

Cultures and Societies of the Indus Tradition

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Introduction

For most of human history, the only record of cultural development is derived from the archaeological record. This record is incomplete and fragmentary. It is not a clear document that can be interpreted without careful analysis and qualification. While the popular literature is filled with statements about ancient discoveries and the meaning of these finds, serious archaeologists are often much more cautious when making interpretations about the meaning of specific finds. Even when archaeologists do make qualified interpretive statements, they are often modified in later publications as more data is recovered from excavations. Unfortunately, the general public rarely follows the rapidly changing field of archaeological studies, and the earlier interpretations often find their way into the popular press to become what can be called “factoids.” “A factoid is a speculation or guess that has been repeated so often that it is eventually taken for hard fact” (Yoffee 2005).

The concept of an “Aryan” race is one example of a “factoid”. The term “Aryan” is derived from the term “ārya”

found in the *R̥g Veda* and meaning “good or noble, someone who speaks Sanskrit, someone who practices the proper Vedic rituals” etc. (Renou 1959). When linguists tried to understand the relationship between the Sanskrit language and other classical languages such as Latin and Greek, they coined the word Indo-European, to refer to a large family of related languages that spread from India to Europe (Mallory 1989; Renfrew 1987). Sanskrit, the language of the *R̥g Veda* and later texts, was considered a sub-branch of Indo-European languages and was classified as Indo-āryan, while the language of the *Avesta* was called Indo-Iranian. All languages derived from Sanskrit have been classified as Indo-Aryan languages. The speakers of Indo-Aryan languages came to be referred to as Aryans. Unfortunately the term Aryan soon lost its meaning relating to language and came to be used incorrectly as a term for genetically distinct populations or races. This use of the term “Aryan” as a classification of a person’s genetic heritage is totally misleading and factually incorrect, because a person’s language does not always correlate to their genetic ancestry. Today, people throughout the world speak English, but only a small segment of the population is genetically related to English speaking ancestors.

Another example of a “factoid” is the destruction of Mohenjo-daro by so called “Aryan” invaders. Although this idea had been proposed by earlier scholars (see R. Thapar this volume) Sir Mortimer Wheeler’s highly speculative statements regarding scattered skeletal remains found in the late levels of Mohenjo-daro (Wheeler 1953) were taken as being archaeological proof of this invasion and the theory became widely accepted in both scientific and popular writings. After assuming that Harappans were non-Aryan, and that the *R̥g Veda* dated to around the fifteenth century B. C. Wheeler presented various Vedic descriptions of the destruction of walled cities by Indra, who is also known as

purandara - “fort-destroyer”. In describing the skeletal remains found at Mohenjo-Daro, he assumed that the individuals died violent deaths and that the absence of skeletons in the citadel areas of the site was due to the fact that invaders cleared this area to live in after sacking the city.

He concluded with the speculation “ On circumstantial evidence such as this, considered in light of the chronology as now inferred, Indra stands accused. Alternatively, if we reject the identification of the fortified citadels of the Harappans with those which he and his Vedic Aryan following destroyed, we have to assume that, in the short interval which can, at the most, have intervened between the end of the Indus civilization and the first Aryan invasions, an unidentified but formidable civilization arose in the same region and presented an extensive fortified front to the invaders. This second assumption is more difficult than the first; it seems better, as the evidence presents itself to accept the identification and to suppose that the Harappans in their decadence, in the sixteenth or fifteenth century B. C., fell before the advancing Aryans in such fashion as the Vedic hymns proclaim. ” (Wheeler 1953:92).

In a more comprehensive overview of the archaeology of Pakistan and India published five years later, he had totally changed the tone of his interpretation. He described the decline of the cities as long and drawn out, resulting from deforestation, flooding, and the wearing out of the landscape. He still assumed that the site of Mohenjo-daro was attacked by raiders, and suggested that they may have been linked to the Rig Vedic accounts of the destruction of cities, but clearly states that “...at present these thoughts are no more than conjectures; picturesque, perhaps provable, but not proven. ” (Wheeler 1959). He also points out that “ ... so-far-flung a society decayed differently and found death or reincarnation

in varying forms from region to region.” (Wheeler 1959).

Dr. George F. Dales strongly refuted Wheeler’s claim of invasion by clearly demonstrating that the skeletons did not belong to one single period and there is no archaeological evidence for destruction, burning or looting of the city that would normally accompany a massacre (Dales 1964). Furthermore, reanalysis of the skeletal remains from Mohenjo-daro by Dr. Kenneth Kennedy indicate that only one out of the 42 different individuals shows any evidence of trauma that could have been the immediate cause of death (Kennedy 1984). The archaeological and skeletal evidence clearly do not support any model of invasion or sudden collapse of Mohenjo-daro, let alone the Indus urban culture as a whole. The decline of Mohenjo-Daro is no longer attributed to Indo-Aryan invasion or migrations, disease or floods, as proposed by earlier scholars, but rather to a combination of factors that include the changing river system, the disruption of the subsistence base, and a breakdown in the important integrative factors of trade and religion (Kenoyer 2005; Possehl 1997).

Unfortunately, such refutations and later clarifications have been ignored by secondary authors and the general public, resulting in major misunderstandings about the nature of archaeological interpretations and the value of archaeology as a scientific study of early human society. For the past fifty years, archaeologists, linguists and historians have been arguing about the nature of the earliest cities of the Indus valley and their relationship to later cultures mentioned in the oral traditions that eventually became codified in the *Vedas* and later texts.

In this essay we will first look at the types of questions that can be answered by the mute archaeological record followed by a brief summary of the current state of knowledge regarding the ancient cultures of northwestern South Asia,

during the time period from around 3000-1000 BCE.

Archaeological Approaches

Who were the peoples living in the ancient Indus valley and surrounding regions during the prehistoric period? Where did they come from? What language did they speak and what were their religious beliefs? Can these communities be linked to the *Vedas* or even to later Epic texts? These questions have been challenging archaeologists, historians and linguists ever since the discovery of Harappa and later Mohenjo-daro in the 1920s and are still at the forefront of discussions today.

The people living in the prehistoric Indus valley and surrounding regions can only be defined on the basis of the archaeological remains that they left behind. This means they are described by their pottery, the types of houses they lived in and the food that they ate. Their origins can be roughly correlated by tracing the development of specific artifact types and tracing the distribution of these artifacts across space (Kenoyer 1998). More recently, studies of the ancient skeletal remains provides clues as to the genetic relationships between the people of the Indus region and other areas of the ancient world (Hemphill and Lukacs 1993). Eventually the study of prehistoric DNA may shed new light on the genetic relationships of specific populations, but so far no well-preserved DNA has been discovered. Even when we do figure out how to trace DNA in ancient populations of South Asia, it will not be possible to use this data to determine the language or religious beliefs of the people that are being studied.

The most difficult aspects of prehistoric archaeological research and interpretation revolve around issues of language and religion. Language and religion are not passed on genetically but are learned behavior that does not always correlate with genetic heritage. Furthermore, without the aid

of written records, it is impossible to determine the language used by a prehistoric community. Although we have written records during the period of the Indus cities, the writing has not been deciphered and the language that they represent is unknown (Parpola 1994). Without decipherment, it is not possible to make positive correlations about the meanings of specific symbols or the use of particular artifacts in the context of religion. This dilemma has been the source of considerable discussion and dispute regarding the language and religion of the ancient urban culture of the northwestern subcontinent that is commonly referred to as the Harappa culture, Indus Civilization or the Indus-Saraswati Civilization.

The term Harappa Culture derives from the initial identification in 1920 of artifacts at the site of Harappa, located along the Ravi River in modern Pakistan (Vats 1940) (Figure 1). Harappa is known as the “type-site” for this culture and archaeologists traditionally use the type-site where artifacts are first discovered to refer to the cultural tradition as a whole. With the discovery of similar artifacts from the site of Mohenjo-daro in 1921 (Marshall 1931), and subsequent discoveries throughout the Indus valley, many archaeologists began referring to the Indus Civilization or Indus Valley Civilization, which includes the Harappa Culture (Wheeler 1968). Eventually, sites dating to this same time period and cultural tradition came to be discovered outside the Indus valley, in the highland regions of Baluchistan and Afghanistan, as well as in the territories of Gujarat and Kutch. This led to the introduction of the term “greater Indus Valley” to refer to the larger area encompassed by this civilization (Mughal 1970).

Some scholars in India have begun to use the term Indus-Saraswati or Saraswati Civilization (Gupta 1996; Lal 1997). The use of this name is based primarily on the misconception that a significant or even greater proportion of the ancient

“Indus” sites were situated along the bed of the now dry Saraswati-Ghaggar-Hakra-Nara River. In fact, most sites along the dry river channel are relatively small and even the few large ones are not as large as the major cities on the Indus or its tributaries. The discovery of these sites is mainly due to the rapid abandonment of the region after the river began drying up during the Late Harappan period. The lack of later occupation and the fact that no more silts were brought down with annual floodwaters has left these sites exposed and therefore easily identified by archaeologists. In contrast, the Indus settlements in other parts of the Punjab, Sindh and Gujarat have been buried by annual flood sediments or by later historical villages and cities.

Regardless of what terminology is used, the characterization of this society is based on the recovery of archaeological evidence alone, as the Indus writing has not yet been deciphered. Archaeologists must use a combination of resources to interpret the incomplete archaeological record. Scientific analysis is used to interpret the nature of specific materials, the technologies used to produce them. Geological models are used to interpret the ways in which the ancient artifacts have been preserved in the soil, and complex archaeological models are used to reconstruct the overall layout of a settlement, the subsistence, and eventually the social and political organization of the people living there. Ethnographic models based on studies of living or historical communities are used to help provide examples of the overall structure of an ancient society. However, none of these approaches can provide a totally accurate or complete picture of an ancient society, since the archaeological record only preserves a small proportion of the original society.

This is also the situation with literary texts, which generally only provide one perspective on an ancient culture, composed or written by a minority of literate elites. Using

such written records it is equally difficult to accurately reconstruct a total picture of the society. This situation is abundantly clear in the numerous interpretations of the meaning of specific words found in the *R̥g Veda* and later Vedic texts, as well as the well-known epic texts, the *Mahābhārata* and the *Rāmāyaṇa*. These texts were not intended to be used as historical documents and yet many scholars have tried to use them to reconstruct ancient Vedic society and to link specific events or localities to the fragmentary archaeological record.

There is little question that many of the events and localities described in the Vedic and later texts can be associated geographically with the greater Indus Valley and adjacent regions. The challenge then is to develop a systematic method of testing the archaeological data to see what, if any, can be associated with the Vedic literature. Using a scientific approach one does not attempt to prove a proposition or hypothesis, but rather to disprove it. If the hypothesis cannot be disproved, then it may represent a valid interpretation.

For example, one of the major characteristics of being “ārya” in the *Vedas* is being able to perform rituals using proper mantras spoken in Sanskrit (Renou 1971). In order to determine if an archaeological site were inhabited by “ārya” it would be first necessary to demonstrate that they had ritual fire altars as well as determining that the language spoken in the course of the fire rituals was indeed Sanskrit. Since we do not have any written language during the Vedic period, and there are no tape recordings of the languages spoken over an ancient fireplace, it is not possible to test if the fireplace was in fact a fire altar or what type of language was spoken. If it is not possible to test a hypothesis, then it cannot help to increase our knowledge of the past. Hence the identification of simple “Vedic fire-altars” at a site is simply a speculation that cannot be tested.

Similarly, there are many horse using cultures in the ancient world, but the presence of a horse does not mean that the people who used the horse are “ārya”. The use of the horse spread quite rapidly (Anthony 1997), and by 1500 BCE horses and chariots were used by elites in a vast area spreading from Egypt to China, and yet no one would argue that Egyptians or Chinese elites were Vedic Aryans. Consequently, the presence of horse bones in a site does not in itself indicate the language or religion of the community using the horse. In order to determine if “ārya” communities used horses it would be necessary to find evidence of horse sacrifice as described in the *R̥g Veda*. So far no such remains have been discovered in South Asia.

Another example is the use of symbols such as the swastika. This is a symbol that has been found distributed throughout the world beginning in the Palaeolithic period. It is found on pottery in Mesopotamia dating to around 4000 BC, at Harappa beginning around 3300 BC (Kenoyer and Meadow 2000) and widely used in the Indus cities from 2600-1900 BCE (Kenoyer 1998). The presence of the swastika in Mesopotamia and the Indus valley is not necessarily connected in any cultural or religious way, but is evidence of independent invention of a symbol that probably had very different ideological meanings.

It should be clear from the preceding examples, that the unbiased documentation of the archaeological record is critical to providing a sound description of prehistoric communities. Furthermore, the connection of prehistoric communities with later literary texts or historically known communities must proceed with great caution, and that all interpretations must be taken as suggestions and not as facts. In the following section I present a summary of the theoretical framework that I feel is most appropriate for incorporating and explaining both the archaeological and the literary

evidence from South Asia.

Chronology and Cultural Traditions

Most traditional archaeological studies of the prehistoric and protohistoric period of South Asia use a linear sequence of periods and events to categorize and discuss the continuities and change in human adaptive strategies. While this approach is still used to some extent to describe the chronological changes within a site or a region, the overarching concept of a “Cultural Tradition” is used in this chapter to encompass long-term cultural developments in a specific geographical region (Kenoyer 1991; Shaffer 1992). While this terminology may be unfamiliar to many readers, it is the most appropriate model because of the nature of archaeological data and dating techniques. The attempt is to provide a focus on the major activities of societies at particular periods. The reference therefore is not just to a chronological bracket but also to how a society was organized and why it was so.

Each “Cultural Tradition” can be subdivided into Eras and Phases that allow archaeologists to organize and compare materials from different chronological periods and geographical regions. The term Era as used in this model designates a unit of analysis that does not have uniform fixed boundaries in time or space and more than one Era may co-exist within a Tradition. The Era is not a developmental phase and not all are found in every tradition. A Phase is the smallest analytical unit, defined by ceramics, architecture and a variety of artifact styles, is limited to a locality or a region and to a defined period of time.

Foraging Era refers to the subsistence focus on wild plants and animals. This era includes mobile and sedentary foragers, including communities involved in hunting and fishing. Early Food Producing Era has an economy based on food production but lacking ceramics. In the Regionalization

Era, distinct artifact styles (e.g. ceramics) cluster in time and space (without fixed boundaries) and are connected by regional interaction networks. The Integration Era shows pronounced widespread homogeneity in material culture, reflecting intense interaction between social groups. The Localization Era has general similarity in artifact styles (comparable to the Regionalization Era), indicating a continued, but altered, presence of interaction networks (Shaffer, 1991: 442).

Within each Era, Phases can be defined on the basis of tool technologies, pottery and other types of artifacts, writing and architectural styles. A Phase is the smallest analytical unit, limited to a locality or a region and to a relatively short interval of time. All of the Traditions and Phases are linked directly or indirectly through avenues of communication and trade. These Interaction Systems are reflected by broad distributions of cultural traits within a brief period. Traditions and Phases are not totally distinct phenomena because of their interconnections through economic, social and ritual interaction systems.

Three major Cultural Traditions can be identified for the northwestern subcontinent during the period under consideration: the Indus, Baluchistan, and Helmand Traditions. The Bactro-Margiana Tradition falls at the northwestern edge of South Asia and is linked in different ways to processes of cultural and political developments in the subcontinent, beginning as early as the Palaeolithic and continuing through the Early Historic period.

Cultural developments in other regions of peninsular South Asia have generally been discussed in terms of single sites or small regional cultures based on limited surveys and excavations. In order to integrate these oftentimes confusing sets of data into the framework used in the northwestern regions, it is possible to identify three additional cultural

traditions for peninsular India; the Ganga-Vindhya Tradition, the Malwa Tradition and the Deccan Tradition.

Each of these traditions is represented by various Eras and Phases, and all of them are linked during their respective Integration Eras to the overarching Indo-Gangetic Tradition. This final Tradition has been defined for the northern subcontinent during the second major phase of urbanization - that of the Indo-Gangetic plain - and is basically synonymous with the Early Historic Period, starting from the mid-first millennium BCE.

Using this chronological and theoretical framework it is possible to describe the cultures emerging in the northwestern regions of South Asia without getting buried with all of the data (Figure 1). Brief overviews of the Indus and the Indo-Gangetic traditions are presented below.

Table 1

Indus Tradition: Basic Chronology

Foraging Era	10,000 to 2000 BCE
Mesolithic and Microlithic	
Early Food Producing Era	7000 to 5500 BCE
Mehrgarh Phase	
Regionalization Era	5500 to 2600 BCE
Early Harappan Phases	
Ravi, Hakra, Sheri Khan Tarakai, Balakot, Amri, Kot Diji, Sothi,	
Integration Era	
Harappan Phase	2600 to 1900 BCE
Localization Era	
Late Harappan Phases	1900 to 1300 BCE
Punjab, Jhukar, Rangpur	

Indus Tradition

The Indus Tradition refers to the total phenomenon of human adaptations that resulted in the integration of diverse

communities throughout the greater Indus Valley and adjacent regions. This Tradition has also been called the Indus Valley Tradition, and begins with the period of initial domestication and settled village communities. The Indus Tradition should not be confused with the Indus Civilization, which is the term used in the general literature to refer to the period of urbanism and integration.

The Indus Tradition begins around 10,000 BCE during the interface of the Foraging Era with the transition to domestication of plants and animals, but it is important to understand that the roots of this tradition may extend back even further into the early Palaeolithic period, more than 2 million years ago. The Foraging Era of the Indus Tradition represents the beginning of subsistence strategies that eventually led to the domestication of plants and animals and other technological patterns that can be linked to later Indus cultural developments. The general date of 10,000 BCE corresponds to a period at the end of the Pleistocene when this type of transition is known to have been occurring in a broad region stretching from northern Egypt and the Fertile Crescent area of West Asia, to Afghanistan and the Indus Valley. Sites that represent these transitional communities are defined by the presence of microlithic tools and other evidence of human occupation, such as accumulations of marine shell, grinding stones and stone alignments.

The subsequent Early Food Producing Era is represented primarily at the site of Mehrgarh (7000 - 5500 BCE) (Figure 2), where there is conclusive evidence for the use of domestic wheat and barley and domestic cattle, sheep and goats (Jarrige, Jarrige et al. 1995; Jarrige and Meadow 1980; Jarrige 1982). Early food producing communities that correspond to other cultural traditions have been discovered in Kashmir and peninsular India. For the Indus Tradition, only one cultural phase (Mehrgarh Phase) has been identified for this

Era, but future excavations in other regions may result in the identification of additional phases. At Mehrgarh, small rectangular mud-brick houses were subdivided into rooms and cubicles that could have been used for storage of grain and other necessities. Baskets coated with bitumen have been discovered in the houses and graves. No elaborate ceramic technology had been developed at this time, but the first basket impressed, low-fired ceramics begin to appear at the very end of this phase. Numerous ornaments made from marine shells and exotic colored stones were buried with the dead along with polished stone axes and chert blades. Additional sites that may belong to this Era have been discovered along the edges of the Indus valley, but have not yet been excavated.

The domestic animals and plants first used at Mehrgarh, especially humped cattle (*Bos indicus*), wheat and barley became the foundation for the subsistence economy of the later Indus cities. The roots of major technological traditions, such as shell working, stone bead making, chipped and ground stone and even mud brick architecture can be traced to this era.

From 5500 to 2600 BCE numerous regional cultures emerged throughout the greater Indus region and represent the Regionalization Era (Kenoyer 1998). This relatively long time period has been subdivided into many distinct Phases on the basis of distinctive pottery, artifacts and chronological occurrence. Most sites reveal the presence of more than one phase. Specialized crafts including ceramics, metallurgy, lapidary arts, glazed faience and fired steatite were developed in each major region. Many crafts using organic materials such as textiles, basketry and woodworking have also been documented. Distinct artifact and ornament styles represented by beads, bangles and decorated figurines evolved in specific regions. Geometric seals were made from terracotta, bone

and ivory. The use of pre-firing potter's marks and post-firing graffiti on pottery set the foundations for the later emergence of writing. Extensive trade networks were established along the major river routes and across mountain passes to connect settlements to each other and facilitate the movement of goods and raw materials. Trade networks were maintained by emerging elites as well as by mobile traders. Communities specialized in pastoralism, fishing, foraging and hunting continued to exist alongside the more settled agricultural societies. The later part of the Regionalization Era, often referred to as the Early Harappan Period, represents a phase of formative urbanism. The building of walled settlements, the use of specific types of painted pottery and ornaments, the appearance of seals and rudimentary writing and the expanded trade networks represent the emergence of complex chiefdoms and incipient urbanism.

The Integration Era (commonly referred to as the Indus Civilization) has only one phase (Harappa Phase) that dates from approximately 2600 to 1900 B.C. (Kenoyer 1998). During the Harappa Phase, there is a synthesis of major regional polities into a larger integrated economic, political and ideological system. A relatively uniform range of pottery styles and other types of material culture including ritual symbols has been found at more than 2600 sites spread throughout the greater Indus valley (Figure 1).

Indus urbanism is defined on the basis of large central cities, which may have held between 40,000 to 80,000 people, surrounded by an irregular network of smaller towns, villages, hamlets and temporary camps of pastoral communities. Most cities, such as Mohenjo-Daro (Figure 3) and Harappa (Figure 4) were built with fired brick, while Dholavira (Figure 5) was constructed extensively with shaped stone combined with mud brick. Smaller satellite settlements were generally built with mud brick. Most Indus settlements had north-south and

east-west oriented streets with brick lined drains for disposal of wastewater.

A formalized writing system, the Indus Script, was inscribed on pottery, seals and a wide range of other types of objects (Figure 9). Although the script is not yet deciphered the context of its use indicates that it is connected to the establishment of powerful communities who dominated Indus society.

The use of standardized weights and measures indicates the presence of taxation and regulations of trade. Hierarchical social order and stratified society is reflected in architecture and settlement patterns, as well as artifact styles and the organization of technological production.

The main domestic animals were cattle, sheep and goat with some use of water buffalo. The domestic horse (*Equus caballus*), donkey (*Equus asinus*) or Bactrian two-humped camel (*Camelus bactrianus*) were used in isolated sites in Northern Afghanistan and Central Asia by around 3000 BCE, but they were not found at the Harappan site of Shortughai in Afghanistan or other Indus sites. Furthermore these animals were not depicted in Indus art or figurines. All three animals are only found in the Indus valley after 1900 BCE at the end of the Indus cities. The first confirmed use of horse and camel for riding is found in the latest levels of Pirak, a small site in the Kachi plain (Jarrige and Santoni 1979; Meadow and Patel 2003). Between 1800 - 800 BCE elaborately decorated camel and horse figurines with riders were being produced at Pirak.

The Harappa Phase represents the first state-level political organization, but no single settlement dominated the region and there is no indication for the emergence of hereditary monarchies or highly centralized territorial states (Kenoyer 1998). There is a conspicuous absence of central temples, palaces and elaborate elite burials that are

characteristic of other early urban societies in Mesopotamia, Egypt and China. Although massive mud brick walls surrounded most large settlements, there is no evidence for burning or destruction of the cities as was the case during major conflict or warfare in other early civilizations. This does not mean that the peoples of the Indus cities were a “peaceful” society, but that conflict may have taken place on a relatively small scale and not in the major cities or towns.

Some scholars have tried to equate the Harappa Phase (or Indus civilization) with the Vedic period (Singh 1995), but as is clear from the summary presented above and more detailed discussion below, we do not have access to any linguistic data that would allow us to correlate the Vedic, Sanskrit speaking communities with the mute archaeological remains of the Indus. Furthermore, the types of artifacts and the nature of the settlements does not correlate to what is described in the *R̥g Veda* or other later Vedic texts.

The Localization Era is a period of cultural transformation connected with changes in local environments, socio-political organization, changing population distributions and settlement patterns (Kenoyer 1998; Kenoyer 2005; Possehl 1997). Some urban centers decrease in size and other regions showing increasing numbers of smaller settlements. The Harappa Phase economic and political structures and associated artifacts such as inscribed seals and weights disappear. Beginning around 1900 BCE, this transformation continues until around 1300 BCE and overlaps with the Regionalization Era of the larger Indo-Gangetic Tradition. The major Phases identified for this Era represent the emergence and consolidation of localized states or chiefdoms with smaller scale social and political interaction. As the cultural regions became disconnected, the unifying styles of artifacts of the earlier Indus cities disappeared. There is no evidence for warfare or the physical

destruction of the Indus cities or even smaller villages during this period. Major changes occurred in burial practices, painted pottery styles and ritual objects (Kenoyer 2005). During this time period, literary sources indicate that Indo-Aryan languages and Vedic ideology and culture were spreading throughout the northern subcontinent. Vedic religious traditions set the foundation for later Brahmanical Hinduism. The roots of other religious traditions, such as Jainism and Buddhism, were also beginning to form at this time. In contrast to these changes, earlier Indus techniques of farming and herding continued to be used along with many of the technologies, such as ceramics, bead making, shell working and metallurgy. New technologies that emerge at this time include higher temperature kilns and glass bead making.

The Localization Era of the Indus tradition overlaps with the regionalization era of the Indo-Gangetic tradition discussed below.

Table 2
Indo-Gangetic Tradition

Regionalization Era	
Vedic and non-Vedic Chiefdoms	1500-800 BCE
Painted Grey Ware	ca. 1200 to 800 BCE
Northern Black Polished Ware	700 or 500 to 300 BCE
Early Historic City-States and Republics (16 Mahajanapadas)	600-300 BCE
Saisunaga Dynasty	542-563 BCE
Nanda Dynasty	362-321 BCE
Achaemenid Persian occupation in NW	559-326 BCE
Imperial Integration	
Mauryan Empire	321-185 BCE

Indo-Gangetic Tradition

The Indo-Gangetic Tradition refers to the major human

adaptations that eventually encompass the larger geographic region extending over the Ganga-Yamuna river valley as well as the greater Indus river valley and much of Peninsular India (Kenoyer 1995; Kenoyer 1997). Although this Tradition has significant links to the earlier Indus Tradition, it represents a dramatically different trajectory and builds on the regional cultures that were established in Western India, the Gangetic and Deccan regions. The Indo-Gangetic Tradition is directly correlated with the emergence of Early Historic states and urban centers during the period from 600 to 300 BCE. Initially centered in the Ganga-Yamuna river valley and parts of the northern Indus Valley, this tradition spreads out gradually and over many centuries to the entire sub-continent and includes Afghanistan and Central Asia. It also eventually incorporates areas of Nepal, the Brahmaputra river valley (modern Assam and Bangladesh) and the eastern regions of northern Assam including parts of modern Burma.

In the vast geographical regions encompassed by the Indo-Gangetic Tradition, numerous isolated communities of foragers continued to exist alongside the settled farming communities and later urban societies that characterized the Regionalization and later Integration Era. These communities are mentioned in literary documents and depicted in narrative art, but no archaeological studies have been conducted to identify and articulate their role during later Eras.

The decentralized polities of the Localization Era of the Indus Tradition and the regional cultures of the Regionalization Eras of the Gangetic, Western Peninsular and Deccan traditions combine to form the basis for this era. From approximately 2000 BCE to 300 BCE new settlements spread throughout the northern Punjab, the Ganga-Yamuna river valley and the Malwa Plateau. This was a period of synthesis and new inventions. Rice and millet agriculture became widespread in regions watered by the monsoon rains,

the use of iron tools, the horse and camel became commonplace. As was the case during the Regionalization Era of the Indus Valley tradition, this period set the foundation for the subsequent developments in the Integration Era. Geographical and cultural areas that were once core and periphery from the perspective of the Indus Valley Tradition become reversed with the establishment of new political centers in the Ganga-Yamuna region and the northern portion of the Indus plain between Taxila and Peshawar.

Although the Indo-Gangetic tradition is not the focus of this essay, it is important to point out that the decline and transformation of the Indus tradition is closely linked to the foundational era of the subsequent cultural tradition.

Protohistoric Chiefdoms and States

Indus Tradition: Harappan Phase

The earliest large-scale urban society in South Asia emerges during the Harappan Phase of the Indus Tradition, 2600-1900 BCE. This society has been defined as a complex chiefdom by some scholars (Shaffer 1992), and a state level society by others (Kenoyer 1994). Although these terms have significance for living societies, it is unlikely that these differences can be easily identified archaeologically and many scholars prefer to focus on the questions of hierarchy and heterarchy. Hierarchy refers to the ranking of elements in society using specific criteria, such as size, complexity, power. Heterarchy refers to the relation of elements to one another when they are unranked or when they possess the potential for being ranked in a number of different ways (Crumley 1995). Generally speaking complex chiefdoms have one large settlement and only one or two levels of smaller satellite towns or villages. State level society, tends to be more stratified, with four or more tiers of settlements with multiple

large settlements competing for political and economic power. Stratification in state-level society is also seen in political organization, in economics and in social organization.

Due to the large geographic area and the many different sizes of settlements associated with the Indus civilization, it is more appropriate to consider the larger settlements as representative of state level society, with some of the smaller regional centers in remote areas possibly representing chiefdoms. The largest cities, such as Harappa, Mohenjo-daro, Rakhigarhi and Ganweriwala may have been relatively independent city-states with direct political control only over local settlements and lands. Several competing classes of elites would have been present in these urban centers; merchants, ritual specialists and individuals who controlled resources such as land, livestock and raw materials. The elites and their supporting communities probably maintained different levels of control over their respective regions. During the 700 years of the Harappan Phase (Indus Civilization), the structure of political control in major cities appears to be relatively decentralized. There is also no indication of territorial states that competed with each other through military conflict.

Separate walled mounds with associated suburbs at both Mohenjo-daro (Figure 3) and Harappa (Figure 4) suggest that these two cities had similar hierarchies of competing political and socio-economic classes. While it is not impossible that a single community of elites with strong kin ties controlled both cities, it is highly unlikely that a ruler in one city dominated all of the other cities. In fact, regional differences in artifact types and city layout suggest that each of the Harappan cities had an independent community of ruling elites. No single building or group of buildings dominated either site. The political organization was probably not a hereditary monarchy, where one would expect to see palaces, royal storehouses and royal tombs. On the contrary,

the presence of numerous large buildings and public spaces in the Lower Town at Mohenjo-daro and Mound F at Harappa support the interpretation that there were several distinct elite groups living in the cities. One clear exception to this pattern is seen at the site of Dholavira, in Kutch (Figure 5). A set of three nested walled areas with a dominant citadel that had four major gateways suggests that the political organization of this settlement may reflect the dominance of a single class. It is possible that this city was a small kingdom, but it also could represent a colony of one of the core area cities ruled by a governor.

Indus Social and Political organization

The presence of hierarchical classes in the Harappan Phase cities is supported by the layout and organization of the cities. Many other categories of evidence, such as 'ritual' objects, ornaments, seals and weights provide additional evidence for social stratification. Although there appears to have been occupational specialization in the Indus cities, the lack of separate burial areas or highly differentiated habitation areas and material culture suggest that rigidly defined social strata, such as the later *varna* system, or hereditary castes (*jati*) were not the norm.

Earlier generalizations about uniformity in artifacts have stressed the authoritarian nature of Harappan culture, but most of the uniformity can be explained through the presence of a common belief system or conservative ideology that required specific symbols and artifacts for ritual purposes as well as for defining class affiliations. These symbolic objects also would reinforce the hierarchy of the society and help to legitimize the socio-economic and political order. The role of kin related learning processes and the diffusion of craft specialists from specific communities to all of the major settlements is also an important mechanism for maintaining

uniformity in technologies as well as style.

Based on comparisons with Early Historic polities, Harappan cities were probably comprised of competing elites whose centers of power would have been within each of the separate walled mounds at Mohenjo-daro and Harappa, or in the acropolis at Dholavira. These walled mounds would have served to reinforce the distinct communities of ruling elites and allow total economic control of specialized goods being produced by artisans in a specific sector.

Fluctuations in dominance between the communities on each of the mounds probably contributed to the economic development and the rapid build up of the city as a whole. New suburbs with associated craft areas may have resulted from growing populations within the city and the agglomeration of new populations to the city. Similar patterns of competition between elites within a city-state are well documented in the Early Historic states. The widespread distribution of Harappan Phase settlements may reflect a process of expansion and colonization through competition and fission among the ruling elites from the core regions of the Indus and Ghaggar-Hakra valleys. A site like Dholavira, or any of the smaller walled settlements in Gujarat, the Punjab, Baluchistan or Afghanistan could represent such outposts or colonies. In contrast to the core area cities these outpost settlements may have supported only one dominant elite community along with the necessary support classes comprised of laborers or indigenous peoples.

Indus Religion and Expressive Culture

Religious practices and beliefs are represented in symbols and narrative scene depicted on seals, pottery and other objects. The most important narrative scenes show sacrifice and worship (Figure 6). The worship of trees and deities in trees suggests that most rituals were carried out in the open

or at the foot of a sacred tree such as the banyan, pipal or acacia. Some large buildings may have been used as temples, but their precise function cannot be confirmed. Terracotta figurines of possible horned male deities and elaborately decorated females may represent deities or worshippers (Figure 7). Stone sculptures of male figures who are sitting on one bent leg, with the other leg bent in front have been widely referred to as representing deities or priest-kings but the specific kneeling posture suggests a supplicant rather than a deity. Abstract symbols such as the swastika and endless knot motifs, and other enigmatic symbolic objects are also thought to reflect ideology, but their precise meaning cannot be known without the aid of readable texts. Harappan religion or socio-ritual belief systems reflect a multiplicity of levels ranging from local cults to what could be called an established “state” religion practiced by the elites of the different cities and emulated by the lower classes.

Examples of local cults may be seen in regional styles of female figurines or ritual symbols on pottery. The practice of a more unified “state” religion may be reflected in the widespread use of the mythical “unicorn” as a motif on seals and other objects. The distinctive offering stands found on unicorn seals also suggests a uniform ritual. Many narrative seals depict ceremonies or rituals that may have been part of state sponsored religious festivals.

Indus Writing

The origins of the Indus writing system can be traced to the Early Indus period, circa 3300-2800 BC, at sites such as Harappa (Kenoyer and Meadow 2000) (Figure 8), Rehmandheri (Durrani, Ali and Erdosy 1995) and Mehrgarh-Nausharo (Quivron 1997). Once it became fully established the Indus writing system spread to all parts of the Indus valley. The Indus script has not yet been deciphered but some of

the pictographic signs can be understood contextually. Most inscriptions are extremely short, consisting on the average of about five discrete symbols and the longest inscription is 26 characters. Indus writing was predominantly executed from right to left, though rare longer inscriptions were written in boustrophedon, alternating from right to left on each succeeding line (Parpola 1994).

The language represented by the writing cannot be determined until the script is deciphered. However, the analysis of non-Indo-Aryan linguistic elements in Old Indo Aryan languages (Southworth 2005:64-67) and studies of place names (toponymy) that may indicate the presence of early linguistic communities, it appears that more than one language may have been spoken in the greater Indus Valley (Fairervis and Southworth 1989). For example, rivers in Sindh and Baluchistan have names that can be attributed to Mundari or Dravidian languages even though there are no modern speakers of these languages in the region today. In the Punjab and Afghanistan, the rivers have Indo-Aryan names, while further to the north the names become Tibeto-Burman or some other language. Future studies of place names need to be undertaken to better understand the implications of these patterns.

If different languages were spoken throughout the regions encompassed by the Indus cities, it is not unlikely that the Indus script may have been used to communicate in more than one language. Many language families may have been present in the Indus region, including Dravidian, Austro-Asiatic, Tibeto-Burman and Indo-Aryan (Southworth 2005). While some individuals have proposed that the Indus script was not a writing system and was not used to encode a language (Farmer, Sproat and Witzel 2004), this opinion is highly debatable.

The Indus script appears to have been used primarily

by elites and occurs on inscribed steatite seals and various types of tokens or tablets, or as graffiti on pottery (Figure 9). The general function of the inscriptions would have been to identify ownership of goods or economic transactions, accounting, the recording of socio-political or ritual events and less formal graffiti.

The most common form of writing is seen in graffiti on pottery. Unfortunately, the fragmentary nature of pottery results in relatively few complete inscriptions being available for study. The most complete inscriptions are found on intaglio seals or various types of inscribed or molded tablets. The seals usually have a relatively short inscription at the top of the seal, below which are various iconographic motifs. A single animal or mythical composite figure faces either to the right or left and an object that has variously been described as an offering stand or a brazier is placed in front of the animal. During the latest occupations of the Harappan phase, seals with complex iconographic scenes were carved, depicting mythological or socio-ritual events. Seals were probably worn around the neck or at the waist and hung from a pierced boss on the back of the seal. Impressions of the seals have been found on pottery, lumps of wet clay or bullae for sealing containers or rope-tied bales. In some instances two or more seals were used, often stamped one above the other with only the writing being visible. This practice indicates that the writing was being read and understood by merchants who would have been trading the goods. Writing is also found on gold ornaments, bangles, bone and ivory objects, bronze tools, trade vessels and storage containers. Sometimes signs were scratched into the wet clay lumps by hand.

Indus Burial Traditions

Burials with grave goods probably indicate a belief in an after

life. Scattered burials as well as discrete cemeteries have been found in each of the major Indus regions at sites such as Lothal, Ruar, Harappa, and Kalibangan. The small size of the cemeteries indicate that only certain groups practiced burial while others were disposed of by other means. The people buried at Harappa were relatively healthy and well fed. The major health problems are periodontal disease, abscesses, caries and tooth loss. The presence of arthritic joints (e.g. vertebral osteophytosis) is seen on some older individuals, and porotic hyperostosis of the crania in rare examples could result from anemia due to malaria. There is some minor variation in the mode of burial and the quantity of grave goods but no indication that different classes of people were buried in the same cemetery.

Burials at Harappa consist of a north-south oriented rectangular pit with burial pottery placed in the bottom (Figure 10). The corpse, with head to the north, was laid out on top of the pottery, either in a wooden coffin or wrapped in a shroud. Burial pottery may have contained food offerings. Other burial goods include personal ornaments such as a copper ring, occasional beads of agate, carnelian or jasper, steatite bead necklaces and ankle bracelets, shell bangles on the left arm of females, and copper mirrors with females. No inscribed objects or high value items such as seals, gold ornaments, long carnelian beads and large copper tools were included in the burials.

Decline and Transformation of the Indus civilization

The state level organization of the Indus cities appears to have been reduced in terms of scale during the Late Harappan period (1900-1300 BCE) (Figure 11), but the continued presence of large cities and settlement hierarchies indicates

that small city states or chiefdoms continued to dominate the landscape of the Punjab and parts of Sindh (Kenoyer 2005).

The factors leading to the decline of the Indus cities are highly varied depending on the region. For example, there is evidence for flooding at sites such as Chanhudaro in Sindh and Lothal in Gujarat, but not at Harappa in the Punjab. The drying up of the Ghaggar-Hakra would have been devastating for the people of Cholistan and the Thar, but the Indus and its tributaries did not dry up and people continued to live along their banks. Over grazing of the land, or continuous agriculture without the use of fallow cycles could have exhausted the fertility of the land. The widely extended trade and political networks would have been seriously impacted by minor changes in economic productivity, as well as by the overcrowding in cities due to the drying up of the Ghaggar-Hakra River. There is no evidence for violent conflict in the Indus cities during the late phase of occupation, though there may have been increased banditry along trade routes and outside of the cities.

During the period of gradual decline and reorganization new agricultural settlements of Late Harappan communities were established in Gujarat and the eastern Punjab as well as in parts of the Ganga-Yamuna Doab. At the same time, other regional cultures began to emerge throughout the greater Indus valley and surrounding regions, parallel to the Late Harappans and eventually absorbing or replacing them.

Late Harappan: Cemetery H Phase

In parts of the northern Indus Valley, Punjab and Ganga-Yamuna Doab, the Late Harappan period is dominated by the Cemetery H culture. Although no large horizontal excavations have been made, settlement patterns suggest the continuation of three or four tiers of settlement hierarchy

and a continuity of urban centers. Distinctive painted pottery with black designs painted on red slip indicate a widely shared symbolic painting style and technological tradition. One of the most important changes seen during the Late Harappan period is the breakdown of long distance trade between the Indus valley and the northwest, as well as the southern coastal regions. This interpretation is based on the absence of marine shell ornaments and the disappearance of distinctive stone drills for perforating hard stone beads. There also appears to be a decline in access to specific stone resources such as lapis lazuli from northern Afghanistan and carnelian from Kutch or Gujarat. The breakdown in long distance trade may have stimulated innovations in faience and glass making, as well as new bead drilling techniques for hard stone. Faience was used to create deep blue beads that look like lapis, and glass was used to make shiny red-orange beads that look like carnelian. Faience was also used to make white beads and pendants that look very much like shell. These technological innovations appear to reflect a creative environment stimulated by demand for high status items by elites who were part of a diverse urban population.

The changes in painted pottery styles and the inclusions of these pottery vessels in distinctive pot burials, suggests that the Late Harappan elites had significantly different beliefs from the previous Harappans. However the change in pottery styles and burial practices was quite a gradual change, and the importance of specific colors of beads, regardless of the actual material being used to manufacture them, suggests a continuity in many aspects of ideology. These patterns could indicate that Late Harappan elites emerged from indigenous communities at Harappa or through the synthesis of local and non-local elements.

Jhukar Phase

Jhukar Phase refers to the Late Harappan southern cultural tradition found in the final Harappan levels at the sites of Jhukar (Mughal 1992), Mohenjo Daro, Chanhudaro and Amri. Jhukar culture is identified on the basis of distinctive pottery with black painted designs on red and cream slip, and distinctive geometric stamp seals. Some of the material culture shows continuities with the preceding Harappan phase, but chert weights and Indus writing is no longer present. Jhukar circular seals are also found at the site of Pirak (Jarrige and Santoni 1979). Most recently, sealings of similar circular seals with geometric designs have been found at the site of Gilund (Rajasthan). The distribution of Jhukar style artifacts throughout the southern Indus valley indicates extensive regional exchange, possibly as far as the site of Gilund to the east. However, the lack of Jhukar pottery at Harappa, or other sites in the north, seems to demonstrate the lack of major long-distance trade. Many of the Jhukar sites in Sindh were eventually abandoned around 1700 BCE and not re-inhabited until the Early Historic period around 500 BCE or later.

Pirak Phase

Another Late or Post Harappan culture from Baluchistan is seen at the site of Pirak on the Kachi Plain, which can be dated from 1700-700 BC (Jarrige and Santoni 1979) or 2000-1300 BC (Shaffer 1992). Many of the architectural styles and even pottery styles appear to reflect indigenous cultures that had been in the region since before the Harappan period. Square and circular stamp seals with geometric designs are similar to earlier forms from Mehrgarh and Nausharo, and have parallels with Jhukar seals from the Late Harappan period. The introduction of rice and the presence of horse and two humped Bactrian camel figurines along with riders at Pirak indicate new forms of subsistence and transportation.

The rice cultivation can be linked to either the Indus and Gujarat regions, or to Swat in the north. Very little can be said about the social or political system, but isolated burials sometimes associated with horse burials may indicate the presence of semi-nomadic tribes or chiefdoms. The use of horse and camel can be linked to Afghanistan and Central Asia. The association of horse with Vedic culture has led some scholars to see Pirak as evidence for intrusive communities entering the Indus valley from the northwest. However, it is important to note that the pottery and figurine styles of Pirak are restricted to the Kachi Plain and Baluchistan, and do not spread to other sites in the Indus Valley. This suggests that the cultural tradition of horse using people represented at Pirak did not spread to the Punjab or to the Ganga-Yamuna doab and therefore cannot be linked to the Vedic society. However the use of the horse may have spread without any accompanying pottery either from Baluchistan or from a more northerly route associated with the Gandhara Grave Culture discussed below.

Gandhara Grave Culture

In the northern Indus Valley, particularly the isolated valleys of Swat, Dir and Chitral, the Gandhara Grave culture (1700-200 BCE) is represented by small settlements and associated cemeteries (Stacul 1984). The society appears to have been organized as a hierarchical chiefdom with some individuals being buried with large quantities of burials goods, while others had only a few pots. Most of the pottery with these burials is burnished grey wares that are very different from pottery made in the Indus or Gangetic region. Horse burials associated with inhumations at the site of Katelai in Swat may represent high status individuals and special rituals associated with their death (Stacul 2001). On the basis of the horse burials and certain artifact styles, some scholars

have associated the Gandhara Grave culture with Indo-Aryan or Vedic culture, but without written texts it is impossible to confirm this linguistic affiliation. Recent discoveries of cist burials in the Salt Range (Shahbaz Khan 2003 - Personal Communication) may indicate that the Gandhara Grave culture extended as far as the northwestern Punjab, but it does not appear to have spread further to the south or east into the Eastern Punjab or the upper Ganga-Yamuna region, which is the core area for the later Vedic and *Mahābhārata* traditions.

Lustrous Red Ware Phase

In Gujarat, the Late Harappan period is characterized by relatively dispersed small settlements with no large regional centers (Possehl 1997). In Kutch the number of Late Harappan sites declines dramatically in contrast to the numerous small sites and regional centers of the Harappan Phase (Bhan 1992). In Saurashtra and mainland Gujarat Lustrous Red Ware sites are dispersed along major watercourses or wherever water sources were combined with seasonal grazing. The disappearance of characteristic features of Harappan material culture, such as seals and weights, indicates a breakdown in administrative and elite communities. However, other features of material culture do continue, including some pottery and ornament styles. Lustrous Red Ware pottery, which was being used along with Harappan pottery during the final stages of the Harappan culture, continues until around 1400 BC (Sonawane 2002). The Lustrous Red Ware pottery is also often found in association with a style of pottery referred to as Black and Red ware which has strong cultural affinities to peninsular sites. Furthermore, the discovery of Lustrous Red Ware pottery at the sites of Navdatoli (Phase III) and Ahar (Phase IC) provide additional support for interaction to the east

rather than with the west. The Late Harappan settlement patterns in Gujarat and changes in material culture reflect the gradual breakdown of the earlier Harappan state organization and the decentralization of political power. After 1400 BC there is a break in the archaeological record at most sites until around 600 BC when another diagnostic style of pottery appears. This is the distinctive Northern Black Polished Ware that is associated with the Early Historic Period (see below).

In summary, the period following the Indus civilization shows different trajectories in each major region. Based on the settlement hierarchies, most of these regional cultures appear to have been organized as chiefdoms except for the multiple tiered settlement system of the Cemetery H or Late Harappa cultures of the Punjab that may have continued as state level societies. Broadly contemporary with the Indus Tradition, other adjacent regions were undergoing their own local trajectories of social and political change.

Helmand Tradition

Situated to the west of the Indus Valley, the Helmand Tradition of Afghanistan represents a parallel urban state level society that was roughly contemporaneous to the Indus cities (Shaffer 1992). The integration of this region into complex chiefdom or state level society can be dated from around 2800-2300 BCE (Shahr-i-Sokhta Phase). Unlike the Indus cities, sites such as Mundigak and Shar-i-Sokhta reveal centralized monumental architectural structures that have been identified as palaces. Although it is not certain if these settlements were ruled by kings or simply by a dominant clan, they appear to have been politically and ideologically different from Indus cities.

Bactro-Margiana Tradition

The emergence of complex chiefdoms or hierarchical state level society is also seen in the Kopet Dagh, in Central Asia from around 2800 -2100 BCE (Hiebert 1994; Hiebert 1995). Settlements were surrounded by a strong mud brick fortification wall with defensive gateways. Increased status differentiation is seen in burials and elaborate styles of ornaments and tools were produced by local craft specialists. From 2100-1900 BCE interaction with the Indus Tradition is documented, but it does not represent a major cultural impact between the two regions. The final phase of Central Asian integration (also referred to as the Oxus civilization) lasts from 1900-1500 BCE and is called the Bactro-Margiana Archaeological Complex -BMAC (Hiebert 1995). This tradition appears to encompass much of Baluchistan and the area previously dominated by the Helmand Tradition, and even extends out onto the Kachi Plain near Mehrgarh. Heavily fortified towns with multiple concentric walls and complex multi-roomed structures were constructed using mud brick. Although each fortified site may have been a separate political unit, similar to historical warlords or “khanates”, almost identical styles of ornaments, seals and tools were being used by elites in each of the settlements. Many of these distinctive objects have been found at sites in the Indus Valley, primarily during the time period between 1900 and 1750 BC. The presence of these Central Asian artifacts in the Indus valley sites indicates that there was considerable trade and the movement of people to and from the highlands.

The emergence of stratified society is assumed on the basis of burials with large hoards of gold and ritual objects that have been found in Central Asia and Baluchistan. Graves with less opulent grave goods have been found at the edges of the Indus valley in the Kachi plain. The pottery, stone or faience ritual objects are broadly similar to those found in

Central Asia. The culture that is represented by these burials disappears around 1750 BCE in the Indus plain and by 1500 BCE in the western highlands. Although many scholars have proposed that the Bactro- Margiana region was inhabited by Indo-Aryan speaking communities, there is no linguistic evidence to support this. Even if these communities did speak Indo-Aryan languages and practice Vedic style sacrifices on fire-altars, there is no indication that political or military leaders from Bactria or other regions of Central Asia invaded the Indus valley and established a new cultural tradition in this area despite the evidence of other forms of contact.

Ganga-Vindhyan Tradition

Throughout the Ganga-Yamuna river valley and the Vindhyan plateau to the south, there is evidence for the emergence of scattered agricultural settlements that are associated with the Regionalization Era of the Indo-Gangetic Tradition (4000-1000 BCE). These settlements were probably organized as chiefdoms and the most powerful of these were located at crossroads and along the trade routes that linked the Gangetic plain to the Vindhyan region and to the Deccan plateau in the south (Gaur 1997). Due to the absence of written records and relatively few seals with geometric designs (only found at Hastinapura (Lal 1954-55) and Noh and not at all like those of the Harappan period), the social or political organization of these settlements is relatively unknown. Distinctive pottery and artifact traditions indicate that regional cultures were becoming established and there is a continuity of development that links these Chalcolithic and early Iron Age settlements to later polities and city states that are documented in literary traditions.

Important pottery styles that are associated with these chiefdom level communities are Ochre Colored Pottery and copper hoards, Painted Grey Ware pottery, black slipped

wares and eventually Northern Black Polished (around 800 BCE). Hand formed Black and Red wares are found throughout the region and extend into the Deccan plateau to the south. None of these sites have been excavated horizontally, but the early layers generally reveal the use of small circular huts, followed by mud brick structures and eventually the use of baked brick. During the Painted Grey Ware period (1200-800 BCE) none of the settlements were fortified, but the site of Jakhera had a large mud embankment and moat on the side facing the river. This massive embankment may have been constructed as flood protection, and similar embankments were constructed around many later sites during the early Northern Black Polished ware period (800-600 BCE). By around 500 BCE, the mud brick embankments at sites such as Kaushambi, Rajgir, Pataliputra, Sravasti, and Ayodhya also served as fortifications (Erdosy 1995). Most of the larger of these archaeological settlements can be linked to capital cities of chiefdoms that are identified in the *Vedas*, *Puranas* and the *Epics* (see below).

Malwa-Rajasthan Tradition

At the same time as villages were emerging in the Indus Valley and the Gangetic regions to the north, small settlements of agro-pastoral communities were being established throughout Gujarat and Rajasthan as well as in the Malwa Plateau, along the Vindhyan range and into the northern Deccan region (Shinde 2002). In Gujarat, early Chalcolithic cultures (circa 3700-3600 BCE) at sites like Loteshwar and Nagwada may have had links with the Early Harappan (Amri and Kot Diji Phase) cultures of Sindh. In central Rajasthan the early Chalcolithic (3200-2600 BCE) is well documented at the large sites of Balathal and Gilund, but there is no evidence of direct interaction with the Indus valley. In north Rajasthan, the Ganeshwar-Jodhpura culture (Agrawala 1984) or its

antecedents may have had direct contact with Indus civilization through the trade of copper objects beginning as early as the Ravi Phase and continuing on through the end of the Harappa Phase (circa 1900 BCE). Further analysis is needed to determine if copper from the northern Aravalli came in the form of ingots, or as finished tools.

None of these communities developed into state level society, but some sites such as Inamgaon, Balathal and Gilund may represent regional centers (Shinde 2002) and were possibly organized politically as chiefdoms. The main evidence for chiefdom level society is the presence of both large and small sites that indicate a settlement hierarchy. Regionally defined ceramic styles, craft specialization and regional trade networks are also important indicators of social complexity. At Inamgaon the discovery of a large house and distinctive burials are thought to represent community leaders or chiefs (Dhavalikar 1986). Monumental architecture, such as fortifications, and complex parallel walled structures and compartmented buildings at Gilund and Balathal also indicate social hierarchy and the need to maintain order. A cache of terracotta sealings made from geometric seals were found in a pit at Gilund reflects the control of some commodity. Stylistic similarities between the Gilund sealings and terracotta or copper seals from sites such as Jhukar, Chanhudaro and possibly even Lothal or Harappa, may indicate some sort of trade or elite interaction between these various regions.

Deccan Tradition

As with the other regions mentioned above, the Deccan plateau also saw the rise of large settlements that were probably inhabited by pastoral tribes or chiefdoms. Large ash mounds and habitation sites represent repeated occupation of specific areas many of which are associated with later Megalithic monuments that date to around 800

BCE (Paddayya 2002; Shinde 2002). Evidence for burning and conflict in some sites such as Inamgaon (noted above) suggest that there was conflict between competing communities. The time frame for this increase in competition corresponds to the historical accounts of movements of Vedic communities from the Punjab and Ganga regions that is, in the first millennium B. C. (see below).

Proto-Historic and Early Historic Chiefdoms and States

Indo-Gangetic Tradition

Regionalization Era

Chiefdoms (represented in the Vedic texts)

1500-800 BCE

Painted Grey Ware

ca. 1200 to 800 BCE

Northern Black Polished Ware

900/700/500 to 300 BCE

The social and political transformations occurring between the prehistoric and the historic period are quite complex and cannot be explained using simplistic models of invasion or migration that were used by archaeologists and historians in the past. The sources that provide information on this time period include the archaeological record, narratives from the Vedic texts, and linguistic evidence from the textual sources.

Archaeological evidence indicates the emergence of new regional cultures in the Indo-Gangetic divide, the Ganga-Yamuna Doab, Gujarat, Malwa-Rajasthan, the Vindhyan and Deccan regions. The most widespread pottery traditions in the northern subcontinent have been identified as the Painted Grey Ware Culture (1200-800 BCE) (Tripathi 1997) and the Northern Black Polished Ware Culture (700-300 BCE) (Roy 1986). Small villages grew into large fortified cities, many of which can be identified in the literary texts (Erdosy 1995). New technologies were being created alongside older technologies and subsistence systems. Rice and millet

agriculture became widespread in regions watered by the monsoon rains, the use of iron tools and the horse became commonplace. Geographical and cultural areas that were once core and periphery from the perspective of the Indus cities become reversed with the establishment of new political centers in the Ganga-Yamuna region and the northern portion of the Indus plain between Taxila and Peshawar.

Narratives from Vedic texts provide information on material culture and social organization used by Vedic communities in religious rituals, but it is difficult to define historical chronology or precise geographic locations. In the section below, aspects of Vedic material culture will be discussed that might be preserved archaeologically, followed by more detailed discussion of the actual archaeological evidence from sites of the Painted Grey ware and Northern Black Polished ware periods.

Vedic Material culture

Being nomadic pastoralists, and occasionally farmers, the Vedic communities had a range of material culture that would be relatively indistinguishable from any other pastoral or farming community in the world. The main artifacts or physical structures that are thought to distinguish Vedic culture from non-Vedic culture are ritual fire altars, the use of the horse and other animals for sacrificial purposes (Jha 1999), and the conspicuous lack of writing (Dandekar 1947). A brief summary of the major types of Vedic ritual structures and paraphernalia as represented in the Vedic texts is provided below. It should be noted that due to the lack of a writing system, the language and oral traditions, which are the most distinguishing features of Vedic culture would not be preserved archaeologically. The comparison has therefore to be restricted to parallels within archaeological data.

Ritual structures and Architecture

During the Vedic period no temples were constructed for ritual purposes or for housing the symbols of the divinity (Jha 1999). Permanent images or iconic forms are not usual as is evident from the single passing mention of an image of Indra. Iconic symbols were however used by other communities and the *Vedas* refer to the Dasas as worshipping the phallus (Dandekar 1947). The descriptions of elaborate Vedic rituals and the construction of fired brick altars are from the Vedic corpus dating to the first millennium BCE and therefore generally later than the *Rg Veda*. Although it is possible that some earlier brick altars were constructed, so far no archaeological remains of structures associated with these rituals have been discovered or dated to this early period, though later altars have been discovered (Nautiyal and Khanduri 1989).

When a ritual had to be performed a sacrificial ground was selected, carefully measured and demarcated, and this was done for each new performance of ritual. Different areas within the demarcated sacrificial zone were devoted to specific rituals. A temporary structure of bamboo and thatch was constructed over the sacred space and was burnt at the termination of the ritual.

Ritual Paraphernalia

Physical objects used in Vedic rituals were usually made specifically for each ritual and burned or ritually broken after the completion of the ceremony (Staal, Somayajipad and Nambudri 1983). Wooden ladles and spoons were used to pour out butter and sprinkle water but such objects would not be preserved in the archaeological record. Many different shapes of pottery vessels and dishes were made by hand forming, but it is not clear if they were distinct from domestic

pottery or not and therefore it is difficult to distinguish ritual vessels from everyday domestic vessels. The only clear indicator would be pottery with evidence for intentional breakage as is found on the slopes around modern temples or near cremation grounds.

Specific pottery shapes might have counterparts in archaeological data such as the globular pots for the soma drink or open bowls and flat dishes for other offerings. But much of what was used would not have survived for any length of time such as bull hides, woolen strainers, antelope skins, wooden drills, etc; used in the Soma ritual. Similarly the sacred thread and special clothing for initiation would have been short-lived as also the grass mats for the priests.

Funerary traditions

Cremation is the most commonly described funeral ritual in the *Vedas*, but texts refer to the dead who were “not burnt”, were buried in the earth (*anagnidagdha* Rv. X.18.11), exposed or thrown away (Dandekar 1947). In later texts dating to around 800 BC, there are detailed instructions on how to collect bones that have been exposed for a specified length of time and place them in a pot with a lid that is then buried in a pit (Grihya-Sutra 4.4.1 and 4.5.1 to 6). In one ritual (*pitṛmedhayāga*) the bones of the dead ancestor were taken into the forest, arranged in their anatomical position to create the human form, and covered with sacred *kuśa* grass and a water plant (*śaivāla*).

It is clear from the preceding summary that the only archaeologically preserved artifacts that might distinguish settlements inhabited by early “Vedic ārya communities” would be fired bricks possibly used to make special types of fire altars, broken globular pots that showed little evidence for long term use in the home, post holes for the sacrificial posts associated with sacrificial fires, and some rare ritual

implements made of precious metals. Specific animals associated with sacrifice included the horse, cattle, sheep, goats and even the dog (for sacrifices to *Yama*, the god of Death). Due to the fact that sacrifices were undertaken on freshly prepared ground, and that burned bones and ash were often scattered after the end of the ritual, the precise identification of such sacrificial events is highly unlikely.

Archaeological sites excavated throughout the northwestern subcontinent reflect the accumulation of domestic garbage and do not appear to represent the type of sacrificial altars described in the Vedic literature. It is also clear that the types of archaeological remains from the communities referred to in the texts, and which have been labeled by some as “Vedic ārya”, would be very different from those found at Harappan sites discussed above. So where then is the archaeological evidence for communities that have been described as “Vedic ārya”?

Archaeological Evidence for Vedic Chiefdoms and Early States

The archaeological evidence for the presence of chiefdoms and states during and immediately after the Late Harappan period is quite complex and based on a combination of data from settlement pattern studies and excavations. Earlier scholars tended to focus on identifying intrusive cultures that came into the subcontinent from the northwest. The Gandhara Grave culture and the horse and camel using communities represented at sites such as Pirak, have distinctive elements that could associate them to Vedic culture, and even though the horse and camel did spread across the northern subcontinent, the pottery of Pirak and the gray pottery of the later Gandhara Grave culture did not spread across the northern subcontinent and therefore cannot be associated with the events described in the *Ṛg Veda* or

later texts.

Two major archaeological traditions that provide more convincing evidence of links to Vedic culture are the Painted Grey Ware culture (1200-800 BCE) and the Northern Black Polished Ware culture (700- 300 BCE).

Painted Grey Ware Culture

The communities who used Painted Grey ware were farmers and herders living in small villages scattered across the land between the Ganga and the Yamuna rivers as well as in the area known as the Punjab where Harappa was located (Lal 1997; Roy 1983) (Figure 12). The Painted Grey ware culture and an earlier Ochre Colored Pottery culture (Dikshit 1978; Gaur 1974) which may represent Late Harappan communities provide the most convincing archaeological evidence for the transition from the Harappan to the Early Historic period. The size and distribution of these settlements in a two to three tiered settlement hierarchy and shared material culture indicates the presence of small chiefdoms that are linked together with a shared culture and beliefs. The shared beliefs are indicated in the use of similar types of ornaments made of terracotta, stone, faience and later glass. Terracotta human and animal figurines are also found at Painted Grey ware sites. The animal figurines include cattle, horse, and wheeled rams that may have also been used as toys. Incised terracotta discs with decorated edges and geometric motifs also may have had ritual meaning. Some archaeologists have proposed that they may be symbols of specific deities. In addition there is evidence for the use of square, rectangular, wedge shaped bricks, but since these are not associated with any domestic architecture, it is possible that they were used in ritual structures that were later disassembled or allowed to fall apart. The lack of detailed reports on the precise patterning of such artifacts makes it difficult to present any conclusive

statements about their use. Overall, the social and political organization represented at Painted Grey Ware sites tends to correspond with the chiefdom level society possibly similar to that represented in the Vedic texts.

At some sites, such as Bhagwanpura (Joshi and Bala 1975-76), there is an overlap between the Late Harappan communities, which continue until around 1000 BCE in the Ganga-Yamuna region, and the Painted Grey Ware culture, which is generally dated from around 1200-800 BCE. The sites where painted grey ware pottery and other related wares, such as “burnished black ware”, “soapy red ware” and “black and red ware”, are found are distributed across a wide region from Taxila in the northwest, along the foothills of the Himalayas, along the dry bed of the Ghaggar Hakra river, in the Malwa plateau and as far east as the central Ganga plain. Many of these sites also have pottery with red slip and black painted designs that can be linked to the Late Harappan period. Generally speaking there is no clear planning of these settlements, but some houses are oriented north south - east west, as was common during the Harappan period. At some settlements large mud brick platforms and surrounding embankments were constructed to protect the settlement from floods.

Most of the settlements were relatively small, about the size of a small village in modern times, with only a few thousand people living in the settlement. Settlement surveys of Painted Grey Ware sites in the Ghaggar-Hakra river valley, northern Haryana, and the Ganga-Yamuna Doab have revealed the presence of two to three tiers of settlements, with the largest towns ranging from 13.7 to 9.6 hectares in area, smaller settlements from 5 to 2 hectares in area and hamlets or nomadic settlements less than 2 hectares in area (Erdosy 1995; Lal 1983). The total number of sites in the Indo-Gangetic divide decreased after the Late Harappan

period, while the number of sites and the total occupied area in the Ganga-Yamuna Doab to the east increased.

In terms of chronology, the earliest Painted Grey Ware sites, which show an overlap with the Late Harappan and also do not have iron tools, are found in the Punjab. Later sites with iron tools are concentrated in the Indo-Gangetic divide and the Ganga-Yamuna Doab. The presence of numerous Painted Grey Ware settlements in the Kurukshetra district is important because this is where the *Mahabharata* battle is thought to have taken place (Lal 2002). These patterns can be correlated to the literary evidence for hierarchical chiefdoms and states during the late Vedic period in the Kurukshetra region. Many of the Painted Grey Ware sites in the Gangetic region continued to be occupied during the subsequent Northern Black Polished Ware period. The fact that sites further to the east, such as Kaushambi date to a later period and show a gradual evolution from late Painted Grey Ware culture to Northern Black Polished ware culture is taken as evidence for the gradual migration of communities to the east. This migration could be correlated to the textual references to migration from the upper to the middle Ganga region (Lal 2002).

Another line of evidence presented by some scholars is based on the names for many modern villages or towns, such as Hastinapura and Kaushambi, which correspond to names used in the *Mahabharata* (Lal 2002). So far there has not been any positive correlation between the sites named in the epic texts and the archaeological sites, but the presence of many such site names in the general geographic locality of the epic suggests that the epic composers may have known this region.

Bhagwanpura (Joshi 1993) is located in the district of Kurukshetra (Figure 11), just to the east of the Yamuna River, in the proximity of what is believed by some to have been

the site of the epic *Mahabharata* battle. The settlement was occupied during the Late Harappan Period (dated at this site from 1700-1300 BCE) and then continued to be occupied through the Painted Grey Ware Period (dated at this site from 1400-1000 BCE). What is most significant about this settlement is that some layers show a mixing of these two cultural periods, suggesting that for a time, people using both Late Harappan and Painted Grey Ware pottery lived together in this village. Over time the Late Harappan pottery was gradually replaced by Painted Grey ware pottery and other changes include the introduction of glass bangles and the horse. Bhagwanpura may represent the type of village that would have included both local Late Harappan people descended from the earlier Harappan cultural tradition and communities who were using new types of pottery and the horse. In most Painted Grey Ware sites, copper tools were used in the earliest levels and iron tools begin to be used in the later levels, around 1200 BCE or slightly earlier. While it is not possible to determine the religion or language of the Painted Grey Ware culture, most scholars agree that there seems to be a correlation with some of the material culture described in the later Vedic texts.

The evidence for more than one group of people living at Bhagwanpura is seen in the use of different types of houses, some were circular while others were rectangular. Some houses also had many smaller rooms, and may have been the homes of powerful leaders or chiefs. Another interesting clue is that although the houses were all made of mud brick or reeds, the people did make fired brick, which were relatively thin and square, rectangular or wedge shaped. Since the bricks were not used for houses it is possible that they were used for making special ritual altars like those recorded in the *R̥g Veda*. Archaeologists have found traces of elaborate ritual altars made from similar types of bricks, but generally

quite thick and heavy, in somewhat later periods. Special types of thick and heavy fired bricks are still made today for the construction of the special bird shaped fire alters used in the *Agnicayana* fire sacrifice. Other similarities are their use of the horse as well as iron tools. We do not have clear evidence whether the horse was used in transport, but that it was an animal of status is clear from its role in ritual sacrifice associated with burials at some sites. However, further studies of the bones and their deposition patterns need to be carried out to better understand the overall use of the horse during this period.

Northern Black Polished Ware Culture

The major cultural tradition that follows the Painted Grey Ware Culture is generally referred to as the Northern Black Polished Ware Culture (Roy 1986) (Figure 13), but there are in fact several regional variations of this cultural tradition that use different styles of pottery. The classic NBP ware appears around 700 to 500 BCE in the core regions of the northern subcontinent. The earliest dates for NBP are from Hastinapura, in the core area of the Ganga Yamuna Plain (752, 709, 530 BCE). In the northwest, sites such as Taxila/Hathial and Charsadda have NBP ware and other related styles of pottery that were dated by comparison with the Ganga sites to around 550 BCE (Marshall 1951). Recent excavations in the Bannu district at the sites of Akra (900-790 BCE) and Ter Kala Dheri (1000-400 BCE), have provided more accurate radiocarbon dates that would push the chronology for the NBP at Taxila and Charsadda to as early as 900 BCE (Khan, Knox et al. 2000). Although no complete settlement studies have been carried out, there is some indication of a two or three tiered settlement system in the northwest. Other sites in the central Punjab, such as Shorkot, Bawani and Harappa, and Pirak have pottery that is comparable to the pottery found

in the early layers of Taxila/Hathial and Charsadda.

Sites such as Bawani and Shorkot have been known since the early surveys of Cunningham (Cunningham 1924 (2002)), but their presence has been long overlooked by historical archaeologists. Full-scale excavations need to be carried out at these sites in order to fill in the vast blank area that is usually seen on maps of the region for this time period. These sites may provide the most concrete evidence for the presence of communities in key areas of the Punjab and Indus Valley that have been mentioned in the literary texts. For example, during the 5th to 4th century as recorded by Pāṇini in the *Aṣṭādhyāyī* the *Sauvīra* were people living in northern Sindh, the *Brāhmaṇaka* in southern Sindh, and the *Madra* in the Ravi-Jhelum doab.

Even without the aid of literary texts, the archaeological record from sites at the end of the Painted Grey Ware period and early Northern Black Polished Ware period indicates increased social hierarchy and stratification, both within the sites and between sites. The settlements with Northern Black Polished Ware and other related pottery styles are more numerous and more widespread than the earlier Painted Grey Ware. During the Northern Black Polished Ware period, the settlement patterns in regions such as the Ganga-Yamuna Doab revealed a four or five-tiered pattern that corresponds to a stratified economic and political system consistent with complex chiefdoms and early state level society.

The overall population estimates for surveyed sites indicates significant population growth in the Ganga-Yamuna Doab beginning in the Painted Grey Ware period and continuing on through the Northern Black Polished Ware period (Lal 1988). This population growth could be attributed to migration of agricultural and pastoral communities, (some of whom are mentioned in Vedic texts), from the Punjab to the rich agricultural regions of the Gangetic plain, as well as

the agglomeration of tribal populations to agricultural villages and towns. The emergence of larger towns and eventually cities occurred at major cross roads and market centers. Most importantly some Northern Black Polished Ware sites became much larger and were protected from flooding by massive mud brick and earthen ramparts that eventually came to be used as defensive walls. Iron became more commonplace and a significant increase in iron weapons indicates a rise in warfare and military technology.

The diagnostic artifact found at most Northern Black Polished Ware sites is the high fired and black burnished pottery called Northern Black Polished Ware (Hegde 1962), which is considered a luxury ware used primarily by elites. This elite ware is not represented at all sites, and other types of pottery used to date this period include burnished black ware, black and red wares and “soapy red wares”. Trade networks that had been disrupted at the end of the Harappan period were once again opened up, bringing marine shell to inland sites and lapis lazuli from northern Afghanistan to markets throughout the northern and central subcontinent. In the later part of this period, seals with inscriptions in Brahmi script, punch marked coins and stone weights for control of trade and taxation begin to appear.

While many sites show continuity from the Painted Grey Ware to the Northern Black Polished Ware period, there are some sites that were only occupied from the beginning of the Northern Black Polished ware period. The fact that many of these sites, such as Ayodhya and Sringeripura are also mentioned for the first time in the *Rāmāyaṇa* has led some scholars to argue that most of the events recorded in this epic occurred after the time of the *Mahābhārata* (Lal 2002).

Conclusions

The one topic that has not been discussed in this article is

the origin of Indo-Aryan speaking communities. These communities are difficult to identify from archaeological data where there is no evidence for the language used by the particular culture. There is no archaeological evidence for invasion, or even large-scale migration into the northwestern subcontinent, but there is considerable evidence for trade and interaction between the Indus and the regions to the west and north, beginning with the Neolithic period (7000 BC) and continuing up to the Late Harappan times (1900 BC). In contrast to these earlier times, there is no clear evidence of trade during the Late Harappan period itself (1900-1300 or 1000 BC) or even in the subsequent Painted Grey Ware period (circa 1200-800 BC). However, the use of the horse did spread across the northern subcontinent during this period and this indicates the presence of some degree of cultural interaction. The spread of the horse could have occurred without the spread of actual people so we must continuously remind ourselves that the presence of horse bones at a site does not define the spoken language of a community. When the horse was first introduced into the New World during European colonial expansion, it rapidly diffused into regions that were not dominated by European language speaking communities.

Given these complications, we must ask ourselves if archaeological evidence can ever be correlated with linguistic models about the origins of the Indo-Aryan speaking communities of South Asia? The linguistic evidence suggests that Indo-Aryan speakers migrated from regions to the west and north (see **Deshpande in this volume**). If they came in gradually over hundreds of years they may have periodically interacted with the people already settled in the region. As nomadic pastoralists or small-scale farmers it is quite likely that their settlements are buried under meters of silt and windblown sediments. The challenge for archaeologists today

is to search for these ephemeral sites and begin to understand the complex cultural mosaic that was present in the prehistoric and proto-historic period. Without the actual presence of writing that can be deciphered, we may never be able to determine the languages spoken by these communities, but eventually we should be able to sort out some of the major cultural transformations that were taking place.

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