle of birth, life on earth, death and rebirth, with each person being reincarnated at a level determined by how they spent their previous existence.

Do not do to another what you would not like to be done to yourself; that is the gist of the law – all other laws are variable. (*Mahabharata, Veda* 39)⁶⁶⁰

An important common element among the Hindu, Jain and Buddhist religions is the practice of yoga, (a practice that one also encounters illustrated on a seal during the Mature Indus Period which predates any of these religions).

The way of the Yogi consists of scriptures that include the details about the techniques of yoga through a process of eight steps, called limbs; There are, nonviolence, truthfulness, non-stealing, celibacy, and non-greed; purity, contentment, mortification, study, and devotion; posture; breath control; withdrawal of attention from the senses; concentration; meditation; contemplation.

⁶⁵⁹ Jim Wills, *A To Z of World Religions - Places, Prophets, Saints and Seers* (Mumbai: Jaico Publishing House, 2007), 268-72.

⁶⁶⁰ Michael Keene, *World Religions* (Oxford: Lion Publishing, 2002), 8-9.

In the spiritual exercise of meditation (yoga), the body is envisioned as being “centred” and brought up through the seven chakras, or centres of energy that are located from the base of the spine to the top of the head. The way of the yogi and society come together in the scriptures called *Bhagavad-Gita*, or the “Song of the Lord”, (part of the long epic of the Mahabharata) in which Lord Krishna himself specifies the method of spiritual progress.

It is considered quite difficult to learn all that is written in these scriptures, and in order to understand these one requires a spiritual leader, who is called a *guru* in Hindi. This *guru* helps one to find the best *bhakti* or spiritual path leading to moksha (liberation), where one finally loses his egocentricity and becomes one with Brahma (the One God).⁶⁶¹ Hinduism is the oldest surviving world religion that is still active today. It has covered a time stretch of thousands of years. It is deeply rooted in the traditions and history of India and one can easily trace its origins back to the beginning of the second millennium BCE, but some scholars suggest that it is even older with the earliest-known antecedents in the Indus valley civilization,⁶⁶² an area from where civilization on the sub-continent began. The word ‘Hindu’ was first used by the Persians (it derives from the Sanskrit word “Sindhu”), indicating the River Indus. It was not long before the word was applied generally to all the people of India, but today it just refers to the followers of the Hindu religion.

The forms of worship and the spiritual discipline mentioned in the *Vedas* remain an important part of Hindu spirituality today. Over this long-time span Hinduism absorbed many ideas from other religions as it spread into southern India.⁶⁶³

Hinduism is a living organism liable to growth and decay and subject to the laws of nature. One and indivisible at the root, it has grown into vast tree with innumerable branches.

(Mahatma Gandhi (1869-1948).⁶⁶⁴

It is true that for many Hindus today, the temple is the centre of religious life, but there are others for whom the communal acts of worship are not important, and they rarely visit a temple.

Buddhism another religion of the Indian sub-continent post-dates the Indus civilization. Some say that it surfaced about the time that some of the Hindu Upanishads were being written down; was first practiced by a young prince from among the Shakyas of northern India. Others

⁶⁶¹ Jim Wills, *A To Z of World Religions - Places, Prophets, Saints and Seers* (Mumbai: Jaico Publishing House, 2007), 273.

⁶⁶² I will discuss this point a little later in the chapter, while discussing the religious beliefs of the Indus people.

⁶⁶³ Michael Keene, *World Religions* (Oxford: Lion Publishing, 2002), 10-11.

⁶⁶⁴ *Ibid.*, 11.

say that Buddhism should be seen as part of the Shamana tradition,⁶⁶⁵ which is much older than Hinduism.⁶⁶⁶ This young prince was the son of King Siddhodanna and Queen Maya, and they named him Siddhartha Gautama. He spent his early life in the palace protected from the harshness of the world,⁶⁶⁷ and surrounded by luxury and pleasures. Later, brief visits outside the palace showed him a side of life that he had never witnessed before, a side that was deliberately hidden from him. The misery of the poor and sick disturbed him to such an extent that he wanted to devote his life to relieving their pain. Leaving his royal life behind, he began search as to how one could release the suffering of others. His search,⁶⁶⁸ which began in his

⁶⁶⁵ “There are only two references to the word Shramana in Vedic literature. One is in the Brihadaranyaka Upanishad where it is placed next to the term *tapasa*, indicating that the Shramana like the *tapasa* was a class of mendicants. It has been argued renunciation was not uncommon to the Vedic society, with Yatis, Munis, Shramanas quoted amongst earliest renouncers. In the pastoral cultures of Vedic people, the renouncer Munis and Yatis were looked down upon. The renouncers meditated upon death, link between births and death conditioned by attachment to desire. These themes surface in Vedic literature for the first time in the Upanishads. After passing through *henotheism* and pantheism, the anthropomorphism of Vedas entered the period of monism in the Upanishadic period. It is in the Upanishadic period that theories identifiable with Shramanas come in direct contact with brahmanical ideals. According to Ananda Guruge, a renowned Buddhist leader, the Shramana movement impacted Vedic education through the Upanishads, with debate and discussion replacing parrot-like repetition of the *Vedas*. Many Upanishads compile contradictory positions where the favourite style of debate is to pose questions until the other cannot answer. The infinite regress notwithstanding, Upanishadic arguments do not involve finding logical contradictions in opposing doctrines. The heterogeneous nature of Upanishads shows infusions of both social and philosophical elements, pointing to evolution of new doctrines from non-brahmanical sources. While the Upanishadic doctrines of Brahman and Atman can be traced back to the Vedas and Brahmanas, the doctrines of Transmigration (as *punarjanma*), Karma (as action), and Emancipation (as *moksha*) do not follow with consistency from Vedic traditions, and are fundamental to the Shramana religions.

Several shramana movements are known to have existed in India, even before the 6th century BCE, and these influenced both the Astika and the Nastika traditions of Indian philosophy. It was as a Shramana that the Buddha left his father's palace and practised austerities. The Brahmajāla Sutta mentions many shramanas with whom Buddha disagreed. Some scholars opine Shramanas of Jaina tradition were widespread in the Indus Valley, with the relics of Indus Valley civilization representing Jaina culture, like the standing nude male figures (Jaina Kayotsarga), idols in Padmasana and images with serpent-heads, and the Bull symbol of Vrishabadeva. However, other scholars opine the Shramana cultures arose and flourished in the Gangetic areas, rather than the Indus Valley. Additionally, some scholars opine the term Shramana appears in texts of the Brahmanas as a religious order other than the Vedic (i.e., Astika) traditions. The Shramana tradition of the Jaina religion is considered the oldest of the non-Aryan group, as an independent pre-Buddhist religion, and is suggested to have existed before the Brahmin cult. From rock edicts, it is found that both Brahmins as well as Shramana Buddhist ascetics enjoyed equal sanctity.

Though Shramana traditions are associated with asceticism, some shramana traditions were, in fact, peculiar as materialists, in the sense they preached a worldly existence and carried denunciation of brahmanical orthodoxy to the extreme.

The Shramana traditions included a range of beliefs, such as the Cārvākas, who on one end of the spectrum lived a luxurious life, to the Jainas, who on the other hand, developed a theory of extreme self-mortification. Some Shramanas were openly critical of the sacrificial traditions of the Brahmins and the concepts of Karma, claiming them to be simply a swindle.”

“Shramanas” *Chinese Buddhist Encyclopedia*, <http://www.chinabuddhismencyclopedia.com/en/index.php?title=Shramana>

⁶⁶⁶ David Gibbons, *Faiths and Religions of The World* (California: Thunder Bay Press, 2007), 124.

⁶⁶⁷ Siddhartha during his early years was deliberately kept from the harshness of the world following an interpretation of a dream that his mother had before his birth. Queen Maya in her dream saw a white elephant with six tusks, entering into her through her right side (true incarnation). The Brahmins who interpreted this dream prophesized that a son would be born to her who would bear upon his body the signs of great monarchs. If he would decide to rule he would be a Chakravartin (sovereign of the world); but if he abandoned his wealth to adopt the life of a wandering ascetic he would become a Buddha and would help in relieving the people from the miseries of life, which are caused by old age, sickness and death.

J. Hackin, et al., *Asiatic Mythology; A Detailed Description And Explanation of The Mythologies of All The Great Nations of Asia*, trans., F. M. Atkinson, (New Delhi: Asian Educational Services, 1994), 69.

⁶⁶⁸ For seeking true knowledge he joined hands with many other holy men. Leaving every luxury of life behind for five years he lived in extreme poverty with five companions. Then one day sitting in isolation, meditating, away from everything, under the Bodhi tree he attained enlightenment. This process taught him the three stages of enlightenment, resisting the

late twenties, ended in his mid-thirties. Hence forth he became known as Buddha (The Enlightened One). He devoted the remaining years of his life to spreading this message in different parts of India (see Figure III.4.5).⁶⁶⁹ Buddha was himself a Hindu, yet his essential break with Hinduism was not that he denied the existence of God or supernatural beings, but his complete rejection of the Hindu caste system and sacrificial cults.⁶⁷⁰

The Buddhist teachings, which lead one to attain the stage of *nirvana* (eternal peace), can only be achieved by understanding the Four Noble Truths and following the Eightfold Path, also called the Middle Way.⁶⁷¹

This, O Bhikkus, is the Noble Truth of Suffering; presence of objects we hate is Suffering; separation from objects we love is suffering; not to obtain what we desire is suffering. Briefly, the fivefold clinging to existence is suffering. All existence is dukkha (suffering). By Buddha⁶⁷²

Thus, all Buddhist practices were designed to help people eliminate their selfish desires and their attachments to this world; by doing this they would be able to finally free themselves from the cycle of birth, life and death and they can only achieve this stage by following the Eightfold Path, also known as the Middle Way:

Right understanding of the Four Noble Truths
 Right thoughts, leading to love towards all living forms, even the most humble.
 Right speech, which must be pure, noble and well intentioned.
 Right action, involving moral behavior, being considerate to others and showing kindness to all living creatures.
 Right livelihood, meaning a Buddhist must not earn a living from anything that involves violence or from following their religion; Buddhist monks must be kept by the community.
 Right effort to banish all evil thoughts.
 Right mindfulness, involving constant awareness of the needs of others.
 Right concentration using meditation, which allows a person to become inwardly calm and at peace with themselves and the world.⁶⁷³

These eight points explain the nature of Buddha's teachings. It tells us how to escape from the miseries and sufferings of life. All this depends on our *Karma* (the law of cause and effect). Thus, a

temptations of Mara (the evil one) and took three nights to complete. On the first night all of his previous lives passed before him, during the second night he saw the cycle of birth, life, death and the cycle that governs it. On the third and final night he understood the Four Noble Truths; the universality of suffering, the origin of suffering, the cure for suffering and the way to find that cure. He now realized that all people suffer, and this suffering stems from human craving and if this craving ceases then the suffering also automatically stops. This realization led him to become Buddha – the enlightened one. It is known that after this he was asked three times by Brahma (god of the Hindus), to help others towards enlightenment.

Michael Keene, *World Religions* (Oxford: Lion Publishing, 2002), 66-69.

⁶⁶⁹ Warren Matthews, *World Religions* (Canada: Wadsworth Publishing, 1999), 127.

⁶⁷⁰ David Gibbons, *Faiths and Religions of The World* (California: Thunder Bay Press, 2007), 124.

⁶⁷¹ Michael Keene, *World Religions* (Oxford: Lion Publishing, 2002), 74.

⁶⁷² Ibid., 74.

⁶⁷³ Ibid., 75.

morally good life generates positive *karma* in the next life, but the ultimate goal is not only to achieve positive *karma* in the next life but to be completely released from the law of *karma*, hence achieving the state of *nirvana*. The different steps of the Eightfold Path are like the spokes of a wheel; although they each have their own value, yet they only gain strength when they are united with one another.

A number of other teachings were later added to the Four Noble Truths and the Eightfold Path, among these the most important are the Five Precepts (moral guidelines), which all Buddhist try to follow. These are as follows;

- They avoid taking life or harming any living thing.
- They avoid taking that which is not given
- They avoid all sexual misconduct.
- They avoid all unworthy speech, such as lying, rumor-spreading and gossip.
- They avoid any contact with drugs and alcohol, since these cloud the mind and judgment.⁶⁷⁴

Buddha taught these principles to his fellow beings till the day he died. Buddhism is a humanistic philosophy with deep psychological insights. Some practitioners worship gods, others do not. Buddha himself is not worshipped as a god, but is respected as a complete, spiritual leader.⁶⁷⁵ Steve Hagen in his book describes about Buddha in these terms,

The Buddha never considered himself to be something other than a human Being - only someone who was fully awake. He never claimed to be a god, or even to be inspired by God. He attributed his realization and understanding solely to human endeavor and human ability. We call Gautama "The Buddha," but many other Buddhas, many other awakened human beings, exist, and have existed... Buddha is not someone you pray to, or try to get something from. Nor is a Buddha someone you bow down to. A Buddha is simply a person who is awake-nothing more or less.⁶⁷⁶

The principle concept of Buddhism is that human consciousness can be transformed from attachment to ego, suffering, and objects of desire to the unattached bliss of *nirvana*. And the path to *nirvana* was demonstrated by Buddha himself. Therefore, the fundamental practice of Buddhism is meditation, and its fundamental social expression is the *sangha* (it's order of priests). Some say that one of the keys to understand Buddhism is the concept of *anatman*, which means "no self". One can only end suffering through ending desire, for suffering is like fire, it needs fuel. Remove the fuel and the fire goes out. Desire is in fact the fuel that feeds suffering.⁶⁷⁷

After the death of the Buddha, Buddhism developed traditions and hierarchies - as religions seem to do once their founders are dead. Just as Christianity was later divided into Catholic and Protestant sects, Buddhism separated into two great traditions, Hinayana (The Lesser Vehicle) and Mahayana (The Greater

⁶⁷⁴ Ibid., 77.

⁶⁷⁵ Jim Wills, *A To Z of World Religions - Places, Prophets, Saints and Seers* (Mumbai: Jaico Publishing House, 2007), 81-4.

⁶⁷⁶ Steve Hagen, *Buddhism: Simple and Plain* (New York: Broadway Books, 1998), 1-159.

⁶⁷⁷ Jim Wills, *A To Z of World Religions - Places, Prophets, Saints and Seers* (Mumbai: Jaico Publishing House, 2007), 81-4. Also see for more, *A Concise Encyclopedia of the Philosophy of Religion*, s. v. "Buddhist Philosophy";

Vehicle). The Buddha during his life time was never depicted in any visual form, but later one sect developed his visual presence, while the other still portrays him symbolically. I will discuss this in more detail while discussing the imagery of the Indus civilization.

Before moving to the second post - Hindo religion I want to refer to observations, of Jim Willis about the similarity in the life stories of The Buddha and Jesus Christ.⁶⁷⁸ One is unable to ignore the parallels found in their legends. Both left their homes to find the truth that exists beyond average human existence. Both went into the wilderness, where they were tested by the devil with three temptations. They both gathered and attracted a group of disciples, one of whom betrayed them. After returning from a retreat in the wilderness both preached a sermon that summed up their teaching: The Buddha delivered his speech in the Deer Park, while Jesus preached on the Mount of Olives. The similarity of their legend does not end here, as both died at the hands of other men, but even then forgave them before their deaths.

Such comparisons do not suggest that one religion is an imitation or copy of the other. It is obvious that the two rose independently of each other and stand as separate entities. There are many points of contrast between the two, especially in their teachings concerning the nature of God (many Buddhists do not believe in a personal deity), time (linear versus circular), and afterlife (heaven versus Nirvana).⁶⁷⁹

Such observations suggest to me that the basic teachings of all religions are pretty similar; regions may differ, individuals who preached this message may differ, but the basic message had always been one and still remains the same. I believe that God time and again has sent his various messengers to the different parts of earth to guide mankind. As according to one famous Islamic Hadith, Allah sent 124,000 prophets into the world.

The origin of Jainism, another religion of India that post-dates the Indus civilization, is considered to be contemporary with Buddhism. Some believe that it has periodically been renewed by enlightened people or *Jinas*, since a beginningless time. Other people date it to the sixth century BCE when Mahavira practiced it (see Figure III.4.6). Like the Buddha, Mahavira was a prince. He belonged to the Kshatriya clan and renounced his position and his wealth at the age of thirty to wander as a spiritual seeker. During his wandering he encountered legendary austerities.

“Once when he (sat in meditation), his body unmoving, they cut his flesh, tore his hair, and covered him with dirt. They picked him up and then dropped him, disturbing his meditational postures. Abandoning concern for his body, free from desire, the Venerable One humbled himself and bore the pain.”⁶⁸⁰

⁶⁷⁸ Jim Willis, *A To Z of World Religions-Places, Prophets, Saints and Seers*, 81-2.

⁶⁷⁹ Jim Willis, *A To Z of World Religions - Places, Prophets, Saints and Seers* (Mumbai: Jaico Publishing House, 2007), 82.

⁶⁸⁰ *An Encyclopedia of The World's Faiths: Living Religions*, s. v., “Jainism.”

He continued to mediate for twelve consecutive years in silence and fasting, after which he finally achieved liberation and perfection. He devoted the next thirty years of his life to spreading this message until the very day he died at Pava (a sacred pilgrimage site). It is said that at his death his community consisted of 14, 100 monks, 36, 000 nuns, and 310, 000 female and 150, 000 male lay followers, who came from all castes, as Jainism is free from any caste system. The religion that started to spread from Bihar today consists of 3,350,000 million Jains in India, with several thousand elsewhere in Asia, Europe, Africa, and North America. It is true that today they are a minority in India, yet they seem to have greater influential force because of their wealth. Most of them marry, although there are some who chose to become monks and nuns.⁶⁸¹

As said earlier, the history of Jainism may not begin with Mahavira, as various scholars suggest that its roots are much deeper. According to one doctrine, only in the current age there have been twenty-four enlightened *jinas* (victors), who are better known as Tirthankaras (literally fords or bridge builders). Each of them was responsible for establishing a four-fold community of monks, nuns, laymen, and laywomen. Mahavira is considered to be the twenty-fourth and last *jina*. He lived in the 6th century BCE (he was born around 599 BCE and died in 527 BCE according to the Shvetambara sect or in 510 BCE according to the Digambara sect).⁶⁸²

The first Trithankara was Lord Rishabha, who is known for establishing social institutions such as marriage, family, law, justice, and government. He also taught the arts of agriculture, crafts, reading, writing, and mathematics, and is also known to have built villages, towns, and cities. Twenty-three more Trithankara followed him over an enormous span of time. Nothing much is known about them, but the twenty-second is known to have been a historic figure. Some scholars suggest that he was the cousin of Lord Krishna, renowned for his compassion for animals, and that he also left his wedding procession and decided not to marry; for fear that many animals would only be slaughtered to cater for his wedding feast. After this incidence he became an ascetic who preached religion for many years. Following suit, his betrothed princess also became a nun. Then came the twenty-third Trithankara who also is known to have been a prince. He left everything and became an ascetic and a great preacher of Jain principles, and lived from around 877 to 777 BCE.

On the basis of these observations and documents, scholars today are unable to deny the extreme antiquity of Jainism as a non-Vedic religion. The well documented ancient Hindu and Buddhist scriptures refer to a Jain tradition that existed long before the life of Mahavira.⁶⁸³ There are some scholars who have

⁶⁸¹ *Encyclopedia of Religious Practices*, Vol. 1., s. v., "Jainism."

⁶⁸² *Encyclopedia of Religious Practices*, Vol. 1., s. v., "Jainism."

⁶⁸³ *An Encyclopedia of The World's Faiths: Living Religions*, s. v., "Jainism."

even suggested that the roots of Jainism can be traced in the Indus civilization. How true or authentic this suggestion is, will be discussed as I proceed.

After the death of Mahavira the religion split into many sects, but eventually two main branches emerged. The Shvetambara and Digambara located in northwest and southwest India respectively. The one main doctrinal difference between these two sects is that the Digambara sect asserts that an enlightened *jina*, does not eat, drink, or take part in common bodily processes and activities, while the Shvetambara sect asserts that an enlightened *jina* continues to function like other humans until his death. However, probably the most noticable disagreement to us today is over clothing: the Digambara (wearing the sky) assert that to reach enlightenment a person must renounce all clothing, while Shvetambaras (wearing white) believe that clothing is necessary for attaining the spiritual path.⁶⁸⁴

The two sects also differ over the subject of women's abilities. The Digambaras strongly assert that women do not have the strong body and willpower needed to attain liberation; they can only be liberated if reborn into a man's body. While, Shvetambaras assert that women are capable of the same spiritual achievements as men. They also believe that the nineteenth Trithankara was a female.⁶⁸⁵

Another very important aspect of Jainism concerns the 'Absolute'. They do not believe in a creator God, though they do believe that their doctrines originate from an omniscient and omnipotent being. "The *Jina*" collectively stands for the term God. Thus, they believe that they do not require or seek verification of any kind for their doctrines from any other source.

One doctrine Jains share with not only Hindus, but Buddhist too is the absolute law of *karma*. Other than Karma, Jains also believe in the absolute nature of the soul (*jiva*), which for them also exist in even the very lowest forms of life; the soul is present, no matter how oppressed the person is with the weight of *karma*. Every soul bears the weight of *karma*. *Karma* is, in fact, the glue that binds humans to the cycle of rebirth, which is the operative element in *samsara* (recurring rebirth of the soul). The soul journeys through infinite incarnation from lower life forms to high, but Jains believe that the human incarnation is the most important, as only through the human form can a person obtain release, and only from human form can a person choose and carry out those thoughts and actions that can bring escape from eons of labor. For Jains there are eight different kinds of *karma*: four are destructive, the other four are nondestructive.

Four Destructive Karmas

1. Mohaniya - Insight and conduct deluding
2. Jnanavaraniya – Knowledge obscuring
3. Dar-shanavaraniya – Perception obscuring

⁶⁸⁴ *Encyclopedia of Religious Practices*, Vol. 1., s. v., "Jainism."

⁶⁸⁵ *An Encyclopedia of The World's Faiths: Living Religions*, s. v., "Jainism."

4. Antaraya – Restricting of energy

Four NonDestructive Karmas

1. Vedaniya – Feeling producing
2. Nama – Identifying the individual creature
3. Ayu – The longevity of a birth
4. Gotra – The family environment

Jain holy men have given careful attention to what they consider the central problem for human existence.⁶⁸⁶ I would like to quote David Gibbon here,

“All living things have a soul, which activates the body it inhabits. It is the only conscious thing in the universe, and also has energy and can experience bliss, but only liberated souls experience this fully. The universe is full of an infinite number of *monads*, units of existence, which are eternal. When a living being dies, the soul is immediately reincarnated to occupy another body-which can be of any type, so one must respect all souls, for each has the potential to become a *siddha*. All beings can suffer, and to harm another life-form brings an influx of *karma*. This is why the Jains espouse nonviolence to all creatures (*ahimsa*), which is their chief ethical doctrine. They have consequently earned a reputation for compassion and tolerance.”⁶⁸⁷

I would also like to quote a summary on the three religions of India that I have talked about, given by Warren Matthews,

“There is a gentleness in the Jain view of life that commands respect. In a violent world, people who practice ahimsa seem as welcome as an oasis in a desert. There is a similarity with Theravadin Buddhism, for the meditating monk is an example of the devotion of life that even laypeople hope to encourage and, perhaps, one day achieve. A religion that inspires a person to work out his or her own salvation by imitating a model requires great fortitude. It is a cool life indeed where humans are not warmed by the glow of divine grace. But Jains know where responsibility lies and need not waste efforts on rituals and myths that may not yield results. Release comes to those who earn it. In spite of the absence of a creator deity in Jainism, it shares some beliefs with Hinduism. The Law of Karma; the existence of the soul, which is reincarnated; and the cycle of rebirths until moksha is earned are similar to Hinduism. The extremes of depriving the body of clothing and food are closer to Hinduism than to the Middle Path chosen by Buddha. Like Buddha, however, the Jains can obtain release without deities. The focus is on humans and human models for them to follow. Jainism, too, has a logic that takes into account the relative truths and knowledge of humans. What we experience and reason as humans is more relative than absolute. Jainism requires of humans a commitment in faith long before they can know whether they will obtain release.”⁶⁸⁸

In spite of the many differences among the teachings of Hinduism, Buddhism or Jainism; they all agree or accept the concept of *karma*, and *karma* deals with keeping a human being in line. In simple words, whatever one does during his or her lifetime, would eventually affect or would bear consequences either on his or her soul or afterlife. Maybe this is the one and only point that in a way binds these three religions together, despite many huge differences. As we have seen previously a common world myth was also about the ‘Immortal Soul’ as discussed previously. Therefore, would it be wrong to suggest that all mankind had some kind

⁶⁸⁶ Warren Matthews, *World Religions* (Canada: Wadsworth Publishing, 1999), 183-6.

⁶⁸⁷ David Gibbons, *Faiths and Religions of The World* (California: Thunder Bay Press, 2007), 129.

⁶⁸⁸ Warren Matthews, *World Religions* (Canada: Wadsworth Publishing, 1999), 189.

of a concept about an afterlife or they were pretty aware that for their actions they could be held answerable. Some quotes from the Quran;

Whatever good (O man!) happens to thee is from Allah; but whatever evil happens to thee is from thy (own) soul. And We have sent thee as a Messenger to (instruct) mankind: and enough is Allah for a Witness (Quran 4: 79).

Verily We have revealed the Book to thee in Truth for (instructing) mankind. He then that receives guidance benefits his own soul: but he that strays injures his own soul. Nor art thou set over them to dispose of their affairs (Quran 39: 41).

The significance of discussing these three religions was not to count their dissimilarities but their similarities. Though all three originated in greater India all three have their own history, religious leaders, scriptures, rituals and practices, but they also have some common elements that cannot be over looked. These common elements that I have highlighted in this chapter and in preceding chapters can be in some way traced to the time period of Indus civilization. It seems that these elements have travelled through time; their appearance under different religious heads might have changed, but somehow, they have been able to keep their essence alive throughout this region's prehistory and history.

My next step is to "revive" the religious practices of the people of the Indus Valley civilization through the excavated material that we have from them. My tools for this exercise will be found in the preceding chapters.

Chapter 3.5

Beliefs of the People of the Indus Valley Civilization

Finally, I have reached a point from where I think I am in a position to suggest in my small way as to how we can build up the religious ideologies of the Indus people, even though it is one of the most complex and least understood aspect of this civilization and that also in the absence of any decipherable written text. Therefore, our main tools in building these ideologies would not only be with the help of excavated archaeological material but also with the use of creative imagination in bridging the gaps or re-establishing a connection,⁶⁸⁹ for it would be unjust only to accept the archaeological evidences as concrete for deducing the religious beliefs of people that no longer exist.

Over the years since the discovery of Indus civilization, many scholars have written about the religion of the Indus People but unfortunately very briefly whether it was Sir John Marshall, Mortimer Wheeler, or George Dales, it is obvious that this is the least worked on area of the civilization.

I will begin the discussion of this chapter by not only narrating what different scholars had to say about the religious practices of the Indus people since its discovery but will built my argument with the help of references from my previous chapters. Before that I want to quote a paragraph from the book *Our Oriental Heritage*, which explains the unique relationship that the people of this land still have and have always had with religion.

“In no other country is religion so powerful, or so important, as in India. If the Hindus have permitted alien governments to be set over them again and again it is partly because they did not care much who ruled or exploited them—natives or foreigners; the crucial matter was religion, not politics; the soul, not the body; endless later lives rather than this passing one. When Ashoka became a saint, and Akbar almost adopted Hinduism, the power of religion was revealed over even the strongest men. In our century it is a saint, rather than a statesman, who for the first time in history has unified all India.”⁶⁹⁰

This statement sounds pretty true if we trace the history of this region from the time when history began in this region. It is not hidden from anyone that only those rulers who were religiously tolerant led successful regimes. Whether it was Ashoka of the Mauryan Dynasty, Kanishka of the Kushan Dynasty, Chandra Gupta II of the Gupta Dynasty or Akbar of the Mughal Dynasty; these kings not only ruled the land which they had conquered, but in many

⁶⁸⁹ The word ‘religion’ comes from Latin and means something like ‘re-establishing a connection’. Pietro Archiati, trans., Pauline Wehrle, *The Great Religions – Pathways to Our Innermost Being* (London: Temple Lodge, 1998), 3.

⁶⁹⁰ Will Durant, *The Story of Civilization - Part I - Our Oriental Heritage* (New York: Simon and Schuster, 1954), 503.

ways through their tolerant attitude towards other religions ruled the hearts of the masses too. That is the reason why their name is still remembered today because their time was a time of growth, prosperity and wealth. And prosperity can only be achieved when the masses are content and the circumstances are favorable. So, would I be wrong if I suggest that religion has and still plays a vital role in the lives of the people of this land. This is what the written and documented history of this land tells us. So, would I be wrong if I suggest that the people of Indus Civilization were also religiously connected, and religion must have played a vital role in their growth and prosperity as it does in the lives of people of this region even today. In fact, I believe it was their religion that held them united and prosperous for many centuries.

Let us now briefly discuss what different scholars have said about the religious beliefs of the Indus people. According to Irfan Habib the Indus civilization can be described as a monotonously uniform and utilitarian civilization, which at first sight cannot be admired for its art, as it lacks large sculpture pieces or any kind of monumental art that could be linked to the state. This means that the artisans might be working for individuals rather than state. This point clearly distinguishes the Indus art from the art work of Mesopotamia and Egypt where huge religious monumental structures and sculptures were made to endorse the state religion. This point also backs that the Indus state might not be endorsing, promoting or associating any type of art with religion in contradiction to what has been said by almost every scholar who has written about the Indus religion and that also in the absence of decipherment of the Indus script which in years to come might give us some clues.⁶⁹¹

Now let us briefly discuss those objects one by one, which have been associated with the supposed religious beliefs of the Indus people since its discovery and what different scholars have said about them at different time intervals.

Priest King and Dancing Girl

For example, most scholars have singled out the “Priest King” (see Figure III.5.1) and have associated it as a religious figure, while some argue including Irfan Habib that he might be a wealthy merchant trading in Mesopotamia as the cut of the beard and the trefoil ornament of the robe thrown over his shoulder can easily be recalled as fashions of Mesopotamia, while the finely made details of the face make it realistic and can easily be classified under the

⁶⁹¹ Irfan Habib, *A People's History of India 2 – The Indus Civilization – Including Other Copper Age Cultures and history of Language Change till c. 1500 BC* (New Delhi: Tulika Books, 2002), 53.

category of portraiture.⁶⁹² The same kind of realistic details are also evident from the sculpture of the “Dancing Girl” (see Figure III.5.2), where the features are sufficiently individual to suggest portraiture. Though the figure is nude, yet it stands erect with left arm akimbo, wearing only bracelets and anklets but not without charm and dignity.⁶⁹³ Wheeler suggests that the provocatively tilted head is a skilful example of impressionistic aboriginal rendering that is propagated with the help of large eyes, flat nose and bunched curly hair. Further he proposes that the features could be native to Baluchistan or to South India, but the link with the later is disputable.⁶⁹⁴

Great Bath of Mohenjo-Daro

Another important statement made with respect to the Great Bath at Mohenjo-Daro (see Figure III.5.3) is that it was an official structure for ritual bathing, though there is no proof to validate this assumption that it was used for anything more than sanitary purposes rather than for ritual purity, except its usage in later religions of this land, specially Hinduism.⁶⁹⁵

Clay-Plaster-Lined Pits

Some small clay-plaster-lined pits have been found at Kalibangan (see Figure III.5.4), Lothal, Banawali and Nageshwar, in public places as well as in houses. These have been described by some scholars as “fire altars”, as charcoal remains have been found in some. But the question remains if these so called ‘fire altars’ had any religious or ritual significance than it must have been regional as no such structures have been found at Mohenjo-Daro or Harappa or any other site beside the ones mentioned. Beside these two “sacrificial altars” have been found at Kalibangan (with ox bones) and at Lothal (ox jaw). Due to the scarcity of these alters

⁶⁹² Sir Mortimer Wheeler not only backs this notion (of similar motif) but also tells us about other places where this motif has been discovered. He explains it in his book, “The trefoil pattern is found in Mesopotamia, Egypt and Crete in comparable associations, and seems likely to represent a common symbolism which may have extended to the Indus valley. The earliest occurrences appear to have been in Mesopotamia: a man-headed ‘bull of heaven’, probably of late Akkadian period in the Louvre, is craved for trefoil incrustations, and others similarly ornamented come from Warka and from Ur. The last is of the IIIrd Dynasty, perhaps about 2200 BC. It bears the symbols of Shamash the Sun-god, Sin the Moon-god, and Ishtar the Morning and Evening Star, together with the trefoils which probably represent stars. With similar intent trefoils appear (with quatrefoils) in Egypt on *Hathor* the Mother-goddess as Lady of Heaven, and are well exemplified by the *Hathor* cows which sustain couches in Tutankhamun’s tomb (c. 1350 BC.), and by a painted figure of the XVIIIth Dynasty from Deir el-Bahari. In Crete the symbol recurs on bull-head (or cow-head) ‘rhytons’ of about the same period. The analogues from Egypt and Mesopotamia at least combine to suggest a religious and in particular an astral connotation for the motif, and support the conjecture that the Mohenjo-Daro bust may portray a deity or perhaps a priest-king.” Mortimer Wheeler, *The Indus Civilization - Supplementary Volume To The Cambridge History of India* (Lahore: Sang-e-Meel Publications, 1997), 87.

⁶⁹³ Irfan Habib, *A People’s History of India 2 – The Indus Civilization – Including Other Copper Age Cultures and history of Language Change till c. 1500 BC*, 51-3.

⁶⁹⁴ Mortimer Wheeler, *The Indus Civilization*, 90.

⁶⁹⁵ Habib, *A People’s History of India 2 – The Indus Civilization – Including Other Copper Age Cultures and history of Language Change till c. 1500 BC*, 56.

in the vast number of Indus settlements not only makes it doubtful but negates the propounding existence of an ox-slaughter cult or for claiming it to have *Vedic* affinities on this basis.⁶⁹⁶ Allchin consider this finding to be pretty problematic as fire-worship is distinctly considered to be an Indo-Aryan trait, which might raise the question of Aryan presence in certain areas of Indus at an earlier date than what was previously thought. Now keeping the recent research in mind this earlier hypothesis of an Aryan invasion has been clearly negated, therefore it will be justified to say that Aryans had been flowing into the sub-continent at different time intervals.⁶⁹⁷

Stone Cones and Large Stone Rings

Dilip Chakrabarti suggests that *shivalinga* cult cannot be unhinged from the Indus civilization, as a terracotta *shivalinga* has been found from the mature Harappan level of Kalibangan, which is identical with the *shivalinga* worshipped in Shiva temples throughout the length and breadth of the country. There are two components of the *shivalinga*; the phallus and the *Gauripatta* which symbolizes the female principle- *Shiva's* consort *Gauri*-and in which the phallus, the iconic emblem of Shiva is set. Though John Marshall also associated these pieces with the later *shivalinga* cult, but he also mentions that these pieces were found detached from one another, and never as a single unit.⁶⁹⁸ Therefore, it is still uncertain as to what purpose the stone cones and large stone rings (see Figure III.5.5) might have served as it is hard to consider them as representation of male and female organs (symbol of phallic cult), while according to Irfan Habib the utilitarian explanations that they might have served as pestles and for building short ornamented pillars seems more suitable.⁶⁹⁹ George Dales also argues that the contexts in which these stones were found do not suggest any cultic significance. As some of the ring stones had lines on them and as Irfan Habib said earlier, may have had architectural use, either to guide masons in pillar building or to measure angles, or may have been used to make astronomical calculations. John Marshall had also suggested that some of these objects may have been grinders or unfinished weights.⁷⁰⁰

⁶⁹⁶ Ibid., 56.

⁶⁹⁷ Bridget and Raymond Allchin, *The Rise of Civilization in India & Pakistan* (London: Cambridge University Press, 1982), 216.

⁶⁹⁸ Dilip K. Chakrabarti, *The Oxford Companion To Indian Archaeology-The Archaeological Foundations of Ancient India-Stone Age to AD 13th Century* (New Delhi: Oxford University Press, 2006), 188-9.

⁶⁹⁹ Habib, *A People's History of India 2 – The Indus Civilization – Including Other Copper Age Cultures and history of Language Change till c. 1500 BC*, 56-7.

⁷⁰⁰ Upinder Singh, *A History of Ancient and Early Medieval India-From the Stone Age to the 12th Century* (New Delhi: Pearson Longman, 2008), 172.

Terracotta Figurines

Beside these two popular sculpture pieces many terracotta and other figurines have been found in private houses suggesting domestic superstitions and beliefs. Out of these the so called “Mother goddess” figurines (see Figure III.5.6) are numerous in number; hence outnumber the procreative male godlings (see Figure III.5.7). Therefore, Irfan Habib suggests that they were most probably prayed to for obtaining children.⁷⁰¹ While Wheeler suggests that to link these terracotta figurines with the Mother goddess notion of western Asia and Europe would be an exaggeration, as the features and general modeling is crude; the eyes and breasts are circular pellets, the nose beak-like and the mouth is an applied strip of clay with a horizontal gash. It seems as no special artistic effort went into the making of these figurines as occasionally,

“... a lump of clay is added to represent an infant at the breast or on the hip; and the general notion of fertility, whether in thanksgiving or in anticipation, is further indicated by representations of pregnancy, although there is no emphasis of the generative organs such as is normal to Mother Goddess cults.”⁷⁰²

Catherine Jarrige who has extensively studied the Mehrgarh figurines points out that they are frequently found in trash deposits giving the impression that they were haphazardly discarded.⁷⁰³ But may have been involved in some kind of domestic cult as the trash deposits are near or within the household areas, and might be associated with, “representations of tutelary deities for the family, the clan or... (a)... relevant profession”,⁷⁰⁴ or possibly they were used for, “magical practices, as is frequently the case in agrarian societies.”⁷⁰⁵ Jarrige also noted holes running through the figurines and small twigs cutting straight through them several times while the clay was still soft. According to her this could either represent a magical attempt to relieve oneself from pain, be it moral, psychological or physical, or a way to harm someone through an image, or the role the woman might have played in society, for from a grave of Period I, a pierced human figurine has been found, held to the dead woman’s face in clasped hands.⁷⁰⁶ Whatever the case might have been it is still difficult to reach any concrete conclusion or assign function to these figurines, yet some things are pretty clear, one that these figurines

⁷⁰¹ Habib, *A People's History of India 2 – The Indus Civilization – Including Other Copper Age Cultures and history of Language Change till c. 1500 BC*, 56.

⁷⁰² Wheeler, *The Indus Civilization*, 91.

⁷⁰³ Catherine Jarrige, “The Terracotta Figurines from Mehrgarh”, in *Forgotten Cities of the Indus* (Mainz: Verlag Philipp von Zabern, 1991), 87-93.

⁷⁰⁴ Ibid., 92.

⁷⁰⁵ Catherine Jarrige, “The Terracotta Figurines from Mehrgarh”, In *Forgotten Cities of the Indus* (Mainz: Verlag Philipp von Zabern, 1991), 92.

⁷⁰⁶ Catherine Jarrige, “Human Figurines from the Neolithic Levels at Mehrgarh (Baluchistan, Pakistan)”, In *South Asian Archaeology 2003*, ed., U. Franke-Vogt and H-J Weisshaar (Aachen: Forschungen zur Archäologie, 2005), 34.

transformed with time, two that their modeling is crude when compared with other artistic materials, three they were discarded haphazardly in household trashes, for Rita Wright's⁷⁰⁷ has suggested that maybe they were like the Barbie and G. I. Joe dolls of the twentieth century, which were made for playing purposes, which might have included puppetry⁷⁰⁸ (mask found), hence the twigs and sticks and on breaking were disposed of easily in household trashes; but as far as the female holding a figurine is concerned, it could be that this particular figurine might have been very dear to her, which is why it was buried with her upon her death.

Masks

The 'Masks' have been discovered in poor contexts, except one, therefore it is difficult to assign their function (see Figure III.5.8-9). Though there is a general agreement that these masks were used in performances. According to Mark Kenoyer⁷⁰⁹ they could have been used as finger puppets or amulets to illustrate myths and legends in dramatic enactments, which could have covered both religious and possibly political subjects, as is still done in the region today. While other scholars like Asko Parpola and Sharri Clark associate them with magical rituals deities, or interprets them as ritual paraphernalia, such as "talismans on shamans' costumes".⁷¹⁰

Sharri Clark further suggests that some of these human (males, females, and other ambiguous gender traits)⁷¹¹ as well as animal (bulls, water buffalo, sheep, goats, dogs, deer, rhinoceros, elephants, large felines, rabbits, turtles, bears, monkeys, gharials (a fish-eating alligator, birds, etc.,) figurines could be useful for animated performances, for a few examples have movable parts, such as changeable heads, holes for movable appendages or wheels. Clark also suggests that though the female and male figurines are easily distinguishable because of their male and female genitalia⁷¹² yet upon careful examination it is evident that no physical

⁷⁰⁷ Wright, *The Ancient Indus*, 62.

⁷⁰⁸ *Ibid.*, 285.

⁷⁰⁹ J. Mark Kenoyer, *Deciphering the Indus Script* (Cambridge: Cambridge University Press, 1998), 83.

⁷¹⁰ Asko Parpola, *Deciphering the Indus Script* (Cambridge: Cambridge University Press, 1994), 234.

Sharri Ruth Clark, *The Social Lives of Figurines: Recontextualizing the Third Millennium B.C. Terracotta Figures from Harappa (Pakistan)* Ph.D. Thesis, Harvard University, 2007, 508.

⁷¹¹ Clark's description about the figurines whose gender is disputable, "A very few figurines either do not have female or male attributes or their sexes are ambiguous. Among a corpus of figurines at Harappa, one such figurine not only had a beard but also breasts and a fan-shaped headdress, while others had nipples and wore belts normally associated with females. These apparent males in female dress may represent a physiological androgyny or cross-dressing."

Sharri R. Clark, "Representing the Indus Body: Sex, Gender, Sexuality, and the Anthropomorphic Terracotta Figurines from Harappa" *Asian Perspectives* 42, no. 2 (2003): 304-28.

⁷¹² Clark's description of the human figurines given by Rita Wright, "The stylized and formulaic renderings of human figurines make it possible to distinguish between females and males. The upper torsos of female figurines have prominent breasts and headdresses, while their lower torsos and genitalia are covered either by a belt and/or cloth wrapped below the waist. Female headdresses most often are fan-shaped. Male figurines occasionally are decorated with headdresses that may

features were overemphasized, which could in any way suggest the idea of fertility, though there are several other aspects that have definitely advanced our knowledge about them and have provided clues to the potential roles that they might have played to enhance ideological expressions in a variety of categories, which could include sexuality, shamanistic practice, life-force, household cults or things that could be associated with the mythical world.⁷¹³

Sharri Clark has associated two human figurines types with ritual and shamanistic transcending and transformative practice. According to her there are several human figurines with male attributes who are wearing headdresses with animal horns or ears, while another small group is depicted sitting in characteristic positions, lacking sexual attributes. Their hands are raised and pressed together; they could be males or possibly eunuchs, since shamans are “associated with transcendence and harnessing both male and female sexual potential.”⁷¹⁴ Another significant analysis of Clark’s laboratory testing is the finding about how the white and black body paint found on the headgear and hair of some figurines was produced. Results show that the pigments were created by heating the bone to 800 degrees centigrade, as the carbon in the bones burnt off, the bone white or ash was retained on the surface. The black bone color was a mixture of bone, minerals and organic materials and was used to color stripes, geometric patterns or hair, mostly on the headdresses of females and males. According to Clark the use of bone color is suggestive of some “Life force”, for instance adding some kind of supernatural powers to the figurines that could have been related to some kind of ritual or cultic practices, possibly shamanistic, as this bone color was never used on pottery as a colorant.⁷¹⁵ Therefore according to Rita Wright these interpretations are in accordance with Bruce

carry widely curled, V-shaped, or rounded horns. They are nude, and their genitalia are articulated. Other decorative elements were added to basic male and female forms. Most include ornaments; for example, several strands of beads are draped over the torsos of females, whereas males may be adorned by a single ornament.

Another important distinction (besides sexual attributes) between male and female figurines is the style of the headdresses or hairdos they exhibit. A common form of female headgear is ornamented with rosettes or flowers or hair that is twirled or looped. The later are held in place with the figurine’s hand. Some males and females have bun hair styles, in which female buns are rounded or pinched, while male hairdos have doubled buns that are wrapped with an appliquéd band. Braids or ponytails, appliquéd locks, and painted hair are found on males and females.”

Wright, *The Ancient Indus*, 286.

Sharri R. Clark, “Representing the Indus Body: Sex, Gender, Sexuality, and the Anthropomorphic Terracotta Figurines from Harappa” *Asian Perspectives* 42, no. 2 (2003): 304-28.

Sharri Ruth Clark, *The Social Lives of Figurines: Recontextualizing the Third Millennium B.C. Terracotta Figures from Harappa (Pakistan)* Ph.D. Thesis, Harvard University, 2007, 526-7.

⁷¹³ Sharri R. Clark, “Representing the Indus Body: Sex, Gender, Sexuality, and the Anthropomorphic Terracotta Figurines from Harappa” *Asian Perspectives* 42, no. 2 (2003): 304-28.

Sharri Ruth Clark, *The Social Lives of Figurines: Recontextualizing the Third Millennium B.C. Terracotta Figures from Harappa (Pakistan)* Ph.D. Thesis, Harvard University, 2007, 526-7.

⁷¹⁴ Sharri Ruth Clark, “Representing the Indus Body: Sex, Gender, Sexuality, and the Anthropomorphic Terracotta Figurines from Harappa” *Asian Perspectives* 42, no. 2 (2003): 304-28.

⁷¹⁵ Clark, *The Social Lives of Figurines: Recontextualizing the Third Millennium B.C. Terracotta Figures from Harappa (Pakistan)* Ph.D. Thesis, Harvard University, 2007, 526-7.

Trigger's findings, in which he has "...noted that household and local cults may communicate directly with gods and/or through shamans or ritual intermediaries who are conduits between the human and supernatural powers."⁷¹⁶ And these "...male and female representation and gender variants provides an as yet undeciphered "vocabulary" of attributes that may be useful in interpreting aspects of the symbolism represented on the narrative imagery."⁷¹⁷ Therefore in light of these latest interpretations the previous idea of the Mother goddess cult can now be dismissed.

There is one human figure of a man discovered on the site of the granary in the citadel of Mohenjo-Daro in 1950, which requires special mention according to Wheeler, "... a flat-bodied representation seemingly of a definite (Semitic?) ethnic type, with long nose and receding, fleshy chin, beardless."⁷¹⁸

Seals and Tablets

Most scholars have associated the Indus seals and imagery on it with the religious beliefs of the Indus people and almost all have linked it with the later south Asian religions (Hinduism and Buddhism). While there are some who negate this hypothesis and associate the Indus seals with the trading system as almost three quarters of the Indus seals carry representation of just a single animal (the Unicorn);⁷¹⁹ the majority of these intaglio seals are square and are largely formulaic in design having relatively static figures, usually the unicorn but sometimes with a combination of another animal, Indus script and a small icon. From the lack of representation of these mythical animals on any other material leads one to suggest that these mythical creatures did not have any totemic functions and can be linked to the lineage or clans of the seal-owners (most probably traders).⁷²⁰ Ktesias and Aristotle have also ascribed the unicorn to India and have called it the "Indian Ass".⁷²¹ Although, there are many scholars who suggest that the variety of many terracotta and faience tablets and some intaglio seals portray narrative scenes (depicting active poses) that appear to convey myths or stories. This imagery includes animals, such as tiger with horns, two- or three-headed bulls, animal and

⁷¹⁶ Wright, *The Ancient Indus*, 288.

⁷¹⁷ Wright, "Images of Women in the Art of the Indus Valley: Female and Male from Amarna to Middle Asia", *The Charles K. Wilkinson Lecturer for Ancient Near Eastern Art Department*, Metropolitan Museum of Art 1997.

⁷¹⁸ Wheeler, *The Indus Civilization*, 91.

⁷¹⁹ A 'Unicorn' is a humpless mythical bull with a single long horn jutting forward from the forehead, always shown with a curiously shaped three-tiered 'manger' in front of it.

⁷²⁰ Habib, *A People's History of India 2 – The Indus Civilization*, 53-4.

⁷²¹ Wheeler, *The Indus Civilization*, 102.

human bodies combined, while some have performing actions, that tell stories or acts, which could be linked with ritual performances related to myths.⁷²²

One unique seal that scholars have associated with the religious beliefs of the Indus people is one which has a rhinoceros and water buffalo on one side, and an elephant and tiger on the other, while the three-faced deity crowned with buffalo horns in human form is in the centre (see Seal III.5.1). This so-called yogic posture of the deity with soles of the feet facing each other, have apparent similarities with how the bull-deity sits in Proto-Elamite representations, though it is difficult to see it as Shiva in its Pashupati aspect, as 'Lord of Beasts' or 'Protector of cattle', as was proposed by John Marshall.⁷²³

Then there are other seals that show battle combat between animals and humans (see Seal III.5.2) and such contest with two beasts has strong parallels with Proto-Elamite Susa (south-western Iran)⁷²⁴ and also helps one to recall a composition of the Sumerian *Gilgamesh* and his lions (see Seal III.5.3). Beside this on another seal in a mythological scene there is a tiger with additional horns, which is being attacked by a "minotaur" or bull-man, which is reminiscent of the Sumerian *Eabani* or *Enkidu* whom the goddess *Aruru* created to combat *Gilgamesh* (see Seal III.5.4).⁷²⁵

Then we have seals with branches of Pipal tree (Indian fig tree) and in one such seal from Mohenjo-Daro there is a deity in the Pipal tree with the 'fish' sign and a large *markhor* goat (see Seal III.5.5).⁷²⁶ Perhaps the deity is being worshipped by a human worshipper, a sacrificial offering while as many as seven females (maybe priestesses) are seen standing in a line at the bottom. According to several scholars the sacrificial offering in this seal has been identified as a human head. If this is true then we must find many examples of this ritual, but beside one excavated skull of a female in her early twenties from Chanhudaro, in a jar closely set in brickwork, we find none.⁷²⁷

On the bases of these similarities, among other scholars, D. Frenez and M. Tosi have noted that the subject matter of these seals and tablets, conceptually belongs to a much wider geographical area than the Indus and which includes the Near East of the third millennium

⁷²² Wright, *The Ancient Indus*, 289.

⁷²³ Habib, *A People's History of India 2 – The Indus Civilization*, 54.

⁷²⁴ Ibid., 55.

⁷²⁵ Wheeler, *The Indus Civilization*, 105.

⁷²⁶ According to Wheeler the Pipal Tree could be a counter part of the Babylonian Tree of Life. Wheeler, *The Indus Civilization*, 110.

⁷²⁷ I Habib, *A People's History of India 2 – The Indus Civilization*, 55.

BCE, for many Indus artifacts and seals have been found in Mesopotamia and elsewhere, indicating clear affinities.⁷²⁸ Steve Farmer, Richard Sproat and Michael Witzel in a joint paper also suggest close links between the Indus (signs on the seals) and of Near East which includes both Mesopotamia and Iranian cultures, especially the ones found at the entrance to the temple of *Ninurta* at Nippur (9th Century BC).⁷²⁹ These figurines according to Dales⁷³⁰ are emphatically not a characteristic Mesopotamian creation, as "...neither male nudity, male obesity, nor animation are found among Sumero-Akkadian figurines of this date. However, the practice of combining human and animal features was common throughout Mesopotamian history."⁷³¹ Wright has also found parallels between the iconography of Indus, Mesopotamian and Iranian seals (Jiroft culture), which offers additional support to Bruce Trigger's comparative analyses of early civilizations about their religious practices and world views.⁷³² According to his analysis, he did not find any civilization to be monotheistic, as they had created deities, which represented natural phenomenon's, such as gods of sun, water, thunder etc.; but these deities were created to maintain the natural order of the world and were an attempt to control the unpredictable aspects of nature, which were beyond the control of man. Hence their myths and legends were also about these aspects; the power of the gods and the abilities of the people to appeal to the supernatural beings, because man considered and viewed himself to be a part of the universe, which included him, natural, and supernatural beings; and where god and goddess were often represented as half human and half animal or were often

⁷²⁸ D. Frenez and M. Tosi, "The Lothal Sealings: Records from an Indus Civilization Port Town at the Eastern End of the Maritime Trade Network across the Arabian Sea", *Studi in onore di Enrica Fiandra, Contributi di Archeologia Egea e Vicinorientale*, ed., Massimo Pernaa (Paris: Diffusion de Boccard, 2005), 65-103.

⁷²⁹ Steve Farmer, Richard Sproat & Michael Witzel, "The Collapse of the Indus-Script Thesis: The Myth of a Literate Harappan Civilization", *Electronic Journal of Vedic Studies* 11-2 (2004): 19-57.

⁷³⁰ For more details see the dissertation of G. F. Dales, *Mesopotamia and Related Female Figurines: Their Chronology, Diffusion and Cultural Functions* Ph.D. Thesis, Department of Oriental Studies, University of Pennsylvania, Philadelphia, 1960.

⁷³¹ Jonathan M. Kenoyer, ed., "From Sumer to Meluhha: Contributions to the Archaeology of South and West Asia in Memory of George F. Dales, Jr.", *Wisconsin Archaeological Reports*, Vol. 3, no. 14 (U.S.A: Individual Authors, 1994), 179.

⁷³² Bruce Trigger's study of early civilizations with cross-cultural comparisons serve as a foundation, to study the Indus masks, figurines and narrative imagery from a comparative perspective. Though his comparative study of civilizations did not include Indus still the relative examination of a large sample of cultures and their regularities in selected features of social behavior, provides one with an entry point for further inquires and more in depth study of a particular culture. The cultures that Trigger studied not only possessed textual sources but had also been subjected to intensive archaeological studies, another important factor is that all these cultures were craft-producing, agrarian or pastoral in nature. His main focus was to identify similarities among these cultures, including their religions. 'His results demonstrated robust patterns of commonality in many aspects of religion.' Nevertheless he concluded that the religion of each culture developed independently, yet they all reflected many common concerns and aspirations. All these concerns were closely linked with nature and could explain aspects of their religious views. 'In all of the cultures studied, people viewed themselves as a part of the natural, supernatural, and social realms. They believed that the universe was "animated by powerful forces that possessed human-like personalities."

Bruce G. Trigger, *Understanding Early Civilizations* (Cambridge: Cambridge University Press, 2003), 412.
Wright, *The Ancient Indus*, 283-4.

associated with specific plants and animals. In short, these people viewed the social, natural and supernatural as part of a single realm, which does not in any way mean that they were intellectually primitive, but that their rationalities differed from the present-day religions in certain ways, because they were less cut off from nature than the man of today.⁷³³

Rita Wright Analysis

Let us briefly outline the parallels found by Rita Wright between the iconography of Indus, Mesopotamian and Iranian seals (Jiroft culture), according to her the motifs and images on Mesopotamian and Iranian seals complement Indus themes and offer additional support to Bruce Trigger's comparative analysis of early civilizations in lieu of their religious practices.⁷³⁴ For her analysis she has picked a few narrative seals from all three cultures (see Seal III.5.6-10) which show similarities in the subjects (a human, supernatural being or an animal image), and themes. These seals are formulated in multiple instances in which the gods and goddess, heroes and humans are together engaged in actions in a natural and supernatural world, much as what Trigger has explained in his comparative study of religion and worldviews in other early civilizations. Hence, she has offered a new meaning with the help of these narrative imagery that lends support to the notion of a society that conceived

“...an undifferentiated natural/human/supernatural world inhabited by a pantheon of gods and dominating elements of the natural world and the cosmos. According to the symbolism represented, gods and goddesses are aligned with powerful aspects of nature in the form of animals and vegetation. These interpretations are very much in line with the comparative analyses of systems of thought in early civilizations.”⁷³⁵

To bridge the gap between the three cultures under discussion she has taken into consideration specific images, which reveal a symbolic vocabulary that appears to be common among the three. This symbolic vocabulary includes identification of deities on the bases of the appearance of horns and vegetal headdresses and supernatural beings. She backs her notion with the help of Trigger's observations which is based on his comparative studies. She says,

“Embedded in the symbolic vocabulary of the seals and the depiction of anthropomorphized deities, there is an expression of a belief in a natural order that was simultaneously human and supernatural, lending support to the idea of a society that conceived of a world inhabited by a pantheon of gods and goddesses, humans and composite animal beings that dominate or are dominated by elements of the natural world and the cosmos. According to the symbolism represented, the pantheon and beings are aligned with powerful aspects of nature in the form of animals and vegetation.

⁷³³ Wright, *The Ancient Indus*, 282-4.

Trigger, *Understanding Early Civilizations*, 442.

⁷³⁴ For details of this analysis see Chapter 10, Wright, *The Ancient Indus*, 274-307.

⁷³⁵ *Ibid.*, 302.

Interestingly (and importantly), there is a lack of distinction between humans and supernatural beings. All of the supernatural beings are identifiable as at least partially human and where humans and mythical beings are present, they appear to interact with each other.⁷³⁶

Another observation of hers in this regard is that although the thought behind these images was the same yet we see cultural modifications that transform the narratives to uniquely local styles, in other words,

“Whatever the content of shared ideas and representation, they were manipulated to conform to local concerns. Most obvious are the substitution of animals of equal power and ferocity to ones more at home in an Indus landscape and local plants that took on a symbolic significance. Also visible are devices of ornamentation, such as bangles ubiquitous in Indus artifact assemblages and an emphasis on hairstyle and headdresses that falls in line with conceptions for terracotta female figurines.”⁷³⁷

Wright suggests that these motifs and imagery reflected a symbolic vocabulary that when viewed together expressed a particular meaning or set of ideologies that must have conveyed important messages through repetition. Therefore, Rita Wright and Bruce Trigger’s analysis provides us with a window through which we can easily identify a few things;

1. The imagery and its interpretations of the three cultures under discussion was pretty much the same
2. Yet all of them manipulated the imagery to their respective local styles
3. They all believed in a world of humans/natural/supernatural beings, animals, plants and god and goddesses
4. There is no clear distinction between supernatural beings and humans, as they appear to be interacting with one another
5. All these observations are in line with Bruce Trigger’s analysis with respect to early civilizations and their ideas about religion, in which the people believed that the universe was “animated by powerful forces that possessed human-like personalities.”⁷³⁸ As is evident from the famous Mesopotamian epic ‘Gilgamesh’, in which the hero struggles with his own mortality. Then along with his companion and friend “*Enkidu*” he kills the Bull of Heaven who had set out to punish him because he had rejected the affections of the goddess “*Inanna*”.⁷³⁹
6. For people of early civilizations felt less cut off from nature because they actively inserted themselves as individuals and societies who were part of a natural order, which they believed was simultaneously a supernatural one.⁷⁴⁰
7. The reason for this mindset of man (religious beliefs) is very rightly explained by Thorkild Jacobsen, who asserts that it is a means of communication for describing or controlling those ‘other worldly’ or ‘Wholly’ occurrences that humans encounter

⁷³⁶ Ibid., 302.

⁷³⁷ Ibid., 302-3.

⁷³⁸ Trigger, *Understanding Early Civilizations*, 412.

⁷³⁹ D. Collon, *First Impressions: Cylinder Seals in the Ancient Near East* (Chicago: University of Chicago Press, 1987), 178.

⁷⁴⁰ Trigger, *Understanding Early Civilizations*, 442.

but somehow fail to interpret/understand. Jacobsen explains this scenario in these words, "...terrifying, ranging from sheer demonic dread through awe to sublime majesty; and fascinating, with irresistible attraction, demanding unconditional allegiance. It is the positive human response to this experience in thought (myth and theology) and action (cult and worship) that constitutes religion."⁷⁴¹

8. Bruce Trigger has also "...noted that household and local cults and individuals could communicate directly with gods and/or through shamans or ritual intermediaries who are conduits between the human and supernatural powers."⁷⁴²
9. The study of the figurines by Clark also suggests that they also could have been used to portray supernatural powers (burnt bone colorant), or for some kind of a life force, transcendent experience, shamanistic practice, or some household cult.

Burial Customs

According to Irfan Habib the Indus people buried their dead as there is no evidence of cremation. This notion is also backed by Sir Mortimer Wheeler who says,

"It is no longer necessary to assume that 'the complete absence of burial...points to cremation as the chief mode of disposal of the dead.'⁷⁴³ In particular, the repeated supposition that certain urns at both sites, containing a mélange of odds and ends "sometimes mingled with ashes and charcoal",⁷⁴⁴ represent human cremations is unsupported by valid evidence and must be discarded.⁷⁴⁵ Beside this the burial practices seem surprisingly uniform at the cemeteries found at Harappa, Kalibangan and Lothal, where bodies were laid supine, north-south with their head usually towards the north; though some graves had mud-plastered walls, while some bodies were buried in coffins. The dead were often buried wearing very few ornaments and grave goods (decorated pots), while earlier burials had decorated pots. This shows that the concept of afterlife was losing its material aspects, as the burial goods were inexpensive and perhaps they were mainly conventional or ritualistic."⁷⁴⁶ Sir Mortimer Wheeler also talks about two graves that according to him call for special mention.

"One of them was outlined internally with mud bricks, which thus formed a sort of structural coffin, a procedure with analogies at Nal in southern Baluchistan, possibly at a somewhat earlier period. The other grave was notable for the fact that the body, probably of a female, had been buried in a wooden coffin, 7 feet long and 2-2.5 feet wide, widening towards the head."⁷⁴⁷

⁷⁴¹ Thorkild Jacobsen, *The Treasures of Darkness* (New Haven: Yale University Press, 1976), 3.

⁷⁴² Wright, *The Ancient Indus*, 303.

⁷⁴³ E. J. H. Mackay, *Further Excavations at Mohenjo-Daro* (New Delhi: Government of India Press, 1938), 648.

⁷⁴⁴ John Marshall, *Mohenjo-Daro and The Indus Civilization* (London: Arthur Probsthain, 1931), 86.

⁷⁴⁵ Wheeler, *The Indus Civilization*, 68.

⁷⁴⁶ Habib, *A People's History of India 2 – The Indus Civilization*, 57.

⁷⁴⁷ Wheeler, *The Indus Civilization*, 67.

The coffin was most probably made of rosewood and deodar, abundantly available at the foothills of the Himalayas. There were thirty-seven pots in the grave, out of which only one was in the coffin huddled near and against its head. Though it cannot be appraised that it resembles the burials of the Sargonid and pre-Sargonid Periods in Mesopotamia, still the resemblance cannot be ignored and is worth noting.⁷⁴⁸

The skeleton biology of five cemeteries found at Harappa were studied by Professor K. A. R. Kennedy and the results are concluded by George Dales, he says,

“Cluster analysis indicates that the specimens from the Harappa Cemetery represent a population which has a very different set of phenotypic relationships than those possessed, for example, by the populations at the prehistoric site of Sarai Khola (Northern Pakistan), Mahadaha (Mesolithic Ganga valley), or modern Punjab. The Harappans appear to be most closely associated with other prehistoric samples from Lebanon and southern Turkey.”⁷⁴⁹

Earlier Kennedy and Sarkar had concluded that the ancient Harappans are not markedly different from the present-day inhabitants of north-western India and Pakistan after his Principal Components Analysis, from which it was concluded that the population of Harappa Mound AB and Cemetery R-37 are closely related, though those of Mohenjo-Daro and Lothal differ from each other. Keeping these analyses in mind they emphasize that the Aryan arrival is just a linguistic phenomenon and as their study does not in any way support racial typology.⁷⁵⁰

Concluding Remarks by Various Scholars

Wheeler very clearly pronounces in the conclusion of his book that would it be right to believe that whatever the Harappan's achieved, perished with them or something's of less tangible qualities like their philosophy and beliefs, might have transferred to the later generations, but somehow failed in getting noticed through the insensitive medium of archeology.⁷⁵¹ For it is quite evident that the much later religion of Hinduism, in spite of its so called Aryan grab, has observed Harappan Mentality to a large extent than what was believed fifty years back.

⁷⁴⁸ Ibid., 67.

⁷⁴⁹ Lakshmi Chatterjee, *Heritage of Harappa, Vol. I* (New Delhi: Global Vision Publishing House, 2005), 50-1.

⁷⁵⁰ Ibid., 50-1.

⁷⁵¹ Wheeler, *The Indus Civilization*, 136.

D. D. Kosambi while comparing the Indus civilization with its contemporaries clearly asserts that it was 'Religion', not prowess or violence, which was the essential ideological force of the Indus society.⁷⁵² Here are some facts that back his notion;

1. The 'Great Bath' could not have been for mere cleanliness, for every house had excellent bathrooms and good wells, while the Indus River flowed past the citadel mound. Therefore, the purpose was surely for some elaborate ritual considered important by the inhabitants.⁷⁵³
2. The Indus civilization and its people cannot in any way be compared with the Egyptian Pharaohs, whether it is in the case of a palace, evidences of dynasty rulers or divine warlords, monuments or glorious tombs, weapons or temples.
3. Records of trade are found from Mesopotamia on the clay tablets, asserting rich merchants, while no Indus records have survived, (that is if there were any), they must have either been on perishable material or word of mouth must have been enough, as this practice remained an important feature of the later Indian society, where contracts made by simple word of mouth were fully honored, to the amazement of the foreigner observer.
4. The lavish houses and the sanitary arrangement in the house of the Indus merchants cannot in any way be compared with the miserable sanitary arrangements of the Mesopotamian merchants.

Upinder Singh's holds the view that the religious and funerary beliefs and practices of the Harappans show great variety. While it could be dangerous to view them through the lens of later-day Hinduism, still it is interesting to note that the Harappan civilization does display a few features reminiscent of later traditions, except the one element of temple worship; because not a single structure has been found so far, which could be associated to it in any way.⁷⁵⁴

This is what V. Gordon Childe thinks about the religion of the Indus,

"The religion of the Indus also is replete with suggestions of traits known from later India. The significance of the bull, the tiger, and the elephant; the composite animals; the seated yogi god of the

⁷⁵² D. D. Kosambi, *The Culture and Civilization of Ancient India in Historical Outline* (London: Routledge and Kegan Paul, 1965), 66-70.

⁷⁵³ For more details see, D. D. Kosambi, *The Culture and Civilization of Ancient India in Historical Outline* (London: Routledge and Kegan Paul, 1965), 67.

⁷⁵⁴ Upinder Singh, *A History of Ancient and Early Medieval India-From the Stone age to the 12th Century*, 173.

seals; the tree spirits and the objects resembling the Siva linga (a device, symbolic of the god Siva, that has a phallic shape) of later times—all these are suggestive of enduring forms in later Indian religion.”⁷⁵⁵

T. Douglas Price and Gary M. Feinman observe that many aspects and traditions of the Indus Civilization are persistence till recent times. These include,

“...ceremonial bathing, ritual burning, specific body positions (such as the yogic position) on seals, the important symbolic roles of bulls and elephants, decorative arrangements of multiple bangles and necklaces (evident from graves and realistic figurines), and certain distinctive headgear—all are important attributes of ancient Harappan society that remain at the heart of contemporary Hinduism.”⁷⁵⁶

Rita Wright’s concluding remarks in the chapter on religion of Indus were,

“In the absence of texts to complement the view presented in this chapter, we cannot know whether this presumed system of thought represents a true reality. However, the results of this investigation using cross-cultural analogies and models derived from comparative analysis present plausible scenarios that move us away from direct historical approaches and forward in gaining a richer understanding of Indus narrative themes and mental life. We have found that the association of gods and goddesses with natural phenomena and references to supernatural and animistic beings fall closely in line with Indus imagery and a deeply expressed impulse to break down and transform the natural world into a built world. What also seems clear is that Indus people had formulated ideas of the supernatural in ways that appear similar to the larger world with which they interacted and Trigger’s interpretations based on comparative analyses.”⁷⁵⁷

⁷⁵⁵ *Encyclopedia Britannica*, 15th ed., s. v. “Nature and Significance”

⁷⁵⁶ T. Douglas Price and Gary M. Feinman, *Images of the Past* (California: Mayfield Publishing, 1997), 405.

⁷⁵⁷ Wright, *The Ancient Indus*, 307.

Chapter 4

Discussion and Conclusion

This research in the preceding chapter, from a different perspective, with the help of recent archaeological excavations has helped us to look at the religious beliefs of the Indus people in a wider perspective than what we had since its discovery or initial years. Therefore, the overall view that the previous scholars had about the religious beliefs of the Indus people need to be revisited and rethought so that we can get a little closer to understanding what those glorious people believed in. Because it only seems fair to assume that the Indus religion was fairly sophisticated, like much else in the civilization, and functioned at different levels to serve different classes of people according to their cultural needs and mental capacity.

I after all this discussion will give my humble suggestions about the religious beliefs of the Indus people, I may or may not be right because in the absence of undeciphered Indus script one cannot be absolutely sure, yet I strongly believe that it would be unjust to depend on only the tool of archaeology for deducing the religious beliefs of people who in a way no longer exist. Therefore, I think of equal importance, in religious study, as in every other academic pursuit, is the absolute necessity of creative reasoning, which I will employ along with other sources to bring before you the religious beliefs of the Indus people. As is rightly said by E. H. Carr about the objectives of a historian is not only that he gets his facts right, but rather that he chooses the right facts to achieve a level of significance.⁷⁵⁸ Some historians also believe that it is their duty to bring together various facts given by different field experts and put them together in such a way as to reach objective conclusions.

I will begin my argument by quoting Karen Armstrong, "...the history of religion has revealed that human beings are spiritual animals."⁷⁵⁹ Their quest for god is as old as humanity, it is not something that is created or imposed on them, it is a natural feeling and very much part of their system. According to Bruce Trigger's comparative research on the religions of various ancient civilizations, man considers himself to be part of a natural order, which consists of humans, natural and supernatural beings.⁷⁶⁰ The reason behind this awareness of man was the quest to find that superior being/super natural power, which was unseen, for he since his birth had the powers of reasoning that made him understand that despite being the best creature on

⁷⁵⁸ Arthur Marwick, *The Nature of History* (London: Palgrave Macmillan, 1970), 192-3.

⁷⁵⁹ Karen Armstrong, *A History of God* (London: Vintage Books, 1999), 3.

⁷⁶⁰ Bruce Trigger, *Understanding Early Civilizations* (Cambridge: Cambridge University Press, 2003), 442.

earth, born with the best of attributes, he still had limitations; there were still things that were beyond his reach and control. And these things were mostly related to natural elements; hence all primitive religions were based on the concept of natural elements. Although there is another theory which is based on the religious books (Old Testament, Bible and Quran) belonging to the three monotheistic religions of the world, which clearly mention that man since his birth has been given the concept of one “God”. It was taught to him through the various messengers/prophets that were sent to this world for his guidance alone. According to these books the first man and messenger was “Adam”, who was followed by another 124,000 prophets. Father Wilhelm Schmidt in his book *The Origin of the Idea of God* backs this notion, when he suggests that there had been a primitive monotheism before men and women had started to worship a number of gods. Originally, they also had acknowledged only one Supreme Deity, who according to them had created the world and governed human affairs. A belief in such a High god, also known as the “Sky god”, (associated with the heavens) is still a feature of the religious life in many indigenous African tribes. Though, they yearn towards him for prayer, believe that he is watching over them and would punish them for wrong doings, yet he is not associated with any special cult and therefore is never depicted in any form of imagery or as an icon. This notion can also be explained when we study the three established monotheistic religions of the world. A good example of this fact are the people of the three monotheistic religions of the world (Jews, Christians and Muslims), who are believed to be the followers of not only the one and same God, “Allah”, but their prophets (for example, Abraham and Noah) and stories related to them are also similar. Some of the stories of these prophets and about man’s early life can be traced in the various myths and legends across the world. Noah’s flood is one example; the concept of creation of the world, Adam, immortality and the belief in one God, are others. Beside these three religions there are examples of individuals who not only believed in the concept of one God, (Akhenaton from Egypt, and Zoroaster from Persia) but also preached it. These people preaching the concept of one “God” in different parts of the world at different time intervals is enough indication to suggest that the sayings in these three monotheistic books about “God” sending prophets at different time intervals to guide mankind is nothing but absolute truth as these same stories about the same concepts are found across the world in the forms of myths and legends.

Anthropologists also tell us that in between the belief in one god, it was replaced by lesser spirits and more accessible gods. Karen Armstrong strongly suggests that therefore, in

the beginning there was just “One God”, and “...if this is so, then monotheism was one of the earliest ideas evolved by human beings to explain the mystery and tragedy of life.”⁷⁶¹ This notion is backed by both Bible and Quran, in which it is clearly mentioned that “Adam”, as I said before, was the first man in this world and was also God’s messenger too. These sacred Books also talk about how man again and again had gone astray, and for his guidance various prophets were sent at different time intervals to different people living in different parts of the world. This is exactly what Karen Armstrong strongly believes, that in between these prophet’s people started to make their own lesser gods, just to feel closer to the One Superior being, that is when one religious idea ceased to work, it was either simply replaced by another or it was altered by some people for their own vaster interests. The history of mankind is full of examples when sometimes the state and sometimes the temples manipulated the religious beliefs and the people for their own self interests (examples are Mesopotamian and Egyptian civilizations).

In light of the things I have talked about, I strongly suggest that the Indus people were aware about the religious beliefs that the first man “Adam” was born with, and which were communicated to later generations at different time intervals through prophets (like Abraham and Noah, as discussed in the preceding chapters),⁷⁶² because these stories can be found in different corners of the world through mythology and legends. Therefore, there can be only two justifications for this: one that there was constant movement and communication between all the people at that time, or the same message and information was conveyed to people of different regions at different time intervals through different prophets, thus the similarities in their myths and legends.

I would personally go with both of them because it is evident that the people of Indus were in communication with north-west and west Asia, and also because it is a proven fact that scientifically all humanity belongs to one lineage, all languages have one source; all females have one mother gene, etc. Although we might never be able to prove that how this message

⁷⁶¹ Karen Armstrong, *A History of God* (London: Vintage Books, 1999), 9-10.

⁷⁶² Another difficult thing to refute is the existence of a pious man, who was religiously known as Noah (Old Testament, Bible and Quran), historically or mythologically known as Utnapishtim (Epic of Gilgamesh), Ziusudra (Sumerian myth), or Yu (Chinese myth), and who is also the saviour of humanity, as is proven genetically that we *Homo sapiens* belong to one race. The language we speak belongs to one linguist group. Therefore, it is difficult to prove wrong the stance of the Quran that God saved Noah and the pious people with him and drowned the rest. If this is true than I would take the liberty of establishing another important point here, that God’s word lived with Noah and spread later through him too, in every corner of the world, from pole to pole. And if this is true than I suggest that the people who settled in the Indus valley civilization must either have been Noah’s direct descendants or his pious companions, who carried God’s message with them not only to the Indus Valley region but to every corner of the world, as is shown through the myths of far off regions of the world.

of one “God” reached the Indus Valley or which prophet preached it to them (through Noah’s himself or his descendants as has been proposed earlier in Chapter 3.3) or through some other prophet, who we do not know about yet, in the absence of undeciphered Indus script, yet the religious and cultural legacy and archaeological material that they have left us, despite of all variations is still enough evidence to hold my stance, that they were pious, modest and down to earth people. As it seems unfair to assume that Allah sent all the prophets to the Middle East and left the Indus Valley region and its people unguided, when it was nearly double the size of its contemporary regions.

I will begin the discussion with the two main parts of Islamic teachings, which are also part of not only the other two monotheistic religions of the world, but of almost every religion in the world. The first part is the right of God, that is belief in the “One and Only God”, and the other is about the “right that every man has over his brother”. Though when we trace the history of humanity alterations in both these parts can be observed.

In view of the above discussion, when I overview the life style of Indus man, I see lots of examples, which can directly be linked with the second right of Islam (also part of every religion), that is the right that every man has over his brother. Though I might never be able to prove the rights of “God” (His Oneness), due to the undeciphered Indus script, yet the rights that each Indus man gave to his brother are evident from their life style.

The main objective and message of Islam is to establish the fundamental unity of mankind on the basis of equality, liberty and fraternity. It is a message of human equality in social status and legal rights. According to Allama Muhammad Iqbal’s philosophy

“...the individual and the community build each other. The individual develops his ego and all its potentialities and then utilizes them for building up the community. But such relationship cannot exist in a community based on class struggle and on privileges of race, color or wealth. Only true realization of the teachings of Islam based on the unity of God and equality of man can ensure such a relationship most conducive to human welfare and progress”.⁷⁶³

And this is exactly what was going on in the Indus civilization, because they were united under one religious’ ideology (which I have been quoting all along and which is evident from Mehrgarh Period III onwards) that is why they expanded, progressed and reached the heights of success and prosperity.

⁷⁶³ <http://www.allamaiqbal.com/publications/journals/review/apr62/1.htm>

Let us have a brief overview to understand what I mean. The land of the Indus and its five tributary rivers was and still is a bounty for the people who live here. This is the reason, why hunter gathers choose to live and settle here in the first place. As man started to live in groups, settlements grew, as a result cultures also evolved. According to Professor Robert Redfield, a culture is an organized or formalized body of conventional understandings (a whole set of rules, beliefs and standards that a particular group follows).⁷⁶⁴ These understandings can be witnessed through their art, religious beliefs or their life style; they are passed on from one generation to the next, people die but their culture lives on. It is something which is not genetically transmitted from one generation to the next, but is imparted as a child grows up in a particular environment. We can learn about early cultures through the things that they have left behind in the form of tools, places where they once lived, the graves in which and how they buried their dead, sometimes with grave goods and sometimes without them. All these things have symbolic significance and hence culture is a combination of various symbols. This rich cultural legacy, of which religion was a part, was left to the people of Pakistan and India by the people of Indus valley civilization. How? For that I will put my creative reasoning at work, and will bring before you only the facts which I think will help, to trace and relive the religious beliefs of the Indus people.

Man did not start domestication in the Pleistocene Period and waited approximately 30,000 to 20,000 years till the Holocene Period to do so. This might sound pretty weird, but not to the historians and geologist who believe that the Holocene Period (warm and stable climate, suitable for farming) was a window of opportunity in the lives of humans, and humans by this time possessed a unique cultural alertness that enabled them to respond to this opportunity.⁷⁶⁵

Genetic research claims that as the earth reached the Third Glacier Maximum it became difficult for both man, animals and plants to survive in places that were believed to be occupied by humans (Europe, the Middle East, Persia, Central Asia and North America), by that time. Therefore, humans for their survival had to relocate themselves to more hospitable environments such as the Indus Valley region, the Himalayan steps and Kashmir valleys.⁷⁶⁶ This notion is backed by extensive studies around the Indus region, which gives us significant

⁷⁶⁴ Robert J. Braidwood, *Prehistoric Men* (Toledo, OH: Scott Foresman and Company, 1967), 30-1.

⁷⁶⁵ Michael Cook, *A Brief History of The Human Race* (New York: W. W. Norton and Company, 2003), 4-9.

Paul G. Bahn, ed., *The Atlas of World Archaeology* (Oxfordshire: Andromeda, 2002), 30-3.

⁷⁶⁶ Narendra Katkar, "The Last Glacier Maximum: The Third Migration", *Comptes Rendus Palevol*, 10 (2011): 665-78.

archeological data that harmonizes with forensic anthropological investigations on inhabitants of modern Pakistan. The results show the arrival of few people into the sub-continent from the north-west during the late Pleistocene Period between 12,000 to 17,000 years ago.⁷⁶⁷

In light of these observation along with the “Out of Asia” hypothesis, which is backed by irrefutable DNA data harmonizing with archaeological data around the early Holocene Period enlightens us about a “Third Migration” of survivors of the Last Glacier Maximum, which occurred at this time travelling from east to west, instead of from west to east.⁷⁶⁸ This would make Indus Valley region and the Persian passage not only a genetic junction but also a cultural junction that saw the beginning of domestication of both animals and plants, hence the foundations of the first human civilizations, were laid in the process in both directions (east and west). These movements by the people proves that since pre-historical times man had been travelling from east to west and from west to east, as has also been proven by the later prehistory and history of both Middle East and Indus Valley (references of movement given in the preceding chapters).⁷⁶⁹

Hence it was during Holocene Period, when the foundation of domestication was laid. Man, for the first time in the total time span of his existence on earth, finally started settled life in different parts of the world between 8000 to 12,000 years ago. Though, archaeology tells us that the first area to be cultivated was in the Middle East, in the area known as the Fertile Crescent around 12,000 years ago, from where it spread to the rest of the Middle East, parts of Sub-Saharan Africa, Pakistan, China and Europe.⁷⁷⁰ But if we keep the “Out of Asia” hypothesis in mind, maybe in future years we can find settlements in South Asia that might predate the settlements of Middle East (Mehrgarh is one such example, which is responsible for revising the historical chronology of South Asia).

As man started domestication he came into closer contact with natural elements. He found that despite doing everything right, the natural calamities were still beyond his control. Hence the concept of the “Divine” was reinforced in his mind. A concept that he was born

⁷⁶⁷ K. Kennedy, *God-Apes and Fossil Men: Paleoanthropology of South Asia* (Ann Arbor, Michigan: University of Michigan Press, 2000).

⁷⁶⁸ Narendra Katkar, “The Last Glacier Maximum: The Third Migration”, *Comptes Rendus Palevol*, 10, (2011): 665-78.

⁷⁶⁹ The earliest settlements found so far in South Asia are located in Baluchistan, which is an extension of the Iranian plateau closely connected and open to receive and transmit cultural influences from and to the other centers of ancient civilizations, especially between northeastern Iran, Seistan and Central Asia on the one hand and the Greater Indus on the other.⁷⁶⁹ Hence these areas were not only geographically linked but were strategically linked too, and in no time in history were they ever disconnected from one another as parallels in painted pottery types have been reported from Turkmenistan, northern Iran and Sialk I-III dating back from the end of the sixth millennium BCE to the fourth millennium BCE.

⁷⁷⁰ Michael Cook, *A Brief History of The Human Race* (New York: W. W. Norton and Company, 2003), 20-3.

with, a concept that time and again according to the teachings of the Old Testament, Bible and Quran had been conveyed to him through the 124,000 prophets sent to the world, only for man's guidance. Another thing which was conveyed to him were the rights that his fellow men had over him. This message when followed in true spirit made him realize the perks of communal work. It hit him that in order to lead a good settled life, he required communal work, and communal work could only be executed if there was unity among different individuals living together. And he understood that this could only be achieved on the bases of justice, equality, trustworthiness and honesty, without any of these it was impossible.

The realization of these two facts brought a remarkable change not only in his thinking and social setup, but also in shaping the history of this land, which grew from the emergence of small settlements first into villages, towns, cities, and then eventually turned into one of the greatest civilization of all times, which was double the size of its contemporaries and that also without the use of any kind of force. Isn't this mindset enough to understand the religious beliefs of the Indus people? People, who could not have either developed or expanded without following these two facts in true spirit.

An example of this communal work can be seen during Period III of Mehrgarh (and onwards), when in comparison with the settlements of Period I and II (tightly clustered villages), the settlements were not only expanded to increase the size for the increasing population, but also for the betterment of the community at large; and we also see specialized activities being spread to specialized zones for the first time. This was just the beginning of this facilitating mindset of the Indus people for which we can find countless examples (Public Works) in the next phases of Indus developmental architecture. Here are just a few examples that show their inclination towards community welfare.

1. Uniformity in city planning, their layout and essential architectural features
2. All the houses were built on the same pattern, following the grid system
3. All settlements were at equal distance, from the major cities, ensuring the smooth distribution of goods
4. The architecture is full of examples demonstrating 'Public Works' as was mentioned in detail in the preceding chapters
5. No palaces, temples or any kind of elaborate monumental architecture is found in this civilization when compared with its contemporaries for a few individuals
6. The sewerage system of this civilization was far more advanced in comparison to its contemporary civilizations
7. Toilets and bathing platforms were invented by the Indus people

8. Sewerage facility was available to every citizen
9. Drains carrying sewerage was covered with large slabs of stones
10. They excelled in techniques to control waste disposal and to prevent encroachment of floodwaters on the city buildings
11. Special vertical shaft wells were first dug than constructed
12. Doors and windows of the houses did not open on the main streets, hence privacy was maintained
13. Working areas were separated from household units
14. Civic Structures varied from settlement to settlement on the bases of need and utility (unlike what we find in its contemporary civilizations, for example, the Mesopotamian Temple, which was built on the same standard plan in various cities).

The given points are enough evidence to prove that a lot of emphasis was given to community welfare, which upheld the concepts of privacy, equality, hygiene and cleanliness. Their architecture was not for individuals or a limited class of people, but was for the masses, which benefitted from it. This is the reason why even the monumental structures also fall under the category of 'Public Works' instead of Palaces or Temples. Though we see lack of uniformity in the 'Public Works', which does not in any way suggest that they were not united under one force or ideology, but rather suggests that they were free to fulfill their civic needs according to the requirements of their concerned areas, for their growth and betterment, without been answerable to any one single authority; as this control was not implemented physically or by force, but was spread through a single religious ideology over a vast area of land for many generations. Therefore, I believe that despite of all the prosperity and wealth they enjoyed, they still believed in modesty and equality, the two things that are the bases of any just society and an important part of every religion even today. This is why settlements grew from villages into towns, and cities, but the facilitating mindset of the people did not change. Why? Because they believed in building, rather than destroying, they believed in giving, rather than snatching, they believed in unity, rather than division, they believed in distribution, rather than accumulation, they believed in sharing, rather than collecting, they believed in expanding, rather than thinning. This could have been the only reason why they expanded and prospered for so many centuries. It was the force of religious ideology that held them united, because scholars have debated this question repeatedly, as to which element was responsible for the significant changes in social organization. Some said it could have been their political leadership, a new ideology, but unfortunately none proposed that it could have been their religion.

Another important example to back this concept is their burial practices. A burial practice is one of the key elements that is directly linked with the afterlife religious beliefs of man. Starting from the burial practices observed at Mehrgarh to the later cities of Mohenjodaro and Harappa in the mature phase of Indus the archaeologists have not found any elaborate burial (though the most common form of burial was a burial chamber, reminiscent of much later Iranian burials), or bodies were buried near the houses (we have evidence from Jericho and Catal Huyuk that they also buried their dead beneath their houses). While according to Pascal Sellier, bodies were wrapped in leather shrouds impregnated with red ochre (this practice of covering the body with red ochre is attested in Central Asia during the Middle Paleolithic and is still found among the untouchable groups in South Asia),⁷⁷¹ showing that it has culturally travelled through many generations.

The burial items were very basic and include, a goat, few pots, body covered with red ochre leather shreds or a few jewelry items. These burial items are nothing in comparison to what we witness in the contemporary civilizations of either Egypt or Mesopotamia.

Though the evidence of burial goods does suggest a definite belief in an afterlife as mentioned earlier, yet their scarcity suggests that they did not believe in using these items in their afterlife, as was seen in the case of Egypt. Another important point to add here is that the lowest percentages of artifacts were found in the burials of children or juveniles. This observation was made by Dr. Wright, who suggests that it might not have been appropriate for juveniles and children to have had any kind of grave goods before puberty that is until they reached adulthood. In her view grave goods might have had some “religious significance”, tied to the concept of an afterlife from which the children were excluded. This “religious significance” that Dr. Wright is talking about parallels the religious beliefs of the Muslims and Christians, according to which, the “Book of Deeds” begins only when the child reaches puberty, before that he is pure and free from any kind of accountability for his actions. As is said by the Holy Prophet Muhammad (PBUH),

"The pen has been raised for three persons (meaning they are not held accountable for what they do): one who is sleeping until he gets up, a child until he reaches the age of puberty, and an insane person until he becomes sane."

⁷⁷¹ Pascal Sellier, “Mehrgarh: Funerary Rites and the Archaeology of Death” in *Forgotten Cities on the Indus: Early Civilization in Pakistan from 8th to the 2nd Millennium BC.*, ed., M. Jasen et al., 78 (Mainz: Verlag Philipp von Zabern, 1996).

Therefore, these children did not require burial goods to accompany them in afterlife, hence the low percentage of grave goods.

On the bases of these observations I would like to suggest that the people of Indus civilization did not believe that grave goods could help them in their afterlife, and only good deeds would accompany them, hence the scarcity of burial goods in comparison to its contemporaries and good deeds can be witnessed in the form of communal work. Another even more important factor is that they might not have believed in the accumulation of wealth with the deceased, rather they believed in the circulation of wealth between the living people, which meant more prosperity among the living. This concept of circulation and distribution of wealth between the kin's is also part of the religious beliefs of many world religions today including Islam.

Another important element of the Indus civilization is "Peace", which is directly linked to its religious beliefs. How? All Indus scholars state that there is lack of weaponry in the whole Indus civilization. It appears that they did not fear invasion, which could be the only reason why they did not produce superior weapons for war in comparison to its contemporaries. Though genetic studies show the influx of people from the north-west and west Asia; trading activities also tell us about the to and fro movement of people but indicate that force was never used. Why? For one they were peace loving and two they were welcoming and accommodating. This is what the history of this country tells us, South Asians are still known for their hospitality and warmth on the one hand and is home to many world religions on the other hand. Therefore, keeping the culture traits in mind I suggest this trait like many others has unconsciously travelled with time.

We have already ruled out that force was not used for the smooth running of administration in such a vast area of occupation as there is no evidence of violence anywhere. The phenomenon of the so-called massacre of Mohenjo-Daro has also been ruled out now. And if there were any clashes, for example between the "bull people" or "the tiger people" (as is seen on some seals), it appears that they hardly had any effect on maintaining overall peace, which must have been resolved through the elders of the settlements, as elders of the family are still respected and their decisions are still honoured; a cultural trait, which is followed in the villages of both Pakistan and India even today. Why? Because they believed in non-violence and the strong family structure kept them bound that is why they were able to sustain

this civilization together for so long under a single strong cultural, religious ideology shared by all the people for their own betterment.

The level of homogeneity employed in the Indus civilization is yet another remarkable element that has direct links with their religious beliefs. For we find artifacts of various types distributed throughout the occupational levels of different Indus sites, rather than clustered in large cities. These artifacts have even been found in the village settlements, suggesting an equality of access to wealth or the symbols of wealth among village and city dwellers, which goes against the idea of inequality. Therefore, I suggest they strongly believed in the concept of equality, which is pretty evident from the site planning and burial customs.

Uniformity is not only seen in the architecture of Indus civilization but also in its crafts. This statement is backed by Bridget Allchin, Raymond Allchin and Mark Kenoyer, among others. It was during its Mature Phase that artisan's developed specialized technical knowledge and as a result not only increased production but also produced high-quality and a diverse range of goods, in specialized areas. This expertise of technique in a particular craft helped to develop Indus technical virtuosity that brought a social change in the social structure of Indus, as is proposed by Massimo Vidale and Heather M. L. Miller.⁷⁷² Shreen Ratnagar also adds that the Harappan society was a class structured society with people following their hereditary professions who were living in well defined areas in an urban settlement, as is the case in Pakistan and India even today.⁷⁷³ Though these changes must have been unintentional, as craft specialization was hereditary, nevertheless it seems that it made some people richer in comparison to others, as its consequences were witnessed generations later, in the form of the Hindu caste system (proposed by Massimo Vidale and Heather M. L. Miller, Upinder Singh, Rita Wright and indirectly by Mark Kenoyer), which indirectly resulted in the differentiate of roles, professions and ranks within the communities.⁷⁷⁴ As there are many indications that by the Mature Indus Period urban society had evolved considerable social stratification and

⁷⁷² Massimo Vidale and Heather M. L. Miller, "On the Development of Indus Technical Virtuosity and Its Relation to Social Structure", *South Asian Archaeology 1997*, ed., Maurizio Taddei and Giuseppe De Marco, Vol. 1, Istituto Italiano Per L' Africa E L' Oriente (Rome, 2000): 115-131.

⁷⁷³ Shreen Ratnagar, *Encounter: The Westerly Trade of the Harappan Civilization* (New Delhi: Oxford University Press, 1981), 170

⁷⁷⁴ Massimo Vidale and Heather M. L. Miller, "On the Development of Indus Technical Virtuosity and Its Relation to Social Structure", *South Asian Archaeology 1997*, eds. Maurizio Taddei and Giuseppe De Marco, Vol. 1, Istituto Italiano Per L' Africa E L' Oriente (Rome, 2000): 115-31.

Upinder Singh, *A History of Ancient and Early Medieval India: From The Stone Age To The 12th Century*, 158. Wright, *The Ancient Indus*, 177.

Kenoyer, *Ancient Cities of the Indus Valley Civilization*, 149-50.

division, but this in its early stages was neither rigid nor universally recognized; it developed in a firm caste system with its disparities and evils at a much later stage after the demise of this civilization,⁷⁷⁵ and when it did two reformative religious movements (Jainism and Buddhism) sprang from within the region not only to negate it but also to counter its effects on the masses.⁷⁷⁶ The book of Hinduism reforms “Upanishad” also came about at the same time. Here I would like to address the question, as to who the true originators of “Hinduism” were. The answer is not as complicated as it was fifty years ago, when the Aryans were considered to be the originators of this religion. In view of recent research, it is debatable as to whether the Aryans defeated the people of the Indus civilization or that they even came to the sub-continent on a large scale is precisely unknown. Therefore it is not difficult to conclude on the bases of the “mediating yogi”, the “so-called shivalingas”, “the pipal tree”, “the Great Bath” that many Indus images or so-called cults have culturally travelled through generations, but in which context they were produced or used definitely seems to have changed; had this not been the case than two reformative religions would not have sprang from the region to make the beliefs of Hinduism counterproductive. And in view of the scenario Hinduism also came up with its book of reforms known as the “Upanishads”. This development shows that the people of this land intentionally fell under the spell of the deadly “caste system”, but then to counter it individuals like Buddha (Buddhism) and Mahavira (Jainism) sprang from the same “Mati”, known as clay in Urdu, meaning people of the land.

There are hardly any icons, imagery or religious buildings from the Indus civilization to associate it with the belief in multiple gods, for whatever supposed religious material has been found (seals, figurines, masks, etc.), could be the property of a limited number of individuals and their application must have been very different, as the iconography of the “One Supreme God” of the Hindus into various personifications came much later to this land.

Let us now briefly over look the similarities between the three post-dated religions of the land, and the icons, script and imagery, whose meaning is unknown;

1. The mediating yogi
2. The all in some way are considered as part of the Shamana tradition (renouncers)
3. This tradition is considered to be much older than Hinduism today
4. Supreme god of Hindus is “Brahma”, he is one and all powerful, the rest are his different personifications

⁷⁷⁵ Early stages of Hinduism have been discussed in the Chapter 3.4.

⁷⁷⁶ These religious movements have been discussed in detail in Chapter 3.4.

5. Jain doctrines also originate from an omniscient and omnipotent being
6. Jainism is considered non-Vedic
7. The concept of Karma is common between all three religions
8. Buddha preached to reach the state of “nirvana”, eternal peace

The significance of highlighting these points was to bring before you a wider picture of the people of this land and their age-old religious affiliations. Despite of the dissimilarities between the three established religions of this land the one common element is “*karma*”, which is pretty evident during the Indus time period too, though we do not have any text to back it, but we do have their archaeological remains which speak louder than words. The term “*Karma*” in Hindu, Buddhist and Jain philosophy means somebody’s current and future lives are determined by that person’s behavior in this and previous lives. Though we do not know whether the Indus people believed in many lives, but one thing is evident that they spent their current lives doing many good communal deeds and the scarcity of burial goods tell us that they did not believe that material things could help them in their future life. This notion is backed by their various personality traits, which can be described with the help of adjectives like honesty, equality, and unity among many others. This concept of *karma* is present in every religion of the world including the three monotheistic religions. Another very important fact is that all these religions believe in one Supreme Being, whether it is “Brahma” of the Hindus or belief in an unnamed omnipotent of the Janis or the un-talked about god of the Buddhist. We also have come across the term of “Shamans”, (mediating yogi or elders of the family could be a symbol of such men) in association with this region, which definitely goes back a long way, maybe it was the human link between man and god, since Indus times and which is pretty evident even today in the region. We find many such people in the villages and cities of both Pakistan and India playing an active part even today.

It only seems fair to assume that the Indus religion was as sophisticated, as just, as equality based, as uniform, as welcoming, like much else in this civilization, and functioned at different levels to serve different classes of people according to their cultural needs and mental capacity, as most advanced religions do. And it is quite evident that the Indus civilization greatly influenced the evolution of religions not only in India but in Near Eastern countries too.

Considering the things, I have talked about, I strongly believe that the Indus people were aware about the religious beliefs that the first man “Adam” was born with, and which later prophets like Abraham and Noah; and individuals like Zoroaster and Akhenaten

preached to the world. As the three monotheistic religions, followed by more than half of the world's total population, are in fact off-shoots from the legends of these great prophets and personalities.

The Indus civilization has been given credit for a lot of things, but I think the one credit, which is superior to all and which it has never earned is its religious ideology which was at par in comparison to its contemporary civilizations. It was this ideology that helped it to prosper, it was this ideology that helped it to grow and expand, it was this ideology that helped it to remain peaceful, when its contemporaries were busy fighting over worldly gains, it was this ideology that kept them united for so many centuries. That is why historians till today say, that it is difficult for a statesman to keep the people of this land together in comparison to a saint or Sufi.

In the absence of the undeciphered Indus script, despite many arguments in favor of one Indus God, it seems that it is difficult to prove the rights of "One God", at this point, yet the rights that each Indus man gave to his brother are evident from their life style and is difficult to prove wrong. Therefore, I rest my case here for the time being, hoping that future studies and excavations can enlighten all of us in more ways.

REFERENCES

- A. M. Courty. "Late Quaternary Environmental Changes and Natural Constraints to Ancient Land Use (Northwest India)." In *Ancient Peoples and Landscapes*. Edited by Eileen Johnson, Lubbock: Museum of Texas Tech University, 1995.
- Ager A. Derek. "The Nature of the Fossil Record." *Proceedings of the British Geological Association*, Vol. 87 (1976): 133.
- Allchin Bridget and Raymond Allchin. *The Rise of Civilization in India and Pakistan*. London: Cambridge University Press, 1982.
- _____. *The Rise of Civilization In India and Pakistan*. New Delhi: Cambridge University Press, 1996.
- Allegre Claude and Vincent Courtillot. "Revolution in the Earth Sciences." *Philosophical Transactions: Biological Sciences*, vol. 354, no. 1392, (Dec., 1999): 1915-19.
- Archiati Pietro. *The Great Religions – Pathways to Our Innermost Being*. Translated by Pauline Wehrle. London: Temple Lodge, 1998.
- Armstrong Karen. *A History of God*. London: Vintage Books, 1999.
- Aruz Joan. *Art of The First Cities: The Third millennium BCE from the Mediterranean to the Indus*. New York: The Metropolitan Museum of Art, 2003.
- Atley De P. S. "Archaeological Surveys in Baluchistan 1948 and 1957." *Occasional Publication*, No. 8, Institute of Archaeology London (1983): 4.
- Bahn G. Paul, (Ed.) *The Atlas of World Archaeology*. Oxfordshire: Andromeda, 2002.
- Barfield J. T. *The Perilous Frontier: Nomadic Empires and China*. London: Blackwell, 1989.
- Barnosky D. Anthony. "Effects of Quaternary Climatic Change on Speciation in Mammals." *Journal of Mammalian Evolution*, Vol. 12, No. 1/2 (2005): 247-60.

- Bar-Yosef O. and A. Belfer-Cohen. "Following Pleistocene Road Signs of Human Dispersals Across Eurasia." *Quaternary International* (2011): 1-14.
- Belcher R. W. "Fish Exploitation of the Indus Valley Tradition." In *Indus Ethnobiology*. Edited by S. A. Weber and W. R. Belcher. New York: Lexington Books, 2003.
- Bhan Suraj, "Siswal A Pre-Harappan site in Deishadvati Valley." *Puratattva* 5 (1971-72): 44-46.
- Bisht S. R. "Dholavira: New Horizons of the Indus Civilization." *Puratattva* 20 (1991): 71-81.
- _____. "Indus Civilization, The Last Fifty Years of the Study in India." In *Exhibitions Of the World's Four Great Civilizations: The Indus Exhibition, NHK*. (Tokyo, 2000): 26-28.
- _____. "The Water Structures and Engineering of the Harappans at Dholavira (India)." In *South Asian Archaeology 2001*. Vol. 1. Edited by C. Jarrige and V. Lefevre. Paris: CNRS, 2005.
- _____. "Excavations at Banawali: 1974-77." In *Harappan Civilization: A Contemporary Perspective*. Edited by G. L. Possehl. New Delhi: Oxford and IBH Publishing Company, 1982.
- Blackman M. J. and M. Vidale. "The Production and Distribution of Stoneware Bangles at Mohenjo-Daro and Harappa as Monitored by Chemical Characterization Studies." In *South Asian Archaeology 1989*. Edited by C. Jarrige, *Monographs in World Archaeology*, No 14, Madison: Prehistory Press, 1992.
- Boehmer M. R. "Die Entwicklung der Glyptik wahrend der akkad-zeit." *Chapter Untersuchungen zur Assyriologie and vorderasiatischen archaologie 4* Berlin: Walter der Gruyter, 1965.
- Bogucki Peter. ed., *Encyclopedia of Society And Culture in The Ancient World*. New Delhi: Viva Books, 2010.
- Bouquillon A. and B. Barthelemy de Saizieu. "Decouverte de nouveau materieu dans

- Les parures de la période pré-Indus de Mehrgarh (Baluchistan): la 'faïence' de steatite." *Techne* 2 (1995): 50-5.
- Braidwood J. Robert. *Prehistoric Men*. Toledo, OH: Scott Foresman and Company, 1967.
- Byers A. Gary. "Is This The Tomb of Noah?", Bible and Spade (Second Run), BSPADE 11:3, 1998, <http://www.galaxie.com/article/bspade11-3-02?highlight=noah%20and%20the%20flood>
- Campbell C. M. and S. A. Tishkoff. "African genetic diversity: implications for human demographic history, modern Human Origins, and Complex Disease Mapping." *Annual Review of Genomics and Human Genetics* 9 (2008): 403.
- Carr Hallett Edward, *What is History?* New York: Random House, 1961.
- Chakrabarti K. Dilip, *The Oxford Companion To Indian Archaeology, The Archaeological Foundations of Ancient India: Stone Age to AD 13th Century*. New Delhi: Oxford University, Press, 2006.
- Chatterjee Lakshmi, *Heritage of Harappa*, Vol. 1. New Delhi: Global Vision Publishing House, 2005.
- Christaller W. *Central Places in Southern Germany*, translated from *Die zentralen orte in Suddeutschland* by C. W. Baskin. Englewood Cliffs: Prentice-Hall, 1966.
- Clark R. Sharri. "Representing the Indus Body: Sex, Gender, Sexuality, and the Anthropomorphic Terracotta Figurines from Harappa." *Asian Perspectives* 42 (2) (2003): 304-28.
- _____. "The Social Lives of Figurines: Recontextualizing the Third Millennium B.C. Terracotta Figures from Harappa (Pakistan)." Ph.D. Thesis, Harvard University, (2007): 526-7.
- Collon D. *First Impressions: Cylinder Seals in the Ancient Near East*. Chicago: University of Chicago Press, 1987.
- Cook Geoffrey, "An Harappan Seal at Berkeley: from Sumer to Meluhha:

- Contributions to the Archaeology of South and West Asia in Memory of George F. Dales, Jr." Edited by J. M. Kenoyer, *Wisconsin Archaeological Reports*, Vol. 3, Madison, 1994.
- Cook Michael, *A Brief History of The Human Race*. London: W. W. Norton and Company, 2003.
- Costantini L. "The Beginning of Agriculture in the Kachi Plain: The Evidence of Mehrgarh." In *South Asian Archaeology*. Edited by B. Allchin. Cambridge: Cambridge University Press, 1984.
- _____. "Plant Remains at Pirak, Pakistan." In J. Jarrige et. al. (eds.), *Fouilles de Pirak*. Paris: Diffusion de Boccard, 1979.
- Costin L. C. and R. P. Wright. "Craft and Social Identity." *American Anthropological Association*, Archaeology Division Monograph 8, (1998).
- Dales F. G. "Harappan Outposts on the Makran Coast." *Antiquity* 36, (1962): 86-92.
- _____. "Mesopotamia and Related Female Figurines: Their Chronology, Diffusion And Cultural Functions." Ph.D. Thesis, Department of Oriental Studies. Philadelphia: University of Pennsylvania, 1960.
- _____. "The Balakot Project: Summary of Four Years Excavations in Pakistan." In *SAA 1977*, Edited by M. Taddei. (Naples) (1979): 241-274.
- Dales G. and J. M. Kenoyer. "Excavations at Harappa 1991." *Pakistan Archaeology* 27, (1992): 31-88.
- Dani H. A. "The Indus Civilization and its Inter-Relation with Oman in Maritime Perspective." *Journal of Central Asia*, Quaid-i-Azam University, Islamabad, Vol. 15, No 2 (Dec., 1992): 27.
- _____. *Recent Archaeological Discoveries in Pakistan*. UNESCO, Plate No. 9 (1998).
- Darwin Charles, *The Origin of Species: A Facsimile of the First Edition*. Harvard University Press, 1964.

- Davis W. *The Canonical tradition in Ancient Egyptian Art*. New York: Cambridge University Press, 1989.
- Dennella W. R., M. Martín-Torres and J.M. Bermúdez de Castro. "Out of Asia: The Initial Colonization of Europe in the Early and Middle Pleistocene." *Quaternary International*, No. 10 (2009): 1016.
- Deshayes J. ed. "Shifting Trade Patterns between the Iranian Plateau and the Indus Valley in the Third millennium BC." *Le Plateau Iranien et l'Asie Centrale Des Origines à la Conquête Islamique* (Paris, 1977): 67-78.
- Durant Will. *The Story of Civilization- Part I- Our Oriental Heritage*. New York: Simon and Schuster, 1954.
- Durkheim Emile. *De la division du Travail Social*. Paris: Les Presses universitaires de France, 1893.
- Eduardo Moreno. "The Society of Our 'Out of Africa' ancestors (I) The migrant Warriors that colonized the world," *Communicative & Integrative Biology*, Vol. 4, Issue No. 2 (Mar/Apr, 2011): 1-9.
- Ehrich W. Robert., ed. *Relative Chronologies in Old World Archaeology*. Chicago: University Press Chicago, 1954.
- Fagan M. Brain., ed. *The Seventy Great Mysteries of the Ancient World-Unlocking The Secrets of Past Civilizations*. London: Thames and Hudson, 2001.
- Fairservis A. W. "Excavations in the Quetta Valley, West Pakistan." *Anthropological Papers of the American Museum of Natural History*, 45 (2) (1956): 167-402.
- _____. "The Origin, Character, and Decline of an Early Civilization." In *American Museum Novitates* 2302. New York: American Museum of Natural History, 1967.
- Fernandez-Armesto Felipe. *Civilizations*. London: Macmillan, 2000.
- Fisher Pat Mary. *An Encyclopedia of The World's Faiths-Living Religions*. London: I. B. Tauris Publishers, 1997.

- Flam L. "Excavations at Ghazi Shah, Sindh, Pakistan." In *Harappan Civilization: A Recent Perspective*, 2nd edition. Edited by G. Possehl. Oxford: Oxford and IBH and American Institute of Indian Studies, 1993.
- _____. "Fluvial Geomorphology of the Lower Indus Basin (Sindh, Pakistan) and the Indus Civilization." In *Himalayas to the Sea: Geology, Geomorphology and The Quaternary*. Edited by J. F. Schroder, Jr. New York: Routledge, 1993.
- _____. "The Other Side of the Mountains: Explorations in the Kirthar Mountains Region of Western Sindh, Pakistan." In *Arabia and Its Neighbors*. Vol. 2, Edited by C. S. Phillips, D. T. Potts and S. Searight. Brussels: ABIEL, 1998.
- _____. *The Paleogeography and Prehistoric Settlement Pattern in Sind, Pakistan (4000- 2000 BC)*. PhD. Diss., Philadelphia: University of Pennsylvania, 1981.
- Forward Martin. *Religion-A Beginner's Guide*. United Kingdom: OneWorld Publications, 2001.
- Franke-Vogt U. "Balakot Period I: A Review of Its Stratigraphy, Cultural Sequence and Date." In *South Asian Archaeology 2001*. Vol. 1 Edited by C. Jarrige and V. Lefevre. Editions Recherche sur Les Civilizations (Paris: 2005): 95-103.
- Frederick J. Simoons and Elizabeth J. Simoons, *A Ceremonial Ox, The Mithan in Nature, Culture and History*. Madison WI: 1968.
- Frenez D. and M. Tosi. "The Lothal Sealings: Records from an Indus Civilization Port Town at the Eastern End of the Maritime trade Network across the Arabian Sea." *Studi in onore di Enrica Fiandra, Contributi di Archeologia Egea e Vicinorientale*, Edited by Massimo Perna. Paris: diffusion de Boccard, 2005.
- Fuller Q. D. "Indus and Non-Indus Agricultural Traditions: Local Developments and Crop Adoptions on the Indian Peninsula." In *Indus Ethnobiology*, Edited by S. Weber and W. R. Belcher. Lanham: Lexington Books, 2003.
- Futuyma J. Douglas *Science on Trail*. New York: Pantheon Books, 1983.
- Gaillard Claire. A. "Dambricourt-Malasse." *Science Direct, 'L' anthropologie'*. Vol.

- 112 (2008): 404-422.
- Ganjoo K. R. and S. B. Ota. "Mountain environment and early human adaptation in NW Himalaya, India: A case study of Siwalik Hill Range and Leh valley." *Quaternary International* (2012): 1-7.
- Garrigan D., S. B. Kingan, M. M. Pilkington, J. A. Wilder, M. P. Cox, H. Soodyall, et al. "Inferring human population sizes, divergence times and rates of gene flow from mitochondrial, X and Y chromosome Resequencing data." *Genetics*, Vol. 177 (2007): 2195-207.
- Gibbons David, *Faiths and Religions of The World*. California: Thunder Bay Press, 2007.
- Gilbert Lewis. "Magic, Religion And The Rationality of Belief," In *Companion Encyclopedia of Anthropology*, Edited by Tim Ingold. London and New York: Routledge, 1994.
- Gordon H. D. "Pottery Industries of the Indo-Iranian Border." *Ancient India*. No. 10-11 (1954-55).
- Gould J. S. *Natural History*. Vol. 85, New York: American Museum of Natural History, 1976.
- Grant Micheal, *Ancient History*. London: First Harper TorchBook Edition, 1952.
- H. E. W. Crawford. "Mesopotamia's Invisible Exports in the Third Millennium BC." *World Archaeology* 6, (1973): 242-271.
- H. -P. Francfort. "Preliminary Report (1983-1984): Archaeological and Environmental Researches In the Ghaggar (Saraswati) Plains." *Man and Environment* 10 (1986): 97-100.
- H. Pittman. "Glyptic Art of Period IV." In *Excavations at Tepe Yahya, Iran 1967-1975*, Edited by Potts D., Peabody Museum of Archaeology and Ethnology (2001): 231-268.

- H. Pringle. "Neolithic Agriculture: Readings the Signs of Ancient Animal Domestication." *Science*, 282 (1998): 1448.
- Habib Irfan, *A People's History of India 2 – The Indus Civilization – Including Other Copper Age Cultures and history of Language Change till c. 1500 BC*. New Delhi: Tulika Books, 2002.
- Hackin J., et al. *Asiatic Mythology; A Detailed Description And Explanation of The Mythologies of All The Great Nations of Asia*. Translated by F. M. Atkinson. New Delhi: Asian Educational Services, 1994.
- Hagen Steve, *Buddhism; Simple and Plain*. New York: Broadway Books, 1998.
- Hallo W. W. "Bilingualism and the Beginnings of Translation." In *Texts Temples and Traditions*, Edited by M. V. Fox, V. A. Hurowitz, A. Hurvitz, M. L. Klein, B. J. Schwartz, and N. Shupak. Eisenbrauns, Winona Lake, IN. (1996): 345-357.
- Hannah V. A. James and Michael D. Petraglia. "Modern Human Origins and the Evolution of Behavior in the Later Pleistocene Record of South Asia." *Current Anthropology*, The University of Chicago Press, Vol. 46, No. S5 (Dec, 2005): S3-S27.
- Haywood John. *Atlas of World History*. Oxford: Sandcastle Books, 1997.
- Heather M. L. Miller, *Pyrotechnology and Societies in the cities of the Indus Valley*. PhD Dissertation, University of Wisconsin, Department of Anthropology. Madison. Ann Arbor: University Microfilms, 1999.
- _____. "Archaeological Approaches to Technology." *Elsevier*. Burlington, MA: Academic Press, 2007.
- Helms W. M. *Craft and The Kingly Idea: Art, Trade, and Power*. Austin: University Of Texas Press, 2003.
- Hemphill E. B. and A. F. Christensen, *The Oxus Civilization as a Link between East And West: A Non-metric Analysis of Bronze Age Bactrian Biological Affinities*. Paper presented at the South Asia Conference 1994, Madison, Wisconsin.

- Hermann Kulke and Dietmar Rothermund, *A History of India*, 4th Edition. London: Routledge Taylor and Francis, 2008.
- Ingold Tim., ed. *Companion Encyclopaedia of Anthropology*. New York: Routledge, 1994.
- Isachenko G. A. "Geographical Roots of Ancient Civilizations (on the 120th Anniversary of L. I. Mechnikov's Civilization and Great Historical Rivers), Part I." *Regional Research of Russia*, Vol. 1 No. 1 Pleiades Publishing (2011): 91-98.
- Jacobsen Thorkild. *The Treasures of Darkness*. New Haven: Yale University Press, 1976.
- Jansen M. *Mohenjo-Daro: City of Wells and Drains, Water Splendor 4500 years ago*. Bonn: Bergisch Gladbach Frontinus-Gesellschaft, 1993.
- Jarrige C., R. H. Meadow and G. Quivron. "Mehrgarh: Field Reports 1974-1985. From Neolithic Times to the Indus Civilization." *The Department of Culture and Tourism*, Government of Sindh, Karachi (1995): 1-95.
- Jarrige Catherine, "Human Figurines from the Neolithic Levels at Mehrgarh (Baluchistan, Pakistan)." In *South Asian Archaeology 2003*. Edited by U. Franke- Vogt and H-J Weisshaar Aachen: Forschungen zur Archäologie, 2005.
- _____. "The Terracotta Figurines from Mehrgarh." In *Forgotten Cities of the Indus*. Mainz: Verlag Philipp von Zabern, 1991.
- Jarrige –F. J. "Continuity and Change in the North Kachi Plain (Baluchistan, Pakistan) at the Beginning of the Second Millennium BC." In *South Asian Archaeology 1983*. Edited by J. Schotsmanas and M. Taddei (Rome, 1985): 35-68.
- Jarrige F. J., R. H. Meadow and G. Quivron. "From Neolithic Times to the Indus Civilization, Mehrgarh Field Reports 1974-1985." *The Department of Culture and Tourism*. Karachi: Government of Sindh (1995):1-95.
- Jarrige J. F. and G. Quivron. "Mehrgarh Neolithic: The Updated Sequence." In *South Asian Archaeology 2001*, Vol. 1 Prehistory. Edited by C. Jarrige and V. Lefevre. (2005): 128-141.

- Jeffrey Kluger, "Not So Extinct After All: The Primitive Homo Erectus May Have Survived Long Enough To Coexist With Modern Humans." *Time*, 23rd December, 1996.
- Jim G. Shaffer. "Cultural Developments in the Eastern Punjab." In *Studies in the Archaeology of India and Pakistan*. Edited by J. Jacobson. New Delhi: Oxford and IBH Publishing Company 1986.
- Jorgen W. D., D. Harvey, S. A. Schumm, and L. Flam. "Morphology and Dynamics of the Indus River: Implications for the Mohenjo-Daro Site." In *Himalayas to the Sea: Geology, Geomorphology and the Quaternary*. Edited by J. F. Schroder, Jr. New York: Routledge, 1993.
- Joshi P. J. and A. Parpola. *Corpus of Indus Seals and Inscriptions I. Collections in India*. Helsinki: Suomalainen Tiedeakatemia, 1987.
- Joshi P. J. and M. Bala "Manda: A Harappan Site in Jammu and Kashmir." In G. L. Possehl (ed.), *Harappan Civilization: A Contemporary Perspective*. New Delhi: Oxford and IBH Publishing Company, 1982.
- K. Chakrabarti K. Dilip. *The Oxford Companion to Indian Archaeology: The Archaeological Foundations of Ancient India Stone Age to AD 13th Century*. New Delhi: Oxford University Press, 2006.
- Kamyar Abdi. "The Early Development of Pastoralism in the Central Zagros Mountains." *Journal of World History* 17 (4) (2003): 395-443.
- Katkar Narendra, "The Last Glacier Maximum: The Third Migration", *Comptes Rendus Palevol*, 10 (2011): 665-78.
- Kayser M. "The human genetic history of Oceania: near and remote views of dispersal." *Current Biology*, Vol. 20 (2010): 194-201.
- Keene Michael. *World Religions*. Oxford: Lion Publishing, 2002.
- Kennedy K. "Have Aryans been identified in the prehistoric skeletal record from South Asia?" In: G. Erdosy, ed., *The Indo-Aryans of Ancient South Asia*. Berlin &

New York: Walter de Gruyter, 1995.

_____. *God-Apes and Fossil Men: Paleoanthropology of South Asia*. Ann Arbor, Michigan: University of Michigan Press, 2000.

Kenoyer M. J. *Ancient Cities of The Indus Valley Civilization*. Karachi: Oxford University Press, 1998.

_____. *Deciphering the Indus Script*. Cambridge: Cambridge University Press, 1998.

_____. "Early City-States in South Asia." In *The Archaeology of City-states: Cross-Cultural Approaches*, Edited by D. L. Nichols and T. H. Charlton. Washington DC: Smithsonian Institution, 1997.

_____. "Lithic Studies. In *Harappa Civilization: A Recent Perspective*." 2nd edition, ed. by Gregory L. Possehl. New Delhi: Oxford & IHH and the American Institute of Indian Studies, 1993.

_____. "Urban Process in the Indus Tradition: A Preliminary Model from Harappa." In *Harappa Excavations 1986-1990*, Edited by R. H. Meadow. Madison: Prehistory Press 1991.

_____. "Harappan Craft Specialization and the Question of Urban Segregation and Stratification." *Eastern Anthropologist*, Indus Civilization Special Number 45 (1-2) (1992): 39-54.

_____. "The Indus Valley Tradition of Pakistan and Western India." *Journal of World Prehistory* 5 (4) (1991):331-385.

_____. ed. "From Sumer to Meluhha: Contributions to the Archaeology of South and West Asia in Memory of George F. Dales, Jr." *Wisconsin Archaeological Reports*, Vol. 3, No 14, U.S.A: Individual Authors, (1994): 179.

Kenoyer M. J. and R. H. Meadow. *The Ravi Phase: A New Cultural Manifestation at Harappa, Pakistan*. In *South Asian Archaeology 1997*, Edited by M. Taddei And G. De Marco. Istituto Italiano per l' Africa e l'Oriente and Istituto Universitario Orientale (Rome, 2000): 64.

Kenoyer M. J. and Richard H. Meadow. "New Inscribed Objects from Harappa."

Lahore Museum Bulletin (Oct. 10, 1995): 9.

Kenoyer M. Jonathan and H. M. L. Miller. "Metal Technologies of the Indus Valley Tradition in Pakistan and Western India." In *The Archaeometallurgy of the Asian Old World*, Edited by V. C. Pigott. Philadelphia: University Museum Pennsylvania, 1999.

Kenoyer M. Jonathan, M. Vidale and K. K. Bhan. "Carnelian Bead Production in Khambhat, India: An Ethnoarchaeological Study." In *Living Traditions. Studies in the Ethnoarchaeology of South Asia*, edited by B. Allchin. Oxford: Oxford Books, 1994.

_____. "Contemporary Stone Bead Making in Khambhat, India: Patterns of Craft Specialization and Organization of Production as Reflected in the Archaeological Record." *World Archaeology* 23 (1) (1991): 44-63.

Kesol J. A. *Physical Anthropology*, 1st ed. (New York, 1970): 221.

Khan A. F. *The Indus Valley and Early Iran*. Department of Archaeology and Museums, Ministry of Education. Karachi: Government of Pakistan, 1964.

Khazanov M. A. *Nomads and the Outside World*. Cambridge Studies in Social Anthropology. Cambridge: Cambridge University Press, 1984.

Kohl L. P. "The Balance of Trade in South Western Asia in the Mid-Third Millennium BC." *Current Anthropology* 19 (3) (1978): 463-492.

_____. *The Making of Bronze Age Eurasia*. Cambridge: Cambridge University Press, 2007.

Kosambi D. D. *The Culture and Civilization of Ancient India in Historical Outline*. London: Routledge and Kegan Paul, 1965.

Krinitzsky L. Ellis. "Earthquakes and soil liquefaction in flood stories of the ancient Near East," *Engineering Geology* 76, (2005): 295-311.

Kulke Hermann and Dietmar Rothermund. *A History of India*, 4th Edition. London and New York: Routledge Taylor and Francis Group, 2008.

- Lamberg-Karlovsky C. C., Edited. *Introduction: In Archaeological Thought in America*. Cambridge University Press, 1989.
- Lewontin Richard. *The Demon-Haunted World*. The New York Review of Books (9th January, 1997): 28.
- Lynch Kevin, *A Theory of a Good City*. Cambridge: MIT Press, 1981.
- M. D. Leakey. *Olduvai Gorge*, Vol. 3 (Cambridge: Cambridge University Press, 1971): 272.
- Mackay H. J. Ernest, *Chanhudaro Excavations, 1935-1936*. New Haven: American Oriental Society, 1943.
- _____. *Further Excavations at Mohenjo-Daro*, I text, II plates. New Delhi: Government of India, 1938.
- _____. *Further Excavations at Mohenjo-Daro*. New Delhi: Government of India Press, 1938.
- Mahadevan I. "Terminal Ideograms in the Indus Script." In *Harappan Civilization*, Edited by G. L. Possehl. New Delhi: Oxford and IBH Publishing, 1982.
- Majumder P. P. "The human genetic history of South Asia." *Current Biology*, Vol. 20 (2010): 184-7.
- Malassee Dambricourt Anne and Claire Gaillard. "Relations between climatic changes and prehistoric human migrations during Holocene between Gissar Range, Pamir, Hindu Kush and Kashmir: The archaeological and ecological data." *Quaternary International*, Vol. 229 (2011): 123-131.
- Manica A., W. Amos, F. Balloux and T. Hanihara. "The effects of ancient population bottlenecks on human phenotypic variation." *Nature*, 448 (2007): 346-348.
- Marshall John. *Mohenjo-Daro and The Indus Civilization*. London: Arthur Probsthain, 1931.
- Marwick Arthur. *The Nature of History*. London: Palgrave Macmillan, 1970.

- Matthews Warren, *World Religions*, Third edition. Toronto: Wadsworth Publishing Company, 1999.
- McMichael J. Anthony. "Population, environment, disease, and survival: past patterns, uncertain futures." *The Lancet*, Vol. 359 (March, 2002): 1145-1148.
- Meadow H. R. "Animal Domestication in the Middle East: A Revised View from the Eastern Margin." In *Harappan Civilization*, 2nd ed., Edited by G. L. Possehl. New Delhi: Oxford and IBH, 1993.
- Meadow H. R. "Pre- and Proto-Historic Agricultural and Pastoral Transformations in Northwestern and South Asia." *The Review of Archaeology* 19 (1998): 12-21.
- Meadow H. R. and A. Patel. "Prehistoric Pastoralism in Northwestern South Asia from the Neolithic through the Harappan Period." In *Indus Ethnobiology*, Edited by S. Weber and W. R. Belcher. Lanham: Lexington Books, 2003.
- Meadow H. R. and J. M. Kenoyer. "The "Tiny" Steatite Seals (Incised Steatite Tablets) of Harappa: Some Observation on Their Context and Dating." In *South Asian Archaeology 1971*, Edited by M. Taddei and G. De Marco. Rome: Istituto Italiano per L'Africa E' L'Oriente, 2000.
- Meadow H. Richard and Jonathan Mark Kenoyer. "Excavations at Harappa 1994-1995: New Perspectives on the Indus Script, craft activities, and city organization." *South Asian Archaeology 1995*, edited by B. Allchin. New Delhi: Oxford & IBH Publishing Company, Pvt. Ltd., 1995.
- Meadow H. Richard. "Pre- and Proto-Historic Agricultural and Pastoral Transformations in Northwestern and South Asia." *The Review of Archaeology* 19 (2) (1998): 12-21.
- _____. "Prehistoric Wild Sheep and Sheep Domestication on the Eastern Margin of the Middle East." In *Animal Domestication and its Cultural Context*. Edited by P. J. Crabtree, D. V. Campana and K. Ryan. Philadelphia: University Museum, University of Pennsylvania, 1989.
- _____. "The Origins and Spread of Agriculture and Pastoralism in Northwestern

- South Asia.” In *The Origins and Spread of Agriculture and Pastoralism in Eurasia*, edited by D. R. Harris. Washington D.C: Smithsonian Institution Press, 1996.
- Mellars P. “Why did modern human populations disperse from Africa ca. 60,000 years ago? A New Model.” *Proc Natl Acad Science*, Vol. 103 (USA, 2006): 9381-6.
- Mery S. “Les Ceramiques d’ Oman et l’ Asie Moyenne: Une archeologie des exchanges a l’ Age du Bronze.” *CRA Monographies 23*, CNRS Editions, (Paris: 2000).
- Miller - L M. Heather. “Pottery Firing Structures (kilns) of the Indus Civilization during the Third Millennium BC.” In *Prehistory and History of Ceramic Kilns*. Edited by P. M. Rice and D. W. Kingery, *Ceramics and Civilization*, Vol. VII. Columbus, OH: American Ceramic Society, 1997.
- Miller J. Laura. “Secondary Products and Urbanism in South Asia: The Evidence for Traction at Harappa.” In *Indus Ethnobiology*, edited by S. Weber and W. R. Belcher. (2003): 251-326.
- Misra N. V. “Human Adaptations to the Changing Landscape of the Indian Arid Zone During the Quaternary Period,” in, J. M. Kenoyer, ed., *Old Problems and New Perspectives in the Archaeology of South Asia*. Madison: 1989.
- Mittre –Vishnu and R. Savithri. “Food Economy of the Harappans.” In G. L. Possehl ed. *Harappan Civilization: A Contemporary Perspective*. New Delhi: Oxford and IBH Publishing Company, 1982.
- Monastersky Richard, “The Whole Earth Syndrome.” *Science News*, Vol. 133, No. 24 (Jun, 11, 1988): 378-80.
- Moore M. Eldridge and Rhodes W. Fairbridge, *Encyclopaedia of European and Asian Regional Geology*. London: Chapman and Hall, 1997.
- Moreno Eduardo, “The society of our ‘out of Africa’ ancestors (I) The migrant Warriors that colonized the world.” *Communicative & Integrative Biology*, Vol. 4, Issue No. 2 (Mar/Apr, 2011): 1-9
- Mughal M. R. “Excavations at Jalilpur.” *Pakistan Archaeology 8* (1972): 117-124.

- _____. "Jhukar and the Late Harappan Cultural Mosaic of the Greater Indus Valley." In *South Asian Archaeology*. Edited by C. Jarrige. Madison: Prehistory Press, 1992.
- _____. "New Archaeological Evidence from Bahawalpur." In *Indus Civilization: A New Perspective*, edited by A. H. Dani., Islamabad: Centre for the Study of the Civilizations of Central Asia, Quaid-e-Azam University, 1981.
- _____. "Recent Archaeological Research in the Cholistan Desert." In *Harappan Civilization: A Contemporary Perspective*, Edited by G. L. Possehl. New Delhi: Oxford and IBH and the American Institute of Indian Studies, 1982.
- _____. "Resurrecting Sir Aurel Stein from the Cholistan Desert." *Context 15* (2001): 1-4.
- _____. "The Consequences of River Changes for the Harappan Settlements in Cholistan." *The Eastern Anthropologist*, No. 45 (1992): 105-116.
- _____. "The Harappan "Twin Capitals" And Reality." *Journal of Central Asia*, Vol. 13, No. 1 (July, 1990): 157-158.
- _____. *Ancient Cholistan: Archaeology and Architecture*. Lahore: Ferozsons (Pvt.) Ltd., 1997.
- _____. *Archaeological Exploration in Cholistan*. Islamabad: Lok Virsa and Department of Archaeology and Museums, Islamabad, 1989.
- _____. "The Indus Valley: 3000-1500 BC." Edited by A. H. Dani and J. -P. Morgan. In *History of the Scientific and Cultural Development of Mankind*, Vol. II Paris and London: UNESCO and Routledge, 1996.
- O'Rourke H. D. and J.A. Raff. "The human genetic history of the Americas: the final frontier." *Current Biology*, Vol. 20 (2010): 202-7.
- Oxnard E. Charles. "The Place of Australopithecines in Human Evolution: Grounds of Doubt." *Nature* Vol. 258 (New York, 1970): 389.

- Paapola Asko and R. H. Brunswig. "The Meluhha Village: Evidence of Acculturation of Harappan Traders in Late Third Millennium Mesopotamia?" *JESHO* 20 (2) (1977): 129-165.
- Papanek L. John. *Ancient India: Land of Mystery*. Alexandria, Virginia: Time-Life Books, 1994.
- Parpola Asko. *Deciphering the Indus Script*. Cambridge: Cambridge University Press, 1994.
- _____. "Deciphering the Indus Script: Basic Methodology and Some Sample Interpretations." *Indian Archaeological Society* (Tokyo, 2000): 1-16.
- Patel A. "The Pastoral Economy of Dholavira: A First Look at Animals and Urban Life in Third Millennium Kutch." In *South Asian Archaeology 1995*, Vol. 1. Edited by R. Allchin and B. Forager-Traders in South and Southeast Asia Allchin. Cambridge: The Ancient India and Iran Trust, 1997.
- Pollock S. *Ancient Mesopotamia*. Cambridge: Cambridge University Press, 1999.
- Possehl G. "Harappans and Hunters: Economic Interaction and Specialization in Prehistoric India." In, edited by K. D. Morrison and L. L. Junker, (Cambridge: Cambridge University Press, 2002) 62-76.
- _____. "Meluhha." In *The Indian Ocean in Antiquity*, edited by Julain Reade. London: Kegan Paul International Association with the British Museum, 1996.
- _____. "Revolution in the Urban Revolution: The Emergence of Indus Urbanization." *Annual Review of Anthropology*, 19 (1990): 261-282.
- _____. *Indus Civilization in Saurashtra*. New Delhi: B. R. Publishing Corporation, 1980.
- _____. Seafaring Merchants of Meluhha. *South Asian Archaeology 1995*, edited by R. and B. Allchin. New Delhi: Oxford and IBH, 1997.
- _____. *The Indus Civilization: A Contemporary Perspective*. New York: Alta Mira Press, 2003.

- _____. Harappans and Hunters: Economic Interaction and Specialization in Prehistoric India. In *Forager-Traders in South and Southeast Asia*, edited by K. D. Morrison and L. L. Junker. Cambridge: Cambridge University Press, 2002.
- Possehl L. G., (ed.) "Recent Archaeological Research in Cholistan Desert." In *Harappan Civilization: A Contemporary Perspective*. New Delhi: Oxford and IBH Publishing Company, 1982.
- _____. *Variation and Change in the Indus Civilization: A Study of Prehistoric Gujarat with Special Reference to the Post Urban Harappan*. Chicago: University of Chicago, 1974.
- Potts T. Daniel, ed., *Dilmun- New studies in the archaeology and Early History of Bahrain*. Berlin: Dietrich Reimer Verlag, 1983.
- Potts Timothy. "Maritime Contacts of Indus Civilization with the West." *Journal of Asian Civilizations*, Quaid-i-Azam University, Islamabad, Vol. 27, No. 1, (July, 2004): 1-13.
- Poyck G. P. A. "Farm Studies in Iraq, Medelingen van de Landbouwhoghe-school, Te Wageningen." *Nederland* 62 (1) (1962): 1-99.
- Price Douglas T. and Gary M. Feinman. *Images of The Past*. 2nd ed. California: Mayfield Publishing Company, 1993.
- Quintana-Murci L., O. Semino, H. J. Bandelt, G. Passarino, K. McElreavey and A. S. Santachiara-Benerecetti. "Genetic evidence of an early exit of Homo sapiens from Africa through Eastern Africa." *Nat Genet*, Vol. 23 (1999): 437-41.
- R. S. Bisht. "The Water Structures and Engineering of the Harappans at Dholavira (India)." In *South Asian Archaeology 2001*. Vol. 1. Edited by C. Jarrige and V. Lefevre. Paris: CNRS, 2005.
- Rao R. S. "Lothal: A Harrapan Port Town, 1955-62." *Memoirs of the Archaeological Survey of India I* (78) (New Delhi: Archaeological Survey of India, 1979).
- _____. "Shipping and Maritime Trade of the Indus People." *Expedition*, Vol. VII (3) (Philadelphia, 1965): 30-37.

- Rasool N. "Archaeological Sites and Monuments in Punjab." *Pakistan Archaeology*. Special Issue No. 2. Karachi: Department of Archaeology, 1994-1996.
- Ratnagar Shereen. *Encounters The Westerly Trade of the Harappan Civilization*. New Delhi: Oxford University Press, 1981.
- Renfrew C. "Archaeogenetics—towards a 'new synthesis'?" *Current Biology*, Vol. 20 (2010): 162-165.
- Rissman C. Paul. "The Organization of Seal Production in the Harappan Civilization." In *Old Problems and New Perspectives in the Archaeology of South Asia*, edited by J. M. Kenoyer No 2 Madison: Wisconsin Archaeological Reports 1989.
- Ross J. E. "A Chalcolithic Site in Northern Baluchistan." *Journal of the Near Eastern Studies* 5.
- Rowland Benjamin, *The Arts and Architecture of India: Buddhist-Hindu-Jain*. London: Hammondsworth, 1967.
- Rudolf Otto. *The Idea of the Holy-An Inquiry into the Non-Rational in the Idea of the Divine and its relation to the Rational*, translated by John. W. Harvey. London: Oxford University Press, 1923.
- Santoni M. "Potters and Pottery at Mehrgarh during the Third Millennium BC (Periods IV and VII)." In *South Asian Archaeology 1985*. Edited by K. Frifelt and P. Sorensen Vol. II London: Curzon Press, 1989.
- _____. "Sibri and the South Cemetery of Mehrgarh: Third Millennium Connections between the Northern Kachhi plain (Pakistan) and Central Asia." In *SAA*. Edited by B. Allchin. Cambridge, 1984.
- Schuldenrein J., R. P. Wright, M. A. Khan and M. R. Mughal, "Geoarchaeological Explorations on the Upper Beas Drainage: Landscape and Settlement in the Upper Indus Valley, Punjab, Pakistan." *Journal of Archaeological Sciences*, 31 (2004): 777-792.

- Schultz A. Emily and Robert H. Lavenda, *Anthropology- A Perspective on the Human Condition*. Belmont, California: Wadsworth, 1998.
- Sellier Pascal. "Mehrgroh: Funerary Rites and the Archaeology of Death" *Forgotten Cities on the Indus: Early Civilization in Pakistan from 8th to the 2nd Millennium BC.*, ed., M. Jasen et al., 78. Mainz: Verlag Philipp von Zabern, 1996.
- Settar S. and Ravi Korisettar, Edited. *Archaeology and Interactive Disciplines: Indian Archaeology in Retrospect*, Vol. 3, New Delhi: Manohar Publishers and Distributors, 2002.
- Shaffer G. Jim. "Indus Valley, Baluchistan and the Helmand Drainage (Afghanistan)." In *Chronologies in Old world Archaeology*, 3rd ed., edited by R. W. Ehrich. Chicago: University of Chicago Press, 1992.
- Shaikh Nilofer. "Maritime Contacts of Indus Civilization with the West." *Journal of Asian Civilizations*, Quaid-i-Azam University, Islamabad, Vol. 27, No. 1 (July, 2004): 1-13.
- Sharri R. Clark, "Representing the Indus Body: Sex, Gender, Sexuality, and the Anthropomorphic Terracotta Figurines from Harappa" *Asian Perspectives* 42 (2) (2003): 304-28.
- Shinde V., G. L. Possehl and M. Ameri. "Excavations at Gilund 2001-2003: The Seal Impressions and other Finds." In *South Asian Archaeology 2003*. Edited by U. Franke-Vogt and H-J Weisshaar, Band 1, Bonn: Forschungen zur Archäologie Ausereuropaischer Kulturen, 2005.
- Simon Cheryl. "The Great Earth Debate." *Science News*, Vol. 121, no. 11 (Mar, 1982): 178-9.
- Singh Upinder, *A History of Ancient and Early Medieval India: From The Stone Age To The 12th Century*. New Delhi: Pearson Longman, 2008.
- Sinha R., R. Kumar, S. K. Tandon and M. R. Gibling. "Late Cenozoic fluvial Successions in northern and western India: an overview and synthesis." *Quaternary Science Reviews* 26 (2007): 2801-2822.

- Smart Ted. *Visual Encyclopedia*. Ballyclare: Arcade Books, 1998.
- Smith Bradley and Wan-Go Weng. China- *A History in Art. United Kingdom: Littlehampton Book Services Ltd, 1973.*
- Stacey Aisha. "The Story of Adam (part 5 of 5): The First Man and Modern Science", *The Religion of Islam*, April 14, 2008, <http://www.islamreligion.com/articles/1198/>.
- Stamp C. Elsa. *A First Geography of Pakistan And India*. London: Orient Longmans, 1929.
- Stanyon R., M. Sazzini and D. Luiselli. "Timing the first human migration into eastern Asia." *Journal Biology*, Vol. 8 (2009): 18.
- Staubwasser Michael and Harvey Weiss. "Holocene climate and cultural Evolution in late Prehistoric-early historic West Asia." *Quaternary Research*, 66 (2006): 372-387.
- Stein Aurel. *Archaeological Reconnaissances in Northwestern India and Southeastern Iran*. London: 1937.
- Steve Farmer, Richard Sproat and Michael Witzel. "The Collapse of the Indus-Script Thesis: The Myth of a Literate Harappan Civilization." *Electronic Journal of Vedic Studies* 11-2 (2004): 19-57.
- Stone E. "City States and Their Centers: The Mesopotamian Example." In *The Archaeology of City-state: Cross-Cultural Approaches*, edited by D. L. Nichols and T. H. Charlton. Washington DC: Smithsonian Institution Press, 1997.
- Stoneking M. and F. Delfin. "The human genetic history of East Asia: weaving a complex tapestry." *Current Biology* Vol. 20 (2010): 188-193.
- Stuart Piggot. *Prehistoric India*. London: Pelican Books, 1950.
- Subbarao Bendapudi. "The Personality of India: Pre and Proto-Historic Foundation of India and Pakistan." *M. S. University Archaeology Series No. 3*, Baroda: Maharaja Sayajirao University of Baroda (1958): 87-94.
- Taşon P. and C. Chippindale. "Australia's Ancient Warriors." *Cambridge Archaeology Journal*, Vol. 4 (1994): 229-31.

- Templeton R. Alan, "A Genetic and Evolutionary Perspective," *American Anthropologist, New Series*, Vol. 100, No. 3 (Sep, 1998): 632-50.
- Tishkoff A. S., F. A. Reed, F. R. Friedlaender, C. Ehret, A. Ranciaro, A. Froment, et al. "The genetic structure and history of Africans and African Americans." *Science*, Vol. 32 (2009): 1035-44.
- Tosi Maurizia. "The Indus Civilization beyond the Indian Subcontinent." In *Forgotten Cities on the Indus*, edited by M. Jansen, M. Mulloy and G. Urban. Mainz: Verlag Philipp von Zabern, 1991.
- Trigger G. Bruce. *Understanding Early Civilizations*. Cambridge: Cambridge University Press, 2003.
- Underhill A. P. and T. Kivisild. "Use of Y Chromosome and Mitochondrial DNA Population Structure in tracing Human Migrations." *Annu Rev Genet* Vol. 41 (2007): 539-64.
- Vats Sarup Madho. *Excavations at Harappa*. New Delhi: Government of India, 1940.
- _____. *Excavations at Harappa*. Vol. 2 Pl. I. New Delhi: Government of India, 1940.
- Vidale M. "The Archaeology of Indus Crafts: Indus Craftspeople and Why We Study Them." *Italiano per l' Oriente*. Rome: IsIAO, 2000.
- _____. "The Short-horned Bull on the Indus Seals: A Symbol of the Families in the Western Trade?" In *South Asian Archaeology 2003*, edited by U. Franke-Vogt and H-J Weisshaar, Aachen: Forschungen zur Archaeologie, Band 1 (2005): 147-158.
- Vidale Massimo and Heather M. L. Miller. "The General Case Through Time." In M. Vidale, *The Archaeology of Indus Craft*, Appendix 143, IsIAO (Rome, 2000): 150.
- _____. "On The Development of Indus Technical Virtuosity and Its Relation to Social Structure", *South Asian Archaeology 1997*, edited by Maurizio Taddei and Giuseppe De Marco, Vol. 1, 130-31, Rome: Intituto Italiano Per L' Africa E, 2000.
- Vigilant L., M. Stoneking, H. Harpending, K. Hawkes and A. C. Wilson. "African populations and the evolution of human mitochondrial DNA." *Science*, Vol. 253. (1991): 1503-7.

- Vogt Franke U. "Inscribed Bangles: An Enquiry into Their Relevance." In *South Asian Archaeology 1985*. Edited by K. Frifelt and P. Sorensen. Scandinavian Institute of Asian Studies, Occasional Papers No. 4 London: Curzon Press, 1989.
- _____. "Inscribed Objects from Mohenjo-daro: Some Remarks on Stylistic Variability and Distribution Patterns." In *South Asian Archaeology 1989*, edited by C. Jarrige. Madison: Prehistory Press, 1992.
- _____. "The Archaeology of Southeastern Baluchistan." *Internet publication with 121 photographs*. <http://www.harappa.com/baluch>.
- _____. "The Glyptic Art of the Harappa Culture." In *Forgotten Cities on the Indus*, edited by M. Jansen et al. Mainz: Verlag Philipp von Zabern, 1991.
- Walker Alan. *Science*. Vol. 207 (7th March, 1980): 1103.
- Wanzke H. "Axis Systems and Orientation at Mohenjo-Daro." In *Interim Reports* Vol. 2. Reports on Field Work Carried out at Mohenjo-Daro, Pakistan 1983-1984 by the IsMEO-Aachen-University Mission, edited by M. Jansen and G. Urban. Forschungsprojekt "Mohenjo-Daro," Aachen (1984): 23-32.
- Watson Francis. *A Concise History of India*. London: Thames and Hudson 1974.
- Weber A. S. "Archaeobotany at Harappa: Indications for Change." In *Indus Ethnobiology*. Edited by S. Weber and W. R. Belcher. Lanham: Lexington Books, 2003.
- Wheeler Mortimer. "Harappa 1946: the Defenses and Cemetery R37." *Ancient India*, Vol. 3 (1947, [1994]): 58-130.
- _____. *The Indus Civilization*, 3rd ed. Supplement volume to the Cambridge History of India. Cambridge: Cambridge University Press, 1968.
- William B. *Descartes: the Project of Pure Inquiry*. Harmondsworth: Penguin, 1978.
- Wills Jim, *A Handy GK Book-A To Z of World Religions-Places, Prophets, Saints and Seers*. Mumbai: Jaico Publishing House, 2007.

Wink Andre, "From the Mediterranean to the Indian Ocean: Medieval History in Geographic Perspective", *Society for Comparative Study of Society and History*, (2002): 439.

Wright P. Rita, *The Ancient Indus: Urbanization, Economy, and Society*. New Delhi: Cambridge University Press, 2010.

_____. "Images of Women in the Art of the Indus Valley." *Female and Male from Amarna to Middle Asia*. The Charles K. Wilkinson Lecturer for Ancient Near Eastern Art Department. Metropolitan Museum of Art, 1997.

_____. "Production and Exchange of Ceramics on the Oman Peninsula from the Perspective of Hili (with M. J. Blackman and S. Mery)." *Journal of Field Archaeology*, No.1691 (1989): 61-77.

_____. "Revisiting Interaction Spheres-Social Boundaries and Technologies on Inner and Outermost Frontiers." *Iranica Antiqua*, No. XXXVII (2002): 403-417.

_____. "Technological Styles: Transforming a Natural Material into a Cultural Object." In *History from Things: Essays on Material Culture*. Edited by S. Lubar and W. D. Kingery. Washington DC: Smithsonian Institution Press, 1993.

_____. "Technology and Style in Ancient Ceramics." In *Ceramics and Civilization: Ancient Technology to Modern Science*, Vol. 1. Edited by W. D. Kingery, (Columbus, OH: American Ceramic Society, 1985.

_____. *Technology, Style and Craft Specialization: Patterns of Interaction and Exchange on the Indo-Iranian Borderlands, Third Millennium B.C.* PhD. Diss. Harvard University and University Microfilms, 1984.

Yahya Harun, *Fascism: The Bloody Ideology of Darwinism*. Turkey: Kultur, 2002.

Yavuz Erdal, "Anatolian Civilizations": In the series, edited by C. Scarre and B. M. Fagan, *Ancient Civilizations*. Pearson: 2008.

Zuckerman Solly, *Beyond The Ivory Tower*. New York: Toplinger Publications 1970.

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Phase I	7000-4800 BCE
Phase II	4800-4000 BCE
Phase III	4000-3200 BCE
Phase IV-VII	3200-2500 BCE

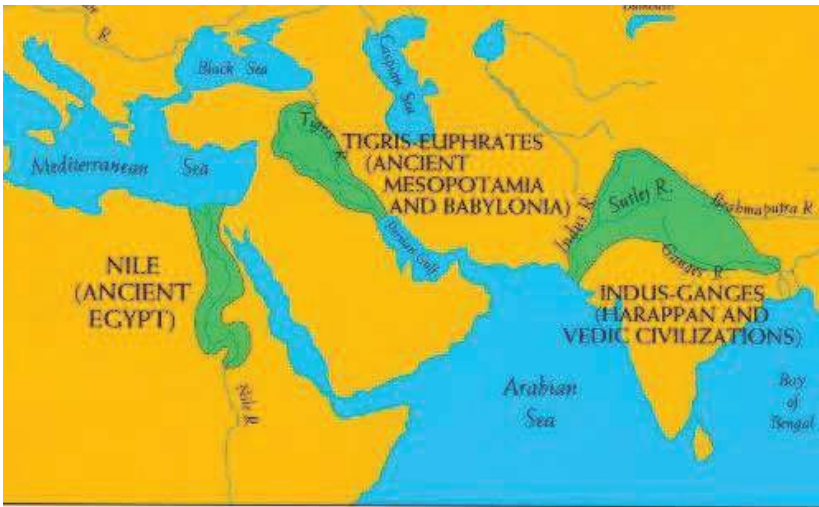
Table III.1.1 The Summary of Chronology and Occupation at Mehrgarh.
© Rita P. Wright.

Upper Indus Valley	
Ravi Phase	3300-2800 BCE
Early Harappan/Kot Diji Phase	2800-2600 BCE
Lower Indus Valley	
Amri Phase	3300-2600 BCE
Hakra Phase	3500-3000 BCE
Early Harappan/Kot Diji Phase	3200-2600 BCE
Ghaggar-Hakra in Cholistan	
Hakra Phase	3500-3000 BCE
Early Harappan/Kot Diji Phase	3000-2600 BCE
Ghaggar-Hakra in Northwest India	
Early Harappan/Kot Diji Phase	3200-2600 BCE
Sothi-Siswal Phase	3200-2600 BCE

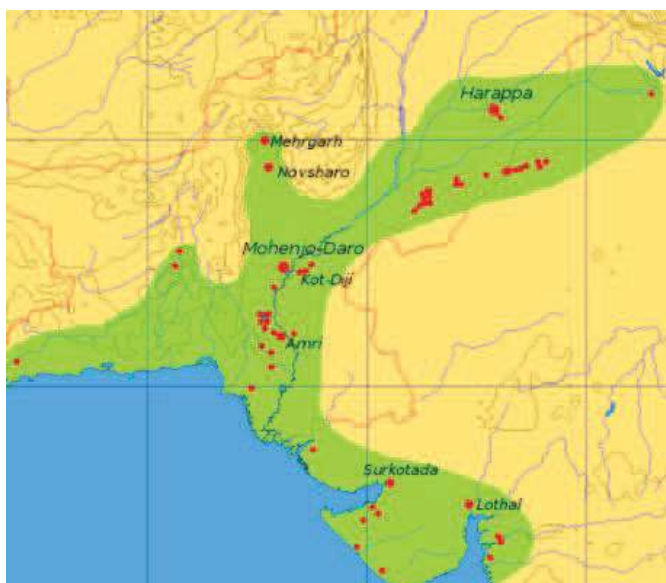
Table III.1.2 Pre-urban Ceramic Phases. © Rita P. Wright

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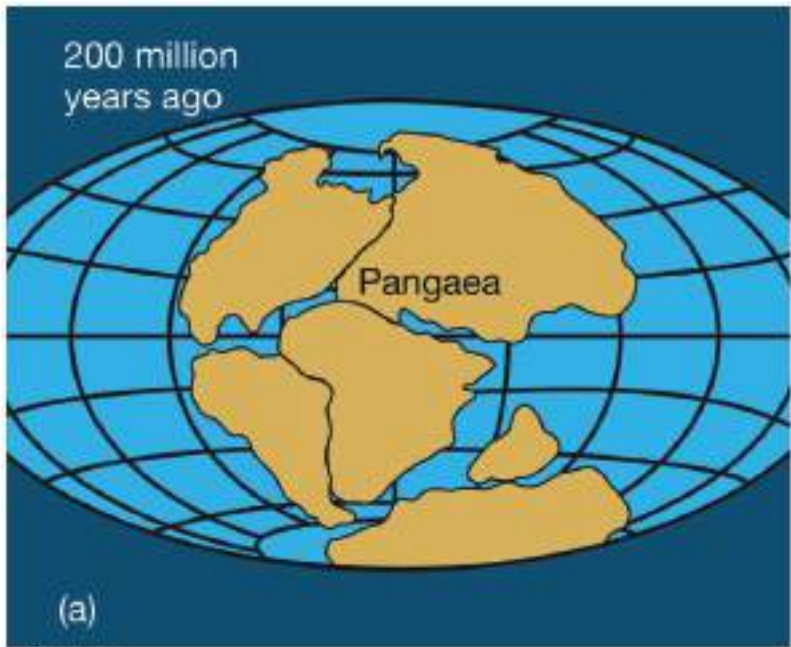
Map I.1 Ancient civilizations - Egypt, Mesopotamia and Indus Valley.
[\(http://questgarden.com/112/71/3/120120081948/\)](http://questgarden.com/112/71/3/120120081948/).



Map I.2 Detailed map of The Indus civilization, showing its expansion.
https://en.wikipedia.org/wiki/Indo-Aryan_migration_theory.



Map II.1.1 Collision of the Earth's continents Laurasia and Gondwanaland.
(<http://africa-arabia-plate.weebly.com/nubian-plate-south-east-region.html>).



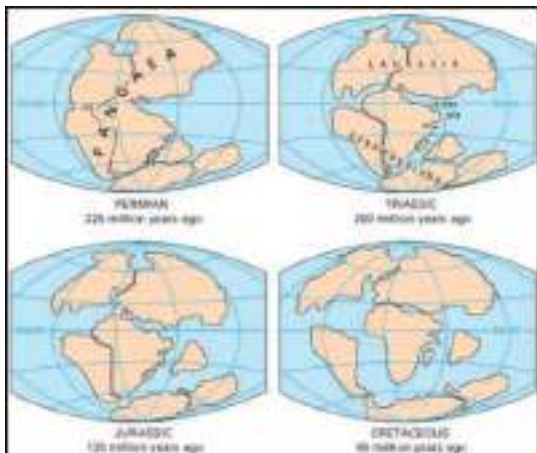
Map II.1.2 Formation of Pangaea two hundred million years ago.
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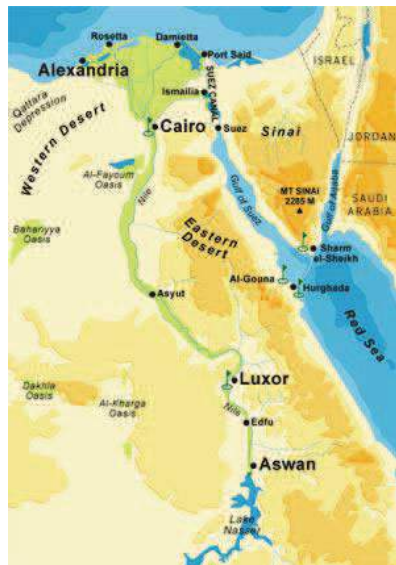
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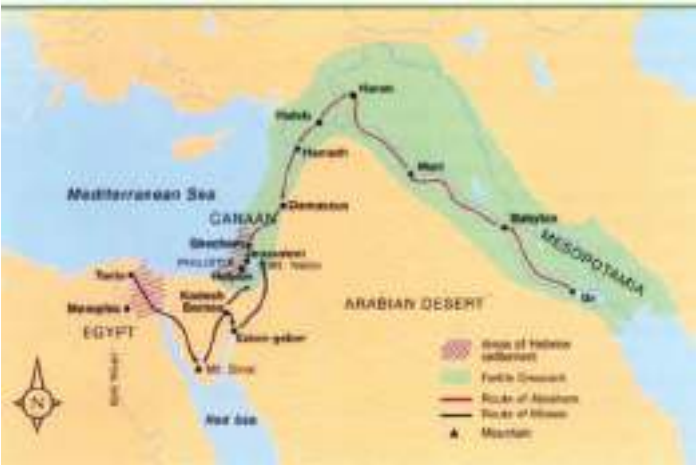
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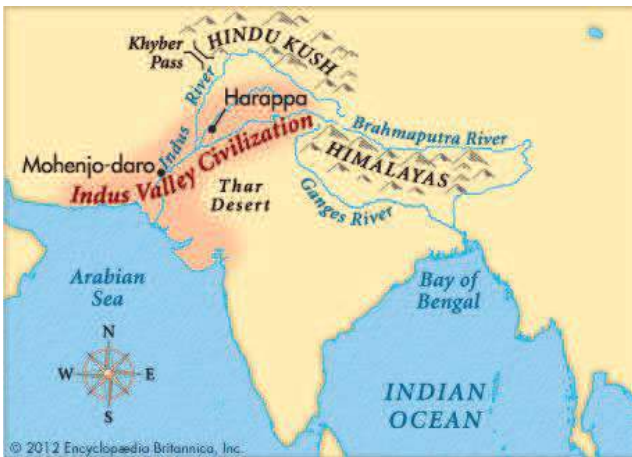
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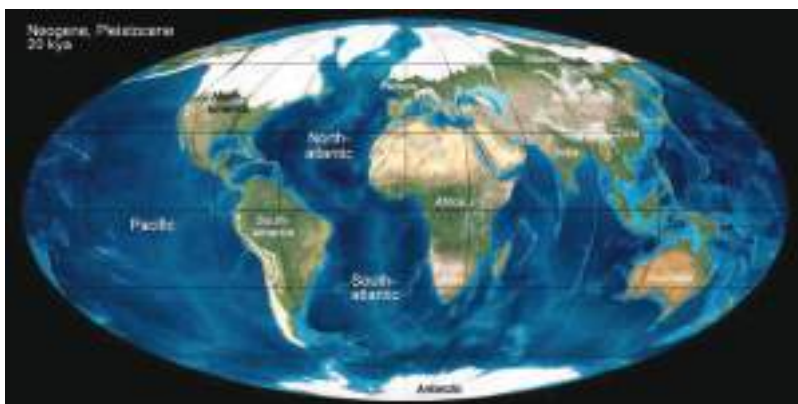
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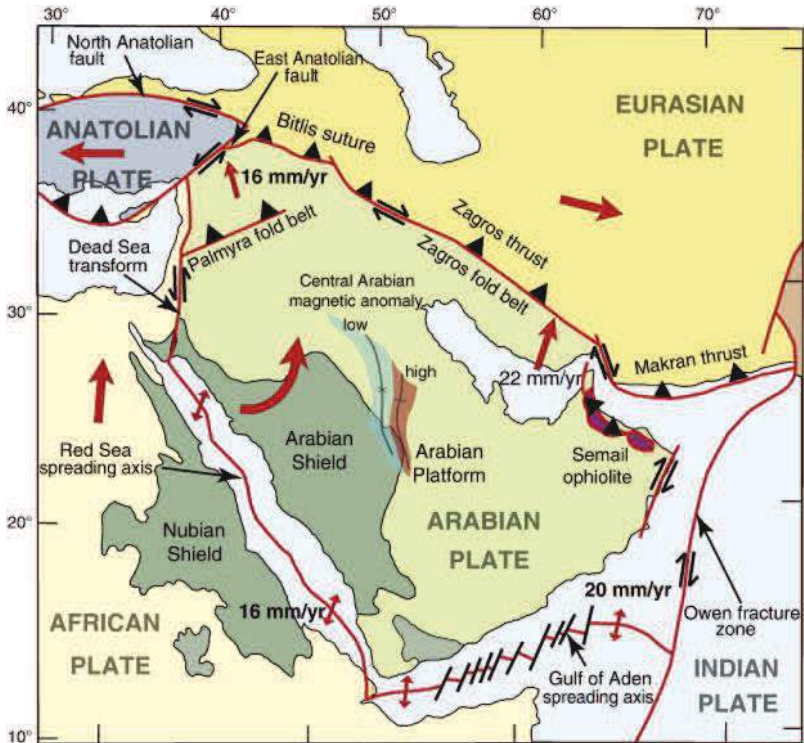
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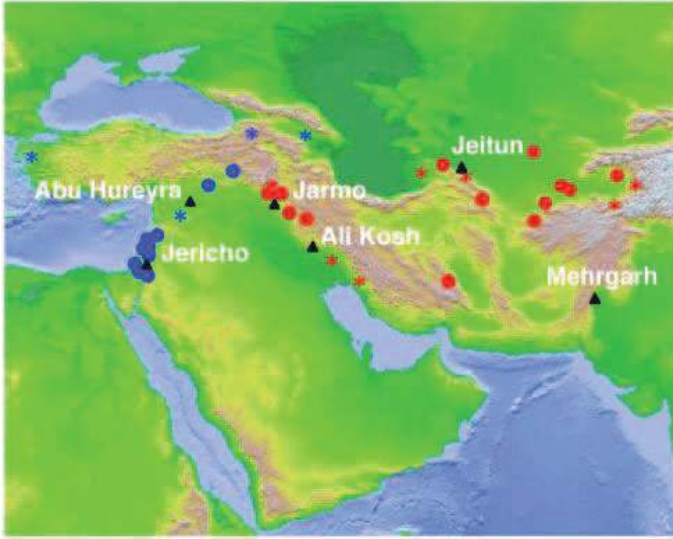
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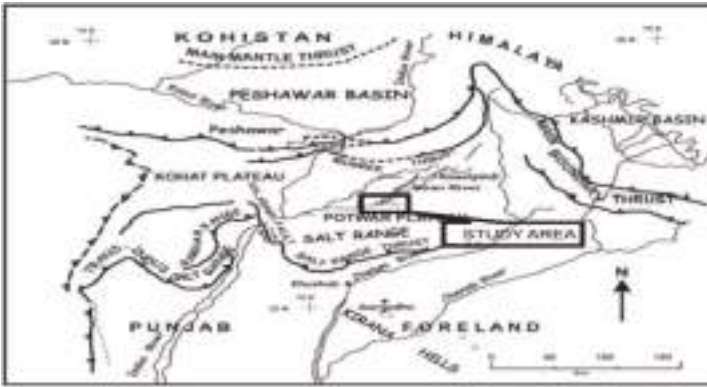
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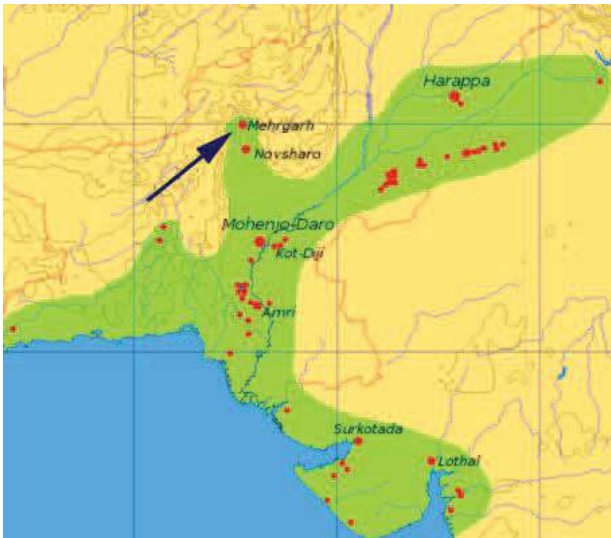
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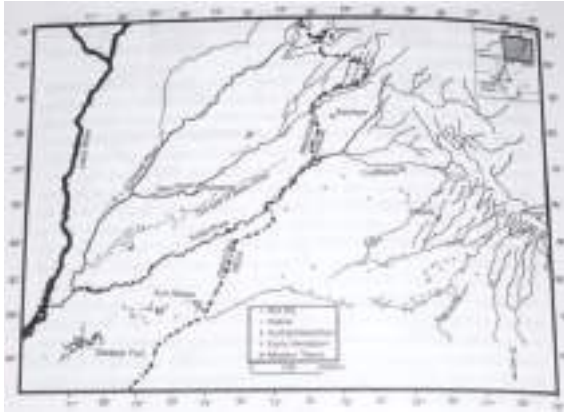
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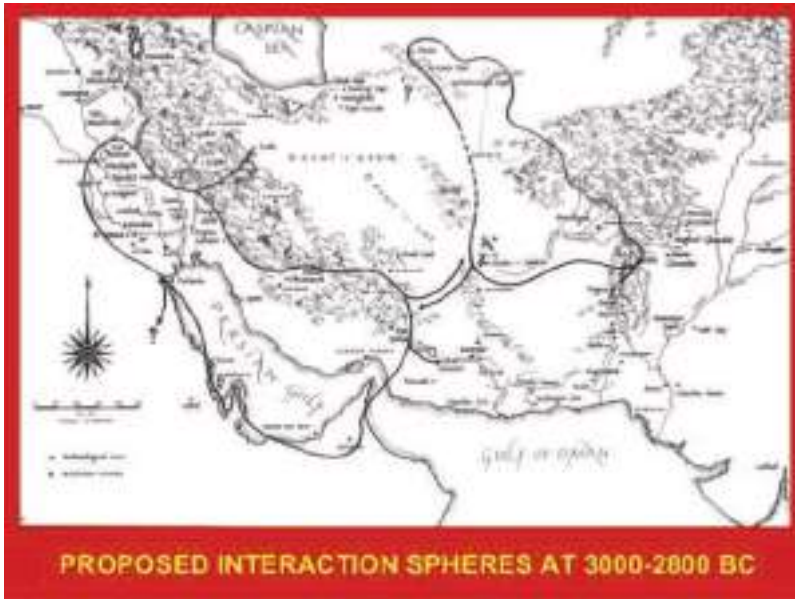
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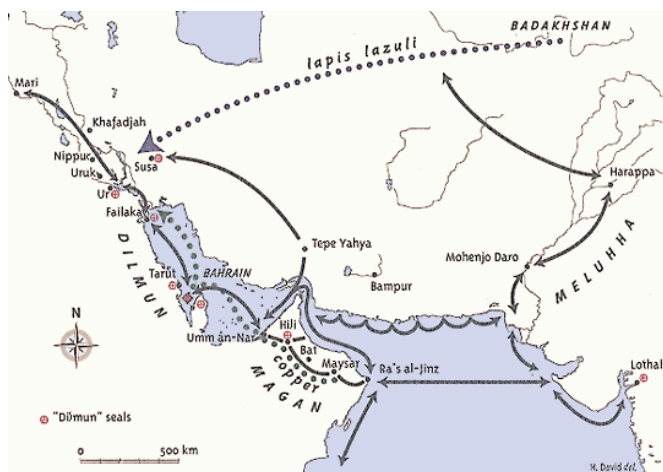
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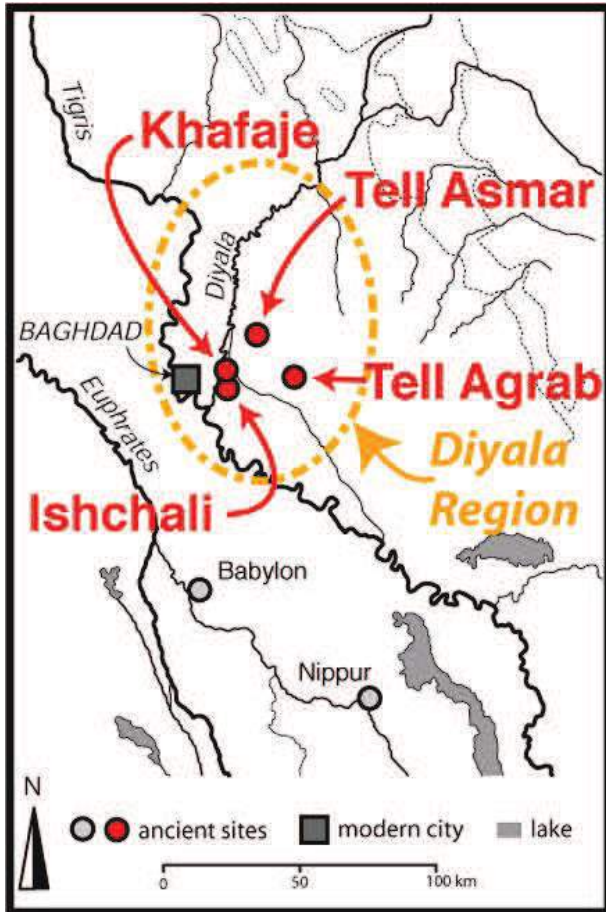
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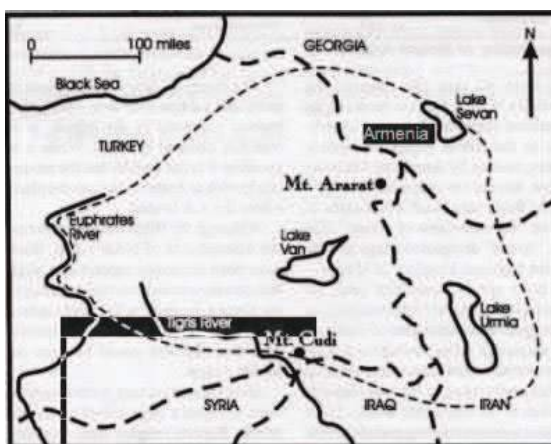
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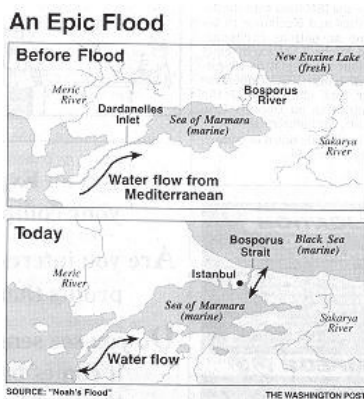


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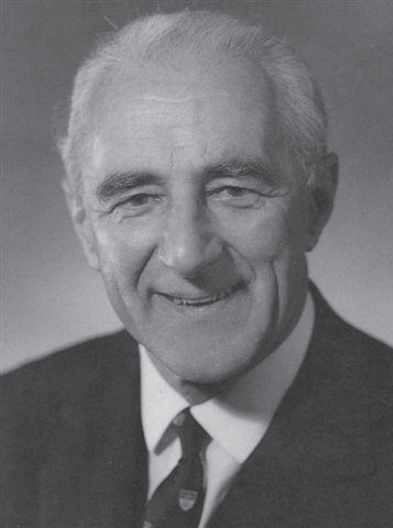


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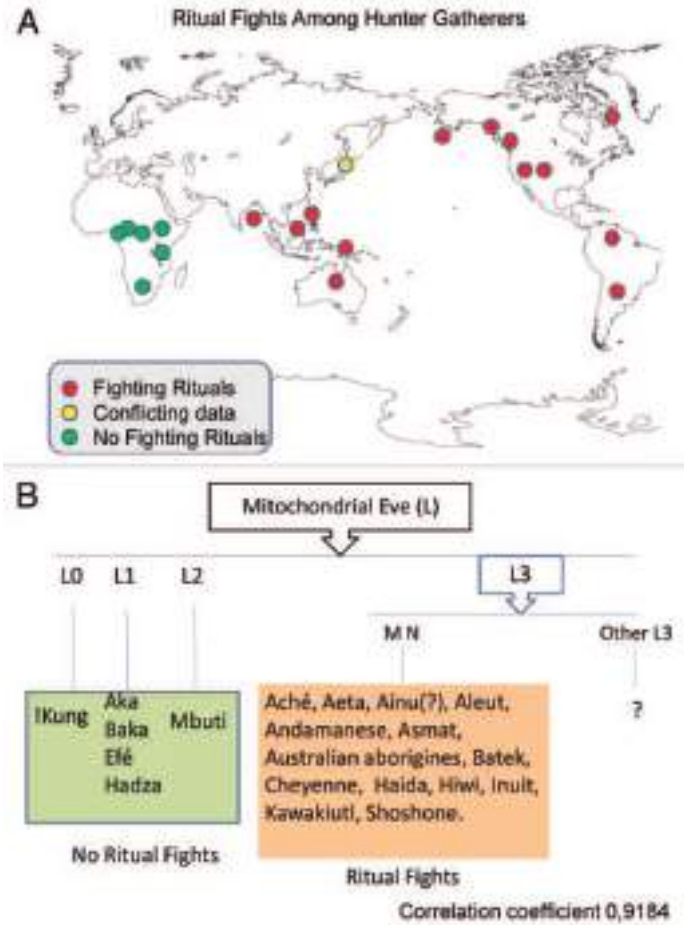


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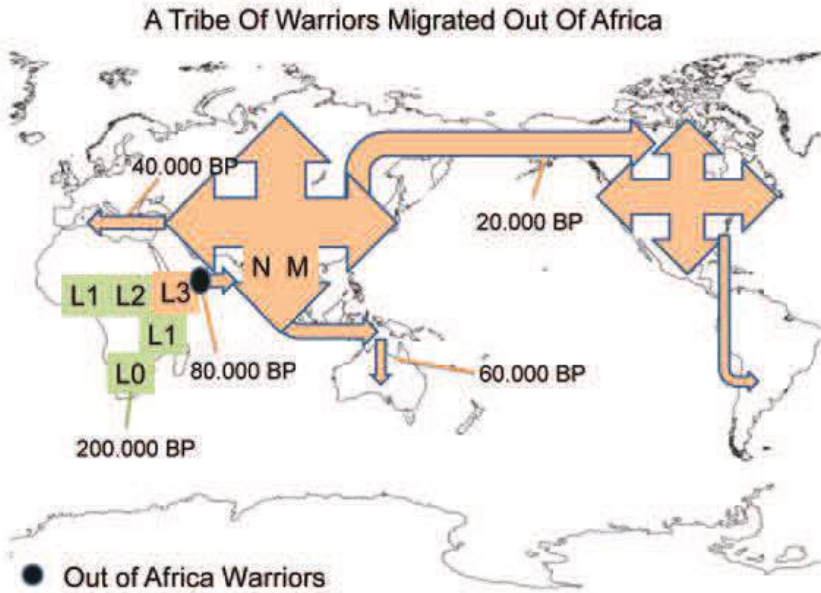


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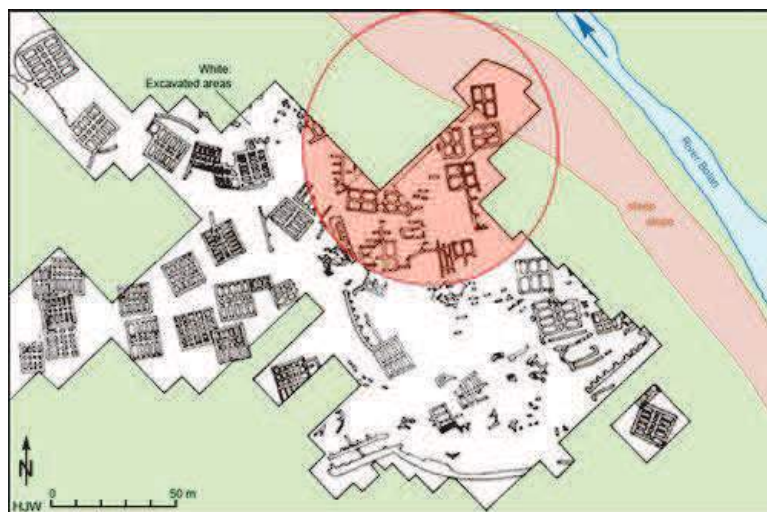


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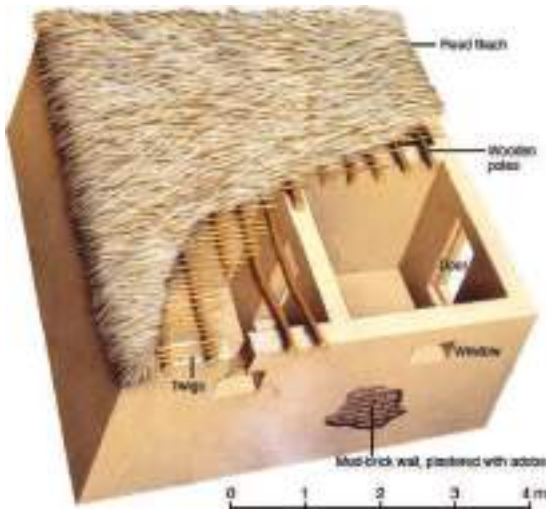


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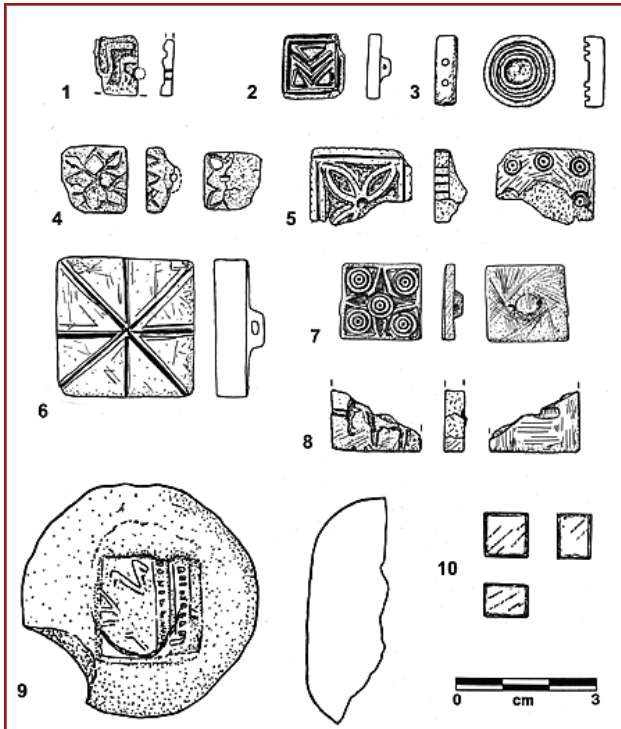


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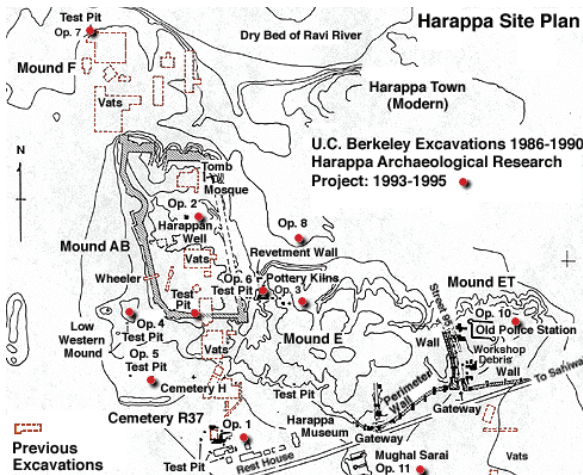


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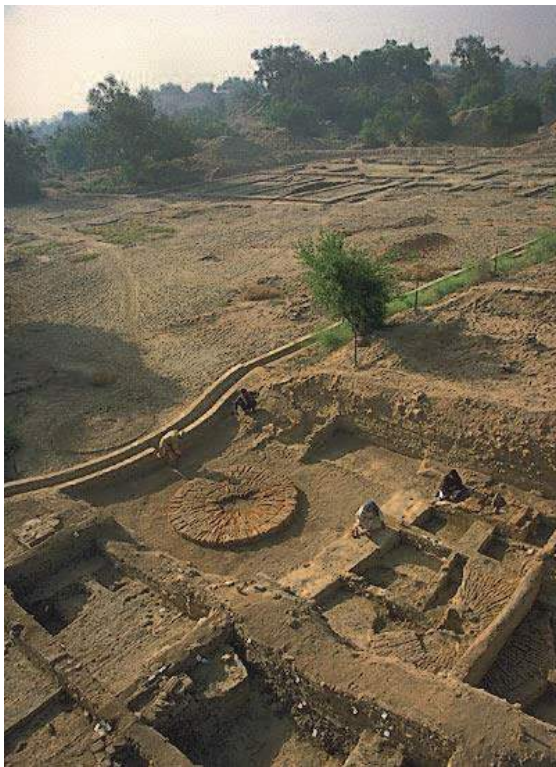


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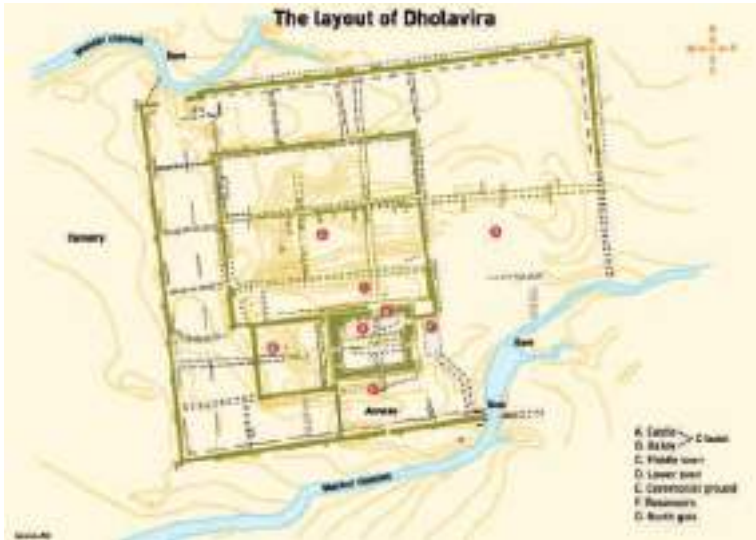


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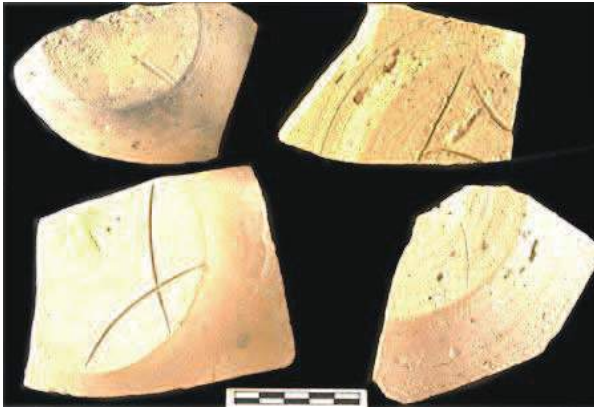


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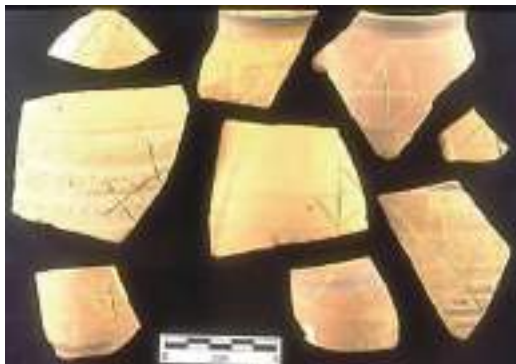


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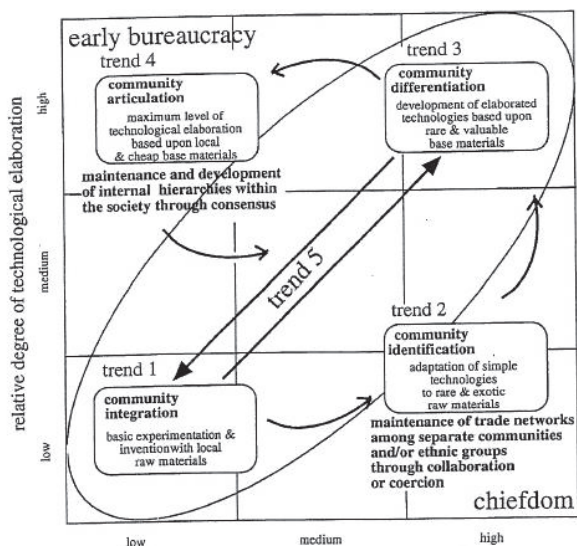


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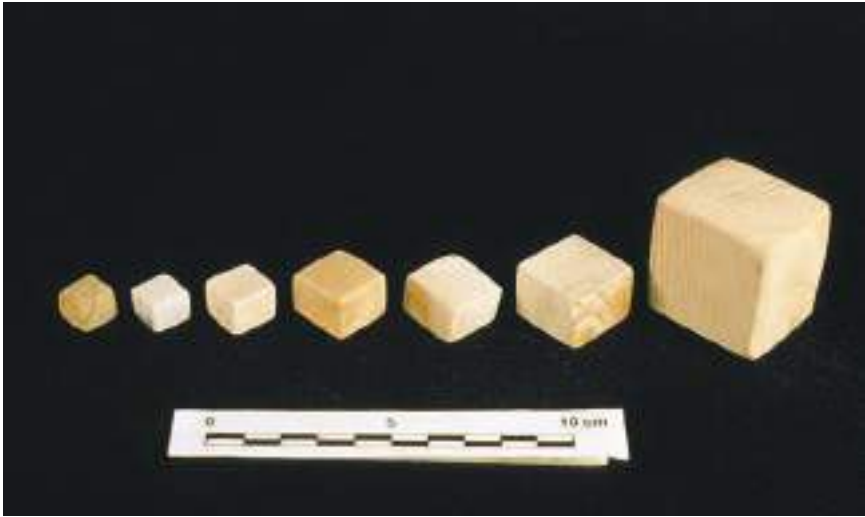


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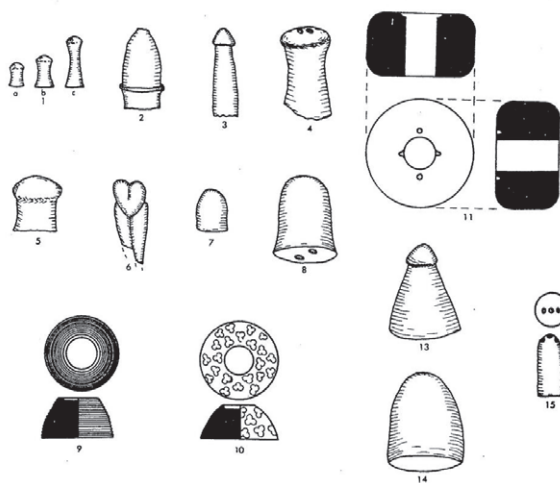


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(<http://tamilandvedas.com/tag/lingam-yoni-in-indus/>).



Figure III.5.6 Mother Goddess of Indus Valley. © Jonathan Mark Kenoyer.



Figure III.5.7 Male Godlings of Indus Valley.
<http://www.waa.ox.ac.uk/XDB/tours/indus5.asp>.



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http://www.yavanika.org/theatreinindia/?page_id=11).



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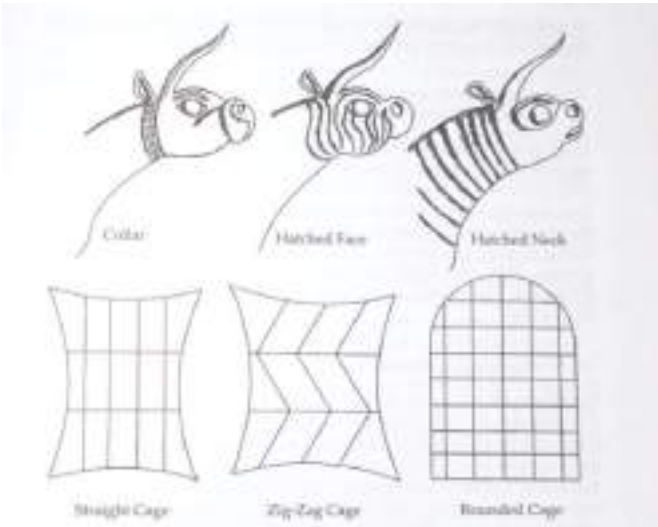
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<http://www.imagesofasia.com/html/mohenjodaro/unicorn-seal.html>.



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© Rita P. Wright



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Seal III.2.12 The Indus seal shows an animal with three heads, bull, unicorn and antelope. (http://www.bbc.co.uk/schools/primaryhistory/indus_valley/trade_and_travel/).



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(<https://www.studyblue.com/notes/note/n/finals/deck/11600749>).



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<http://swamiindology.blogspot.com/2014/03/change-indus-valley-civilization-to.html>).



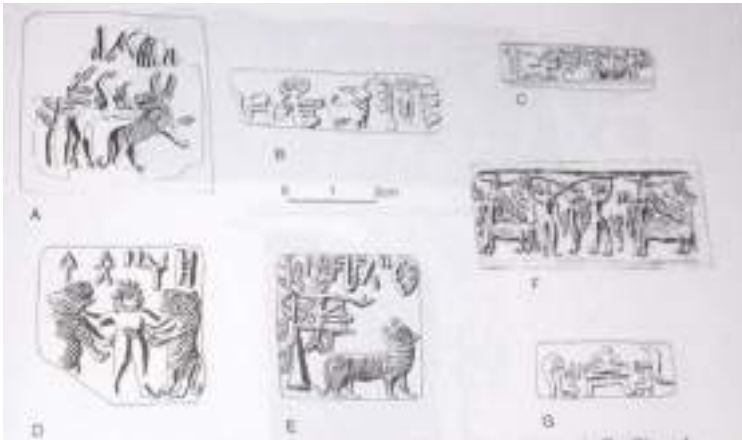
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<http://arthistoryworlds.org/epic-of-gilgamesh-part-one/>).



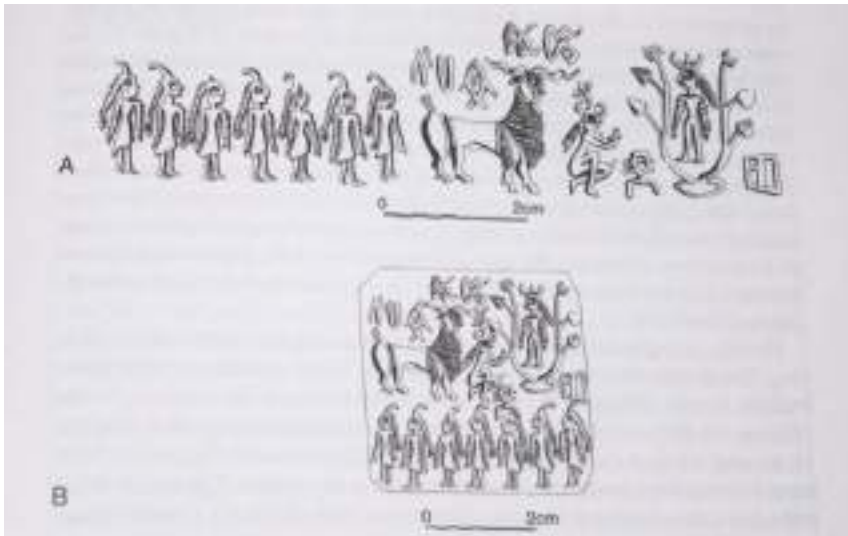
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Seal III.5.9 Narrative images from Mesopotamia. Courtesy British Museum.



Seal III.5.10 Narrative images from Southeastern Iran and Tepe Yahya.
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