Indus Epigraphic Perspectives: Exploring Past Decipherment Attempts & Possible New Approaches

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Abstract

First appearing on potsherds around 3300 BC, the Indus script was primarily in use during the Mature Harappan period (ca. 2600-1900 BC) in the Indus Valley region, centred in the north-western region of the Indian Subcontinent. It is one of the last remaining undeciphered scripts of the ancient world. A great number of Indus inscriptions, however, have been uncovered at many archaeological sites in the Persian Gulf, discoveries that corroborate the inclusion of the Indus civilization as an active participant in the Mesopotamian-dominated Gulf trade of the 3rd millennium. In addition to exploring the current state of research surrounding the Indus decipherment attempts, the thesis will examine new perspectives on ancient history, arguing in favour of various possibilities of Mesopotamian, Elamite, and/or pre-dynastic Egyptian (North East African) cultural presences or influences in the ancient Indus River basin.

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Introduction

> *The Indus Valley civilization is the Cinderella of the ancient world. By a combination of circumstances it has been considerably overshadowed by its elder sisters of the Nile Valley and the Tigris-Euphrates Valley. It is more distant from Europe (and it was from Europe that the discoverers of all the ancient civilizations had come); it was discovered much later; and it has proved more difficult to fit into a coherent history of mankind. Unlike the civilizations of Egypt and Mesopotamia, which had been known by repute to the historians of Greece and Rome, and which were recorded in the Bible, the civilization of the Indus was unsuspected until 1921.*
>
> Geoffrey Bibby (1969), p. 174.

The thesis will explore the current state of research pertaining to the decipherment of the Indus script (see Fig. 1.0 in *Appendix*), meaning that it will examine the relevant historiography and methodological literature, as well as the decipherment proposals themselves. In addition, it will provide a critical analysis of the various analytical approaches – or schools of thought – in understanding the Indus script and explore some of the reasons for their failure or non-acceptance by the field. My thesis will take a multidisciplinary approach, drawing on the related fields of archaeology and history in order to contextualize various epigraphic perspectives vis-à-vis the undeciphered Indus script.

In the course of analysing the relevant scholarly literature, I will argue that the newly emergent frames of reference in understanding the Indus script may be fruitful in leading to a successful decipherment, an outcome that has eluded earlier efforts. These newly emergent frames of reference examine various possibilities of Mesopotamian, Elamite, and/or pre-dynastic Egyptian (North East African) cultural presences or influences in the ancient Indus River basin, based on archaeological finds and new perspectives on ancient history.

To date, inscriptions featuring the characters of the Indus script have been found on nearly four thousand seals among other inscribed objects belonging to the Indus Valley civilization.[1] Despite the quantity of material, however, the script remains undeciphered. Archaeological discoveries have established that the Indus Valley civilization, a Bronze Age civilization, extended over a vast area, with its centre in the north-western region of the Indian Subcontinent, encompassing most of present-day Pakistan as well as the western states of India, and extending as far as south-eastern Afghanistan and the easternmost part of Iran's Baluchistan province.[2] After the initial discovery of this ancient civilization by Westerners in the mid-1800s, British explorers published images of inscribed seals that were found on these sites (Possehl 2002). These initial explorations were followed by many other excavations, so that by the middle of the 20th century, was finally revealed the full geographic extent and immense zone of influence covered by this ancient civilization.

Chapter 1 will explore a) the Indus civilization itself, and b) the possible contact between civilizations during the age of the Indus civilization (Agrawal 2007: 4-144; B. Allchin 1997; R. Allchin 1995; Kenoyer 1997, 1998; Possehl 2002), from the earliest beginnings of the culture to its eventual collapse, circa 3000 to 1600 BC[3], and c) the impact of such contact on their writing systems.

This study will first examine the historical context of the Indus Age. This examination will include a focus on historical periodization, in order to evaluate the chronologies that have been proposed and largely accepted by scholars working in the field, such as Gregory Possehl (1984,

[1] All of these inscriptions have been catalogued and separately published in three volumes by the *Memoirs of the Archaeological Survey of India*, and they form the *Corpus of Indus Seals and Inscriptions* (Joshi & Parpola 1987, *Vol. 1*; Shah & Parpola 1991, *Vol. 2*; Parpola & Pande 2010, *Vol. 3*).

[2] R. Allchin 1995; B. Allchin 1997;Kenoyer 1997, 1998; Possehl 2002.

[3] As established in the absolute chronology for the Indus Age, by Possehl (1999) and also found in McIntosh's (2002: 11) more general timeline for the Indus civilization, the approximate date of 3000 BC marks its beginningand 1600 BC marks what is termed as its collapse.

1999, 2002), Jim G. Shaffer (1992), Jonathan Kenoyer (1991), and Kenoyer & Meadow (2008). Because the Indus civilization ranks as one of the four great Bronze Age civilizations it will be necessary to situate it chronologically alongside the other three: Ancient Egypt, Mesopotamia and China. This comparison will be based primarily on the timelines found in studies by Jane McIntosh (2002) and Asko Parpola (1994).

Chronological comparisons are important because during the development and use of the Indus script, ca. 2600-1900 BC (Possehl 2002), other contemporaneous writing systems – notably the Sumerian cuneiform and Egyptian hieroglyphic, were also in use. And, in addition to these two which constitute the world's first writing systems, the last phase of the mature period of the Indus Age, ca. 1900 BC (Possehl 2002: 29), also saw the appearance of a third writing system far away from the Indus River basin. This was the earliest form of the Old Semitic script, called the Proto-Sinaitic, which appeared in the Middle-Eastern Sinai peninsula around 1850 BC (Darnell *et al.* 2005: 86-90). Scholarly approaches in analysing – and deciphering – the Indus script often fail to properly contextualize and situate the Indus writing system in a time and place that is specific to its initial appearance and subsequent developmental periods. Researchers have tried to relate the Indus script to elements of these other writing systems, often without giving due consideration to the scholarship on the matter. A clear understanding of the contemporaneous ancient writing systems will better serve to point out each of the theoretical shortcomings – and strengths – of these decipherment attempts, which to date have not been accepted in the field.

Chapter 2 will examine a) the Indus script source-books, meaning the "sign list" databases, corpora and concordances (e.g., catalogues, charts); the essential tools used by Indus epigraphists, and b) the Indus epigraphic perspectives (or schools of thought), basically the

various analytical approaches used by researchers in their attempts to decipher/understand the Indus script.

Chapter 3 will then examine the question of North East Africa (pre-dynastic Egypt), Mesopotamia, and Elam, as newly emergent valid frames of reference in making sense of the Indus script's origin and/or cultural sphere of influence. Sections in this chapter will include an examination of a) Mesopotamia-to-Indus trade linkages, and b) African-Asian interaction in Antiquity, meaning to explore Afrocentrism as a valid frame of reference (in attempting to understand the genesis of the Indus culture/script). The Conclusion will summarize the contributions of the thesis and will be followed by an Appendix and the Bibliography.

Chapter 1: **The Indus Valley Civilization & Script**

1.1 **Situating the Indus Script:** *Archaeology, Historical Context & Periodization of the Indus Valley Civilization*

The extent of the Indus civilization[4] or Harappan culture (named after one of its principle sites, Harappa) in the 3rd millennium BC context is vast. Spreading over a geographic area measuring an impressive 1.25 million sq km (Agrawal 2007: 63), the Indus civilization is larger than any other of the contemporary empires of its day, including the Mesopotamian, Egyptian or Chinese Bronze Age civilizations (McIntosh 2002: 7; Agrawal 2007: 1). Noting the impressive cultural uniformity of the Indus civilization, Sir Mortimer Wheeler (1968: 98) once remarked that the Indus civilization exemplifies "the vastest political experiment before the advent of the Roman Empire."

Archaeological discoveries have established that the Indus civilization was centred in the north-western region of the Indian Subcontinent, mainly confined to the Indus Valley and Saurashtra regions, including Kutch[5], with a large number of Indus sites on the dry Ghaggar-Hakra system; the latter was a system which had probably joined the Indus or the Nara Rivers in the past (Agrawal 2007: 63). Translating this into modern geographic markers, this means that the Indus civilization encompassed most of present-day Pakistan as well as the western states of India, and extended as far as south-eastern Afghanistan and the easternmost part of Iran's

[4] The Indus civilization is also frequently referred to as the Indus-Saraswati civilization or the Indus Ghaggar-Hakra civilization, the former name based on a possible identification of the Ghaggar-Hakra River with the mythical "lost Saraswati" River of the Nadistuti sukta in the Rig Veda (McIntosh 2002: 24). Thus, my preferred use of a more simplified "Indus civilization", as McIntosh (2002) herself puts it, "[…] should be seen as an abbreviation in which the "Saraswati" is implied" (Ibid. 24).

[5] "Kutch" is the more common English spelling of a place-name that on many maps and in other sources is also spelled/transliterated as Kachchh, Kachchha, Kacch, and Cutch.

Baluchistan province (see Fig. 1.1) (Agrawal 2007: 4-144; B. Allchin 1997; R. Allchin 1995; Kenoyer 1997, 1998; Possehl 2002).

The map of the Indus archaeological sites shows that the boundaries are Sutkagendor (Makran) in the west, Alamgirpur (UP) in the east, Manda in the north, and Bhagatrav, in south Gujarat, in the south (see Figs. 1.3 and 1.8) (Agrawal 2007: 63). These sites map out a distinct geographic region which lies at the intersection of two major zones: the dry Iranian plateau and the largely tropical South Asian peninsula, dominated by monsoon climate (Kenoyer 1991: 340-41; McIntosh 2008: 9-26). It is here that the Mature period of the Indus civilization (usually termed the Mature Indus – or Mature Harappan – period) first emerged between 2700 and 2600 BC (McIntosh 2002: 25-26).

To the west of the Greater Indus Region[6], the mountains of Baluchistan rise out of the eastern edge of the arid Iranian plateau, thus forming a natural border with the Indus Valley civilization. Located further west of the Iranian plateau are the Zagros mountains, forming its westernmost boundary, and beyond it lies the Mesopotamian plain. Because of the natural geological formation which forms a natural "wall" separating the lands of the greater Indus River basin from that of the Iranian plateau (and beyond), this area is traditionally termed the Indo-Iranian borderlands (McIntosh 2008: 9-26).

The formative stage of the Mature Indus civilization of the middle and late 3rd millennium is dated to the second half of the 4th and early part of the 3rd millennium BC (Allchin & Allchin 1982: 131), and can be attributed to the long interplay among the developing regions found east of the Indo-Iranian borderlands during this time. Because these developments started around the second half of the 4th millennium BC, this historical period is generally referred to as "the

[6] The use of the expression "Great Indus Region" in reference to the vast area encompassing all of the archaeological sites belonging to the Indus Age is not my own innovation, but rather it is the standard term currently used by researchers (e.g., Possehl 1999).

beginnings" of the Indus Age, or more specifically the Early Indus period (Possehl 1999; Allchin & Allchin 1982: 131-65).

In 1949, radiocarbon dating was invented by the physicist Willard Libby, a tool which is credited as having sparked a revolution in archaeology (McIntosh 2002: 25-26). The use of radiocarbon dating actually made it possible to date the surviving organic materials (i.e. bone, wood, shell) from any given archaeological site. As Jane McIntosh (2002) puts it, this absolute dating technique was much more reliable than the previous dating techniques which were more dependent on educated guesswork by "relying on indirect or contextual methods such as stratigraphy and association or comparison with dated artifacts" (ibid. 25). One of the many benefits of the new dating technique was that it enabled researchers to accurately date cultures individually, instead of solely on the grounds of cross-cultural comparisons (ibid. 25-26). Researchers would henceforth now be scientifically assisted "to build up a clear picture of how cultures related to each other in time" (ibid. 25).

The increased reliability of radiocarbon dating permitted archaeologists to date the early farming settlements in the Indo-Iranian borderlands to the 5th millennium BC (ibid. 25-26).[7] It also further assisted researchers to firmly establish that in fact these same borderland communities – which would finally give rise to towns in some areas during the 4th millennium – were culturally related to later communities of the second half of the 4th millennium BC, which, in turn, are now accepted to have formed the nucleus of those Early Indus settlers who colonized the Indus Valley river basin in ca. 3500 to 3000 BC (McIntosh 2002). Radiocarbon dating was instrumental in laying down much of the chronological groundwork exploring what could best be

[7] Part of this chapter 1.1., specifically relating to the cultural continuity established between these early Indo-Iranian borderland communities (5th millennium BC) and the Early Indus settlers (4th millennium BC), appear in P.D. LeBlanc (2012b) "Aryan Culture and Language: A Possible Candidate for the Linguistic Identity of the Indus Civilization and Script." *The Inquestia Times.* Online article made available by author, dated Dec. 2012.

described as complex regional networks of interplay that formed the " beginnings" of the Indus Age (ibid. 25-26; see also Possehl 1999; Allchin & Allchin 1982: 131-65).

The cultural continuity that links these cultures over time and space, from as far west as the eastern edge of the arid Iranian plateau (belonging to the 5th millennium BC era) to those belonging to the early Indus settlers (toward the end of the 4th millennium BC) reveals one rather complex socio-cultural network of people steadily moving eastwards in the direction of the Indian Subcontinent. This striking cultural continuity has led archaeologists to speak of the Indus civilization no longer to be clearly defined in terms of its more "classic" and easily recognizable Mature (Harappan) period, ca. 2600-1900 BC (Possehl 2002), but rather, researchers view the Mature Harappan period as a later phase of development of the great Indus system, and thereby as an integral part of a greater whole – a piece of a bigger puzzle – which is commonly termed the Indus Age. The Indus Age is periodized accordingly into distinctly separate periods and phases.

When discussing the Indus civilization, usually a more general timeline marks its "beginning" with an approximated date of 3000 BC while 1600 BC marks what is termed to be its final "collapse" (Possehl 1999; McIntosh 2002: 11). Yet, archaeological sites (e.g., the 5th millennium Indo-Iranian borderlands farming settlements) or finds related to the prehistory of the Indus civilization are represented on the larger chronological scale, meaning the one relating to the Indus Age (instead of the smaller one that relates only to the Indus civilization). The chronology of the Indus Age consequently represents both the chronological development of the Indus civilization (ca. 3000-1600 BC) along with its prehistory (meaning before 3000 BC).

It should also be noted that 1600 BC is often used to mark the collapse of the Indus civilization. This date, however, does not mark the *beginning* of the end (of the civilization).

Rather, 1600 BC marks the end of a long decline that had started centuries before, since already "by 1800 B.C. the Indus Civilization was collapsing, giving rise to a number of Late Indus regional groups" (McIntosh 2002: 25-26). It is important to bear in mind that while 1800 BC is the *earliest* possible estimated date for the collapse of the Indus civilization, the 1600 BC collapse date represents its *latest* possible date (the tail-end of the collapse period).

The Indus script was in use primarily during the Mature Harappan Period, ca. 2600-1900 BC (Possehl 2002). During this time, what are deemed to be more "sophisticated" inscriptions are found mostly on steatite seals and clay sealings (McIntosh 2002: 141). These "sophisticated" Indus inscriptions, appearing as early as 2600 BC, are considered to have been derived from a much earlier script, a Harappan protoscript with antecedents in the 4th millennium B.C. "when we find a few simple graffiti scratched on pots, probably the personal marks of the potters who made them" (ibid. 141). The origins of the Indus script can ultimately be traced to the proto-Indus writing found on these shards of pottery that date back as early as the Ravi phase, ca. 3300-2800 BC, or possibly even earlier still to 3500 BC (Bryant 2001: 178).

The great antiquity of the Indus signs has led many scholars to see the Indus script as an autochthonous innovation since it appears to have originated and evolved wholly in the Indus region (as opposed to having been imported from somewhere else). Nonetheless, there are still many propopents of various other historical and analytical perspectives that disagree with this viewpoint (as shall be further explored in Chapters 2 and 3). Nevertheless, proponents of all perspectives share some basic points. Firstly, they all adopt some sort of theoretical foundation which is in turn based on a particular historical perspective. Second, they use chronology to address a common set of questions: Who were the Indus people or culture? What language did they speak? Third, they all rely on the same source, namely, archaeology.

Although there can often be a certain level of subjectivity in the scholarly elaboration of historical timeframes, the ones included in this study – unless otherwise indicated – represent a "general consensus" among scholars.

1.2 **An Absolute Chronology:**——————————————— Towards an Historical "Roadmap" for the Indus Age

Since the (re)discovery of the Indus civilization in the latter half of the 20th century, most of our knowledge has come from archaeological sources. As previously explored, radiocarbon dating techniques have enabled researchers to establish an absolute chronology for the Indus Age. Early interpretations of the Indus civilization were based primarily on data coming from the major Indus urban centres. Interpretations of these studies, stemming from the first excavations (Mackay 1928-1929; Marshall 1931; Vats 1940) and regional surveys, had therefore ultimately "assumed a Near Eastern [Mesopotamian] or external stimulus and used simple diffusion models to explain its development" (Kenoyer 1991: 332).[8] Some of these early views can clearly be seen in Marshall's preliminary reports on the excavations at Mohenjo-daro and Harappa in which "prior to 1926 the term *Indo-Sumerian Civilization* was used to describe the remains" (Possehl 2002: 12).[9]

Recent studies have demonstrated otherwise. The scholarship of recent decades has replaced earlier interpretations that had previously treated the Indus civilization as being "monoethnic and monolinguistic" (Kenoyer 1991: 332). Scholars now view the Indus civilization and culture as

[8] These "early interpretations" that "assumed a Near Eastern or external stimulus" are given by Kenoyer (1991: 331) as the following: Fairservis 1956; Gordon & Gordon 1940; Piggott 1950; Sankalia 1974; Wheeler 1947, 1968.
[9] As a footnote to Marshall's use of the term *Indo-Sumerian Civilization*, as Possehl (2002) remarks: "In 1926 Marshall dropped the term in favor of *Indus Civilization* (never *Indus Valley Civilization*), noting that the previously used 'term ('Indo-Sumerian') is likely to imply a closer connection with Sumer than seems now justified.' " (ibid. 12; quoting Marshall).

diverse as that of ancient Mesopotamia.[10] Archeological discoveries lend support to this view. Kenoyer notes that "traders and even whole communities were moving between the various regions of Western and Southern Asia from a very early period, so that, by the time farming villages were established and long before the rise of [Indus] urbanism, overlapping networks stretched from Anatolia to the Indus Valley and from Central Asia to Arabia" (ibid. 332).[11] No longer can we assume "sharply delimitated cultural zones, although this misconception still interprets single sites as points of origin for innovations" (ibid. 332). Scholars presently speak of interaction networks (or systems) (e.g., metallurgy, ceramics, agriculture, animal husbandry) as the "end results of regional and multiregional processes" (ibid. 332).[12]

The re-evaluation process is in large part due to archaeological finds that have shed more light on the major historical developments of the Indus Valley Tradition.[13] Although this scholarly renewal has occurred mostly in academic institutions in Pakistan and India – where most Indus civilization studies are to be found – it has also involved foreign scholars (ibid. 332). New paradigms have been established (ibid. 332; in reference to Dyson 1982; Jacobson 1979); early "theories of migration and diffusion have been replaced by models of regional interaction (Chakrabarti, 1977) and indigenous development (Durrani, 1986; Jarrige and Meadow, 1980; Mughal, 1974b; Shaffer, 1982b)" (ibid. 332).

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[10] On the linguistic complexity of Mesopotamia, see Kenoyer (1991: 332) who refers to: Kramer 1963; Lloyd 1978; Oppenheim 1954, 1964. Regarding Mesopotamia's ethnic complexity, he refers to: Parpola *et al.* 1977, Parpola 1984; Yoffee 1988.

[11] In relation to these "overlapping networks", Kenoyer (1991: 332) refers to: Bar-Yosef & Belfer-Cohen 1989; Kohl 1979; Lamberg-Karlovsky 1975, 1985; Lamberg-Karlovsky & Tosi 1973; Meadow 1973; Tosi 1979.

[12] For a comprehensive definition of what constitutes an "interaction system", Kenoyer (1991) explains: "Interaction systems are avenues of communication which may crosscut traditions and phases. These are reflected by broad distributions of cultural traits within a brief period. Traditions are not totally distinct phenomena; traditions and phases are connected through economic, social, and ritual interaction systems" (Ibid. 334).

[13] For a definition of what is termed to be "the Indus Valley Tradition", Kenoyer (1991) writes: "The Indus Valley Tradition as defined by Shaffer (1991) includes all human adaptations in the Greater Indus Region, from around 6500 B.C. until 1500 B.C. and later" (ibid. 342).

Currently, it is Gregory Possehl's (1984, 1999, 2002) research that forms an integral part of the consensus view in relation to the chronological development of the Indus culture. His "absolute" chronology for the Indus Age (see Fig. 1.4) is seen as one of the more scholarly approaches to the sequential development (archaeological "phases") of the culture, because it draws on scores of radiocarbon dates and chronologies from various Indus dig sites over the years (Possehl 1999: 727-845; see also Kenoyer 1991: 335-38; see Fig. 1.5). Possehl inventories no less than 477 dig sites for the Early Harappan period alone, and 1019 settlements from the Mature Harappan period (Possehl 1999: 555, 714). In an appendix, he includes the data utilized to elaborate his chronology, a list of more than 1800 Indus-related sites (including post-Harappan sites) for which he provides (calibrated and uncalibrated) carbon dating for approximately 1500 (Possehl 1999).

Kenoyer (1991) gives us a succinct *breakdown* of the more common terms used by Possehl and other scholars in relation to the chronological development ("periods" and "phases") of the Indus culture and civilization. He writes that, presently, "the most common terms for the periods between circa 4000 and 1500 B.C. are Pre-Harappan, Early Harappan, Mature Harappan, and Late Harappan" (ibid. 333). The Mature Harappan period designates the "full urban phase of the Harappa culture or Indus civilization, as represented at the core urban centers (Dales, 1966; Fairservis, 1967)", although "there is evidence for urban centers and associated infrastructures both before and after the Mature Indus (Allchin and Allchin, 1982)" (ibid. 333). The Late Harappan is the "final phase" of the Indus civilization, "with local names for regional cultures, such as Cemetery H culture in Punjab and Jhukar culture in Sindh" (ibid. 333). Other common terms that frequently appear in discussions that pertain to the "Post Harappan" or "Post Indus" periods, include "later assemblages such as Gandhara Grave Culture (Stacul, 1989), Painted

Grey Ware Culture (Joshi, 1978; Lal, 1985; Mughal, 1984), Northern Black Polished Ware Culture (Roy, 1986), and the Black and Red Ware Cultures of peninsular India (Singh, 1978)" (ibid. 333). In regards to the importance of these latter Post-Indus cultures, as Kenoyer points out, previously they "were thought to have little to do with the Harappan, but recent research is revealing connections (Shaffer, 1988b)" (ibid. 333).

Because many of these various terms (mentioned above by Kenoyer) are "ill defined, overlapping, and at times contradictory", Shaffer has "proposed an overarching terminology that incorporates most regional features and also allows more specific definitions" (ibid. 333). The central concept Shaffer presents is that of a "Tradition" that possesses "persistent configurations of basic technologies and cultural systems within the context of temporal and geographical continuity" (ibid. 333-34; quoting Shaffer 1991: 442, after Willey & Philips 1958: 37). As identified by Shaffer, the three major cultural traditions can each in turn further be divided into eras and phases (see Figs. 1.6a, b, and 1.7a). Because these "[e]ras do not have fixed boundaries in time or space and more than one era may coexist within a tradition" (ibid. 334), they are therefore more comprehensive when used to understand various developmental phases of a culture.

Examples of these important eras include the *Early Food Producing Era* which "has an economy based on food production but lacking ceramics" (Kenoyer 1991: 334; in reference to Shaffer 1991: 442); the *Regionalization Era*, used to identify "distinct artifact styles (e.g., ceramics)" are clustered in time and space (without fixed boundaries) and "are connected by regional interaction networks" (ibid.); the *Integration Era* "shows pronounced widespread homogeneity in material culture, reflecting intense interaction between social groups" (ibid.); and, the *Localization Era*, which exhibits a "general similarity in artifact styles (comparable to

the Regionalization Era), indicating a continued, but altered, presence of interaction networks" (ibid.).

Existing alongside the Indus Valley Tradition were the Baluchistan and the Helmand Traditions (Shaffer 1992; Kenoyer 1991). Some useful maps are provided by Kenoyer (1991) in order to illustrate the major sites and interaction networks of the three major cultural traditions (Indus Valley, Baluchistan, Helmand) during both the Regionalization Era (see Fig. 1.7b) and Integration Era (Fig. 1.8). All of these maps and chronologies are based on radiocarbon dating, archaeological finds, which, while extraordinarily helpful, nevertheless present their own problems (Possehl 1999: 16).

For example, the "absolute" chronology for the Indus Age gives us highly scientific chronological divisions which are usually expressed in terms of "periods" or looser notions of "phases" and/or "stages". Yet, there are no written documents that have survived from this ancient period – or at least none that can yet be understood. There is basically no cross-referential material; nothing is known of the names of the Indus people, their "rulers", their cities, city-states, empires, or dynasties, or any other information that might corroborate the chronologies developed from the archaeological evidence. In short, we lack the basic ability to put a proper name to any of the archaeological periods, phases and/or stages that radiocarbon dating has helped us establish in a neat orderly fashion. For this reason, most of the terminology in relation to time and space for the Indus civilization have "become established through use but are not precisely defined" (Kenoyer 1991: 332). This means that even the designation of a particular date range with a specific name in the archaeological data could very well influence others' own interpretation of the material at hand.

It is quite specifically for this reason that Gregory Possehl (1999), in his elaboration of an absolute chronology for the Indus Age, attempts to minimize his own potentially subjective approach on the archaeological data by declaring that, personally, he was more predisposed to think of time in anthropological terms (Possehl 1999: 18). This predisposition explains his use of "phases" with "fuzzy transitions" instead of more clear-cut, or rigidly structured notions of chronological/historical "periods" (ibid. 18).

Possehl's absolute chronology includes all the various archaeological "stages" and "phases" of the Indus Age (see Fig. 1.4). As he sees it, his is a chronological scheme which "is basically linear, with patterns of change presented as though they took place simultaneously over vast areas of the northwestern region of the Subcontinent" (ibid. 25). But, one must bear in mind that this segmented approach is nothing more than a contemporary invention, nothing more than "archaeological devices" (ibid. 25) that make life a little easier for researchers.

These artificial separations in Possehl's absolute chronology for the Indus Age are consequently broken up – or individually segmented – time periods that do not correspond to any known (or recorded) historical events (e.g., successions in forms of rulership, empires/dynasties, signs of ancient wars, revolutions, invasions, etc…). Possehl warns that his timeline is not to be understood in terms of clear cut "periods" of succession and geographic uniformity (ibid. 25). He remarks (ibid. 25):

> [I]t seems unlikely that the Transition from the Early Harappan to the Mature Harappan began at the same time in all regions of the Harappan area, or that the transition from the Togau to the Kechi Beg Phase took place at the same instant wherever they were found. Archaeologists do not really know when, for example, the Kechi Beg Phase, or the one called "Togau" began. […] They are archaeological devices that have to be invoked in the absence of chronological precision. One would err with mistaken concreteness to believe otherwise. Thus, the thought that the Togau Phase, or any of the other Phases and Stages, began in a particular year, let alone a particular month, week, day, hour or minute, is absurd.

As Possehl indicates, the various "stages" and "phases" of the Indus culture seemingly *bleed* one into another, with "beginnings" in one particular site overlapping with the "endings" from another one. This makes the daunting task of having elaborated an acceptable chronology for the Indus culture particularly impressive, especially given the fact that Possehl is dealing with a multidisciplinary field with scores of scholars constantly re-evaluating dates from a gazetteer (or geographical directory) of the 2600 sites that have been uncovered (ibid. 26).

Nevertheless, alongside the more mainstream archaeological record in regards to the Indus culture/script – meaning the received scholarship which forms the concensus view around the subject matter – there exist some other distinct historical/epigraphic perspectives (to be explored in the following chapter).

For this reason, any attempt to decipher/understand the Indus script is inevitably infused with pre-conceived notions surrounding the Indus culture. Even if some epigraphic perspectives appear to contain higher levels of subjectivity, or cultural bias, than others, the fact remains that the scholars (would-be decipherers) all end up with results and/or theories that fulfill their linguistic/cultural predilections of choice (in relation to assigning a cultural/linguistic identity to the Indus culture/language/script).

For instance, the Indian scholar and archaeologist S.R. Rao (1982) proposes that the Indus script reveals "Sanskrit-like" terms. Although Rao's decipherment proposal has not been accepted by mainstream scholarship, it has found some acceptance by those who see the Indus culture as having been historically Āryan – meaning Indo-European (IE) and Sanskrit-speaking in nature – as opposed to those who see it as being qualified as Dravidian (non-IE). Hence, the debate over whether the Indus culture was a Sanskrit or a Dravidian-speaking one reflects the Āryan *versus* Dravidian debate with regard to modern India's national identity. These identity

politics constantly make their way into the studies pertaining to the Indus script and shall be explored in greater detail in the following chapters, but for now, it is simply important to note that in general terms the majority of North Indians identify with Āryan culture and/or language as opposed to South Indians who identify with Dravidian culture and/or language.[14]

Not surprisingly then, whoever sees the Indus civilization as the great achievement of their own ancient ancestors, undoubtedly supports an epigraphic perspective that befits this preferred view of history. When grouped together, such mutually-shared "biases" form what are generally termed as *schools of thought*. The result has been the creation of "a virtual warren of chronological schemes, so many that even an expert in the field has difficulty keeping up" (Possehl 1999: 16).[15]

In discussing the widespread acceptance of his absolute chronology (for the Indus Age) among his peers, Possehl (1999: 24) notes that one of the main reasons behind this success is his detachment from any personal presumptions about the history and culture of the Indus Age.

Another important reason for Possehl's success is that his work highlights some of the "uncertainties" that exist in the re-evaluation of a proper timeframe. Possehl (1999: 24) raises three critical points in relation to his own absolute chronology:

> **1.** A well run radiocarbon sample from third millennium contexts can be expected to have a one sigma deviation between 100 and 125 years, which is a swing of 200 to 250 years on the central point of the date. The resulting lack of precision in a radiocarbon chronology is a weakness inherent in the method and contributes to the appearance of a linear sequence of change.
>
> **2.** Some Phases have almost no dates at all, and yet the material has to be accommodated within the relative stratigraphy of a regional sequence, which means that some of the reasoning behind this chronology is necessarily an educated guess.

[14] As a referential aid to show the present-day distribution of the modern Indo-Āryan languages in what is primarily located in North India, see my Fig. 1.9a map. For the distribution of the unrelated Dravidian (non-Āryan) languages, see Fig. 1.9b map which shows them to be primarily situated in South India.

[15] Possehl (1999) gives some "good examples" that this fundamental "lack of agreement on the chronology and culture historical terminology of the Indus Age" (Ibid. 16) has caused, refers to chronologies proposed in: Fairservis (1956a: 349-53), Dales (1966c), Possehl (1977); Shaffer and Lichtenstein (1989), Shaffer (1992), and more recently in Allchin, B. and F.R. (1982) and Agrawal (1982a).

3. The relative stratigraphy of the Greater Indus Region is still incomplete. For example, in Gujarat there is a "missing millennium" separating the end of the Lustrous Red Ware Phase and the beginning of the Iron Age.

In light of these critical points it is clear that there is a real need for more archaeological research in order to further develop and re-evaluate the chronology for the Indus Age.

1.3 **Possible Contact Between Civilizations——————— & Writing Systems:** *Cross-Cultural Trade Links*

During the Bronze Age, in the 3rd and early 2nd millennium BC, maritime trade in the Arabian Gulf connected the Indus civilization to the political economies of Mesopotamia and other Gulf societies (Beaujard & Fee 2005; Edens 1992; U. Singh 2008: 166-69; Allchin & Allchin 1982: 183-90; McIntosh 2005: 133-46; Curtin 1984: 65-67). The flow of goods that connected the Indus merchants with the Gulf trade provides a framework for considering the possible cross-cultural contact between civilizations in the ancient world as it relates specifically to the Indus culture, language and the script in use during the Mature Harappan period, ca. 2600-1900 BC (Possehl 1996; 2002; McIntosh 2002: 141-42). Scholars have suggested links between the Indus script and the Proto-Elamite writing system, Mesopotamian cuneiform, and, albeit to a lesser degree, ancient Egyptian hieroglyphs (Parpola 1994; Wells 2011).

The Mesopotamian World-System

The rise of the state in ancient Mesopotamia – especially interrelated city-states – saw "the expansion of trade networks with neighboring regions" as early as the 4th millennium BC (Beaujard & Fee 2005: 416).[16] This expansion "may have resulted in the formation of a world-system, with southern Mesopotamia acting as a core" (ibid.). This does not mean that the Indian

[16] Parts of this chapter 1.3 have already been published in the form of an article, in LeBlanc 2012a.

Ocean was "a unified space" (ibid. 417) between the two civilizations and their commercial exchanges. Nevertheless, it can be stated that as early as the 3rd millennium, there existed a "world-system"[17] that "took shape between the urbanized societies of Mesopotamia, Elam, and Indus through maritime roads in the Persian Gulf and land routes that ran all the way to Turkmenistan and Bactria (ca. 2600-1800 B.C.E.)" (ibid.). (See Fig. 2.0 for geographical relationships of the four principle regions involved in the Gulf trade, and Fig. 2.1 for an overall chronology.)

As an active trading partner with the Mesopotamian state in the Indian Ocean maritime commercial zone (which extends into the Persian Gulf), the Indus civilization or *state*, was an integral part of this world-system. But because the Indus state "lay beyond the Mesopotamian periphery" it is considered to have "formed a center with its own periphery", instead of a peripheral zone in relation to Mesopotamian "cores" (Edens 1992: 121). Mainstream scholars believe that the "Mesopotamian-Indus relationship thus was center-center, and Mesopotamian center-periphery structures can be presented without detailed involvement of the Indus" (ibid.). As Christopher Edens rightly points out, this center-center *status quo* is quite important since the exact "nature of Indus interregional relations is hotly disputed (e.g., Shaffer [1982])" (ibid.).

The dispute arises because some archaeologists "have suggested that intermediary commercial links by sea and by land may well have been the cause of urban civilization in the Indus valley, not merely its result" (Curtin 1984: 66). The debate surrounding the possible influence of Mesopotamian urbanism, its appearance in the Indus Valley, and the emergence of

[17] The "world-system" is a term that can best be described as a commonly shared maritime trading zone, based on geographic factors, in which different exchange networks interrelate, and that can be further divided in subsystems with each one having its own "core" (or center) that determines the nature of trade with its peripheries (Beaujard & Fee 2005: 413). The term "core" refers to "the core states [that] establish a pattern of structural dependence on these exchanges among periphery states, thus perpetuating the existing class structure and preventing upward mobility" (Maoz 2011: 299).

civilization in the Asian Subcontinent, has unfortunately been overshadowed by the later European model of expansion in the Indian Ocean under British imperialists in the control of the Indian Subcontinent's resources and maritime zone. As H.B. Ray (2003: 91) notes, "[a]nother consequence of this colonial model has been the emphasis on the Harappans as suppliers of prestige and luxury goods to resource-poor Mesopotamia."

Although the Mesopotamian-Indus relationship is considered to have been center-center (Edens 1992: 121), this does not necessarily mean that the Indus culture was devoid of any cultural influence from their commercial ties with their trading partners. To say that the Indus state lay "beyond the Mesopotamian periphery" (ibid.) refers to the fact that the Indus trading network lies immediately east of Mesopotamian-controlled Elam, the easternmost territorial conquest in Sargon (2334-2279 BC) of Akkad's empire-building project (Teissier 1984: 12; Hamblin 2006: 73-101). Mostly through warfare and forceful subjugation, Sargon's "Akkadian empire" (2334-2190 BC) managed to spread the hegemony of the Mesopotamian trade system to other conquered societies in order to create a veritable world-system (Hamblin 2006: 73-101). Yet, even if the Indus state's center-center trade status was on an equal footing with the core Mesopotamian city-states, it may well have been subject to some of the same cultural influences as the Mesopotamian "peripheral" regions. It is important to bear in mind, however, that even though written-records of Sargon of Akkad's conquests document Elam as the easternmost Akkadian conquest (ibid.; see Figs. 2.2a & b), the role of the Indus civilization as a "peripheral" region or state is not clear cut.

For instance, in recent times, there has surfaced archaeological proof that Sargon's dynasty (in the late 2300s BC) maintained "colonies of merchants" or "trade fortresses" in regions where "there is no evidence of Akkadian rule" (Curtin 1984: 66). Evidence from excavations in

northern Syria and at Ashur in northern Mesopotamia has raised "at least the possibility of a militarized trade diaspora or trading-post empire stretching overland to the northwest" (ibid.). The Indus state does not lie to the northwest of the southern Mesopotamian city-states, the heart of the Akkadian empire, but the existence of an Akkadian "militarized trade diaspora" (ibid.) suggests that we should not be too quick to rule out a periphery-core relationship between the Indus culture and ruling Mesopotamia (insofar as Mesopotamian-to-Indus sociocultural influences are concerned).

Even if the Indus might possibly have been spared the lower "peripheral" status of other Mesopotamian-controlled societies, Mesopotamian center-periphery structures may still be relevant to understanding the Indus culture.[18] If the Indus state apparatus did indeed remain free of Mesopotamian socio-political subjugation and constraints, it nevertheless was economically interrelated with the world-system in the Gulf trade as an actively engaged trade partner. The transmission of societal influences does not always depend on "imperial" rule (e.g. the Akkadian empire harnessing the Mesopotamian state apparatus onto a subjugated society, such as happened to Elam). The ancient inhabitants of the Indus state could have been culturally influenced through their seafaring activities by travelling to distant lands in order to carry on some business with strangers.

[18] This, to a certain extent, runs contrary to Edens (1992), who states that because of the center-center Indus-Mesopotamian relationship, there is no real need for Mesopotamian center-periphery structures to be examined with any "detailed involvement of the Indus" (ibid. 121).

1.3.1 **Core-Periphery Relations of the World-System:**——— The Indus, "Core-Core" Beyond the Mesopotamian Periphery

The exploration of the "core-periphery relations" and the study of their economic cycles (that lasted several centuries) of the ancient exchange networks (subsystems) of the Asian and East African maritime zones helps in looking at some "possible origins" that may in turn provide "a key to unlocking the history of the region" (Beaujard and Fee 2005: 413). The "cores" of these ancient trade networks are the cities, which acted as the "nodes of the networks" and directed "production and exchange according to a hierarchical structure" (ibid. 414). In doing so, they played an important unifying role in the creation of the whole global trading- or world-system. "Urban points linked by long-distance trade create a string of conglomerations or relay points," which ultimately "form the spine of the system" (ibid. 414). Certain cultures of city-states may have "played a particular role in the evolution of the global system, especially through their ideological and institutional innovations" (ibid. 414).

The mechanisms of the world-system and their "core-periphery relations" indicate that the ancient "core" cities were not merely importers/exporters of products, but also vehicles to transmit religious and/or cultural ideologies. To illustrate this particular point, Beaujard and Fee (2005: 415-16) describe the different types of cross-cultural exchanges that could have possibly occurred between a culturally influential city "core" and its periphery:

> The export and import of products are closely tied to ideologies, themselves inseparably meshed with political forms. Once an ideology has become ascendant in a given network, it can influence the desirability of certain products and contribute to the determination of their commercial value. Thus, studies of world-systems must consider how the economic can be encompassed by the cultural and the sacred. The organization of marketplaces and their varying levels of importance are closely linked to social structures and to the politico-military competition of states and elites. A study of trade circuits requires a reconstruction of the political, economic, and religious history of the regions where the network operated, at both international and local levels. Built around religious sites that

> are also sites of production and trade, religious networks become spaces where, following the paths of pilgrims, wealth and information circulate.

Evidence of cross-cultural trade links between the Indus civilization and their other contemporary "civilized" neighbours has already been discovered (and shall be further explored in the following section). Such artefacts not only attest to the likelihood of contact between civilizations, but also serve as indicators of possible "outside" cultural influences in the ancient Indus River basin. As Beaujard and Fee note, the import and/or export of products is in itself enmeshed in the originating culture's ideologies, whether in relation to political, cultural or sacred values (ibid. 415-16).

Another possible indication of Mesopotamia's sphere of influence on the development of the Indus is the sudden period of urbanization which occurred during the civilization's Mature Harappan period, that is "the relatively abrupt appearance of a complex urban society that integrated at least culturally an enormous region that had previously contained several different archeological cultures" (Edens 1992: 119). This development is comparable to the appearance of urbanism (urban society) in other regions within the Mesopotamian world-system's sphere of interaction. One such region is the central Gulf region which in the late 3rd millennium BC also becomes suddenly urbanized (ibid. 120).[19]. Also comparable, is a "marked peak in the number of settlements and also in production of commodities for exchange (especially copper)" in the southeast Arabia region (ibid. 120). These changes in the four regions involved in Gulf trade around this same time period can be explained by their material connections in terms of trading activities (ibid. 120), as well as other activities that further help define the center- or core-

[19] The central Gulf region is defined by Edens (1992) as follows: "(2) the southern littoral and islands of the upper and central Gulf, and especially the islands of Bahrain and Failaka, corresponding to the Barbar archeological culture area and to the cuneiform toponym Dilmun" (Ibid. 118-19).

periphery trade relations between the "ruling" Mesopotamian "core" cities and the "peripheries" of the world-system. [20]

Other scholars view the urbanization in the Mature Harappan period (ca. 2600-1900 BC) as the result of a very long "gestation period" (Possehl 1990: 261; see Fig. 2.3). Possehl (1990: 261-62) writes:

> The Urban Phase of the Indus or Harappan Civilization stands out from other complex societies of the Bronze Age of Asia in several ways. […] The roots of sedentism and the village farming community have now been documented in the seventh millennium BC, at the site of Mehrgarh on the Kachi Plain of the central Indus Valley. The beginnings of food production and the village farming way of life, on which the Indus Civilization rests, were once thought to be relatively recent, implying a short period of gestation leading to the Harappan Civilization. This gestation period has now been shown to have been very long and deep, but punctuated at its terminus by a very rapid transition to urbanization encompassing something on the order of 100-150 years.

To summarize, Possehl's (1990) overall preference is to see Indus urbanism as a "very rapid transition to urbanization" following a very long "gestation period" (ibid. 261-62). This suggests that urbanism arrived in the Indus river basin without any direct "outside" Mesopotamian influence. Possehl, however, does finally concede that Mesopotamian trade may have played a role in the emergence of Indus urbanism. In this reconsideration, Possehl is influenced by R.M. Adams (1974), who

> has made an important contribution to the growing realization on the part of archaeologists that not all cultural change can be understood in terms of gradualist, evolutionary processes operating at the societal level, or by considerations of small-scale change punctuated by vaguely stated diffusionary processes. He suggests that research

[20] In their studies, Edens (1992) and Beaujard & Fee (2005) consecrate most of their research to explore these center- or core-periphery relations of the world-system. In relation to these "other activities" aside from the Gulf trade that helped define the center-periphery relations, Edens (1992) writes: "The Gulf trade represented a material connection between these four regions, and potentially a mechanism by which emerging conditions in one region effected changes in others. However, trade, whether maritime or overland, was not the only dimension of interaction between these and other regions of western Asia. Mesopotamian dealing with lands to the east also involved a range of diplomatic exchanges, elite marriages, cultural hegemony, political clientship, and warfare. Together with trade, all these activities defined center-periphery relations, whose nature and intensity altered as the constituent societies changed. The paired concept of center and periphery contrasts regional scales of sociopolitical complexity and economic production, implies interregional inequalities of economic, political, and ideological power, and locates important economic forces with respect to regional institutional and ideological structures" (ibid. 120).

> strategies be broadened and diversified to consider the creative potential of situations where the impact of goal-directed behavior on the part of individuals controlling key social positions is amplified, and to consider situations where the process of change is very rapid, leading to wholesale modification of the sociocultural structure.[21]

The level of influence Mesopotamian trade played in the emergence of Indus urbanism is not known, but if Possehl is right in following Adams's lead, then the existence of an Mesopotamian-Indus trade relationship could be more important than previously thought. Possehl (1990) remarks: "Trade, broadly defined, focusing to some degree on the Mesopotamian contact with ancient India (known to them as Meluhha) may have played a significant role in the century of paroxysmal change that seems to have led to the development of Indus urbanization" (ibid. 276-77).

In this line of reasoning, Possehl focusses on sociocultural elements (i.e. cultural beliefs, "religion") that the Indus culture may have acquired through Mesopotamian trade links. Possehl compares the acquisition of a "foreign" product (infused with the originator's culture) as a "seed" in the form of a "institutional setting" (ibid. 278). This "seed", however, is not to be seen as "a convenient point of entry into the sociocultural matrix (the system)" (ibid. 278). Rather, "trade and ideology" should be seen as "centers of action that 'energize' systems and promote a complex, interconnected process of change" (ibid. 278).

Based on Adam's approach, Possehl tries to make sense of the Indus process of urbanization as a "wholesale modification of the sociocultural structure" through the "impact of goal-directed behavior" (ibid. 276). He theorizes that the Indus sociocultural system of the Harappans may

[21] Possehl 1990: 276; Possehl goes on to give examples of such radical changes "leading to modification of the sociocultural structure" (Ibid. 276), giving the following examples found in Adams's work: "Perhaps the best examples are in West Africa in the 18th century, where rapid state formation took place within the context of slave trade and 18th and 19th century North America. Using a broadly conceived notion of trade, Adams holds that in these historical cases, and many others, "involvement in trade can bring in its wake, rapid massive changes in the structure and technological equipment of a society"" (Adams 1974:244; referenced by Possehl 1990: 276).

have been revolutionized by a new ideology or belief system that could in turn have affected or "energized" the Indus "institutional setting" (ibid. 277-79). Possehl argues that "trade and ideology" (acting as "centers of action") 'energize' social systems and promote a complex, interconnected process of change" that could have the capacity to change its "own dynamic sociocultural environment" (ibid. 277-79). What Possehl proposes is essentially an adopted ideology, such as religion, which revolutionizes from within, and in so doing, re-energizes the whole institutional sociocultural setting (ibid. 277-79). Possehl therefore suggests that the ancient Harappan worldview was substantially modified (or "energized" from within) in their exposure to cross-cultural goods/ideas obtained through their involvement in the Gulf trade. These "foreign" influences may have spurred urbanization.

Possehl's assessment of the archaeological culture of the Indus civilization is both striking and convincing; the formative stages which the Indus material culture reveals to have occurred prior to 2550 BC coincides perfectly with the emergence of the Mesopotamian world-system. Possehl's conclusions cohere with those of Beaujard and Fee's (2005), who observe that "[t]rade implies not only an exchange of goods, but also an exchange of knowledge, beliefs, and values. The power of trade to unify, create, and transform cultures can be appreciated only by viewing it from the widest possible angle" (ibid. 412).

There is a corresponding timeline that emerges when comparing the characteristic cultural achievements and uniformity of the Mature Harappan phase (ca. 2600-1900 BC) with that of the developmental period of the Mesopotamian world-system. When the Gulf trade continues expanding in scale all throughout the 3rd and into the 2nd millennia, at its most extensive, it "engaged four principal regions" (Edens 1992: 118-19) which are identified as—

> **(1)** southern Mesopotamia and Elam, with principal port cities at Ur, Lagash, and Susa;
> **(2)** the southern littoral and islands of the upper and central Gulf, and especially the

> islands of Bahrain and Failaka, corresponding to the Barbar archeological culture area and to the cuneiform toponym Dilmun; **(3)** the peninsula of southeastern Arabia, encompassing the southern coastlines both of the lower Gulf and of the Gulf of Oman as well as the mountain interior of Oman, a unity reflected in the archeological sequence of Hafit, Umm an-Nar, and Wadi Suq periods and by the cuneiform toponym Magan; **(4)** the Indus Valley civilization with its coastal settlements between Sutkagen-Dor and Lothal together with its riverine heartland, corresponding to the Harappan archeological sequence and probably to the cuneiform toponym Meluhha.
>
> Ibid. 118-19.

Major social changes experienced by southern Mesopotamia in the 3rd millennium did not simply alter the political economy of the area, but also made its ruling cities the "core" of the new world-system born out of these changes. Early state formation in the Uruk period (early Uruk, 4000-3500 BC) to later empire-building under Sargon of Akkad (2334-2279 BC), resulted in an Akkadian "empire" (2334-2190 BC) extending its military hegemony over many neighbouring regions (Hamblin 2006: 34, 73-101). These changes in the Mesopotamian political economy would result in the creation of "new forms of political and economic power" and "individual as well as institutional wealth" (Edens 1992: 119).[22]

These chronological developments in 3rd millennium southern Mesopotamia established the "core" cities (or city-states) of the Mesopotamian world-system. It is under Sargon's campaign of warfare (in the Early Dynastic III period [Edens 1992: 119]) that his "attempts at regional integration" succeeded in extending "a military hegemony over many neighboring regions" (ibid. 119). Sargon and his empire-building activities conquered neighbouring societies and their

[22] In order to gain a better understanding of these important changes in the Mesopotamian political economy, Edens (1992) explains: "During the 3rd millennium these regions experienced major social changes. In southern Mesopotamia, the Uruk period of state formation was followed by the Early Dynastic configuration of competing city-states. The attempts at regional integration through warfare that typified the later Early Dynastic III period eventually succeeded under the Akkadian "empire" founded by Sargon, which also extended a military hegemony over many neighboring regions. The Akkadian polity was followed by repeated cycles of political disintegration (the Gutian and Isin-Larsa periods) and integration (the Ur III and Old Babylonian states). These cyclical "events" sprang from, and in turn altered, the Mesopotamian political economy. In particular, the role of palaces and individual agricultural estates expanded at the expense of temples, community assemblages, and corporate estates, creating new forms of political and economic power; the merchants connected to these institutions could take advantage of new opportunities for individual as well as institutional wealth" (ibid. 119).

economies, and then incorporated them successfully under the political economy that had emerged in southern Mesopotamia. Thus, the Akkadian "empire" (2334-2190 BC [Hamblin 2006: 73-101]) united formerly separate commercial networks into one overarching Mesopotamian one, thereby creating the Mesopotamian world-system (see Figs. 2.0 and 2.2a). Its "core" cities (city-states) remained in southern Mesopotamia whence the "globalizing" system first emerged, whereas Sargon's conquest of Elam (in the Iranian plateau) brought into its economic fold participants as the Elamite capital-city of Susa, making it rank in importance alongside other principle Mesopotamian port cities such as Ur and Lagash.[23]

The Indus civilization was not at the "core" of the Mesopotamian world-system. As far as the historical record indicates, Sargon's conquest did not extend further east than the Elamite dynasty. Therefore the Indus civilization, which lies to the immediate east of Elam, is situated beyond the periphery of the Akkadian empire (see Figs. 2.2a & b). For this reason, the Indus state is considered (by world-theorists) to be a "core" in a center-center commercial relationship with a fellow "core", the Mesopotamian city-states (Edens 1992: 121). But even Edens concedes that this center-center relationship does not necessarily mean the Indus culture was devoid of any cultural influence from their commercial ties with their trading partners (ibid. 121).

Such rigid categorizations of "core-periphery" or "core-core" contradict some known ways in which culture, language and beliefs spread. Possehl's (1990) point that trade is an "institutional setting" is important to understanding the Indus culture (ibid. 277-79). Harappan traders were carrying on business in the Gulf trade ports on equal terms with Mesopotamia in a core-core relationship (Edens 1992: 121). Although they were not subject to Akkadian rule as inferiors (in what would have made the Indus into a "peripheral" subjugated role in relation to a ruling

[23] It if for this reason that Edens (1992) includes Elam in his first categorization of the "engaged four principle regions" of the Gulf trade which, beginning in the 3rd millennium, as previously explored, he gives as: "(1) southern Mesopotamia and Elam, with principal port cities at Ur, Lagash, and Susa" (Ibid. 118-9).

Mesopotamian "core"), the Harappan seafarers were nevertheless exposed to the influence of another culture. The exact impact of these "outside" influences, however, is unknown. Instead of seeing the sudden emergence of Indus urbanism as a consequence – or by-product – of direct "outside" influences that manifested themselves through trade, one might see it as the result of a revolution from "within" the individual – where the "possible role of ideology" has played an important part in the formation of the Harappan identity, uniformity of culture, among other characteristics of civilization (Possible 1990: 277-79).

The fact that the Indus civilization was very much involved in the Mesopotamian-dominated (world-system) Persian Gulf trade as an active trading partner does suggest that the Indus culture may have been affected/effected by Mesopotamian trade and exposed to Mesopotamian sociocultural ideas/values. Trade is key to understanding the Indus culture – and by extension its script, therefore this warrants in turn an examination of exactly what products the Harappan traders were loading onto their ships as cargo, and towards what distant port they were heading.

1.3.2 **Indus Urbanization and Trade Links**:——————— *Seafaring Activities of Harappans Aboard their "Ships from Meluhha" (Cuneiform)*

The process of urbanization that appeared in the river valley of the Indus encompassed complex trade linkages that extended well into the huge hinterlands of Baluchistan, Afghanistan, Iran, Central Asia, and peninsular India.[24] In addition, the Indus linkages extended right down to the Persian Gulf and beyond, to southern Mesopotamia (Asthana 1982; Kenoyer 1997; Chew 2007: 35; 1999: 94-5). While the Indus-Mesopotamian trade "may not have been as substantial as earlier held", other areas such as the Persian Gulf may have been important zones of interaction (U. Singh 2008: 164-65). The foreign long-distance trade connections of the Indus extended far beyond Mesopotamia, and all the way to the ancient lands of Dilmun (Bahrain) and Magan (Oman), two distant lands located in and around the faraway Arabian Peninsula.[25] (For maps of these local and long-distance Indus trade routes, see Figs. 2.4a, b, c & 2.5).

Some impression of the Indus trade, both local and long-distance, can be gained by a study of the natural resources and raw materials unearthed at several excavation sites (e.g. Mohenjo-daro). These discoveries indicate that the Indus traders obtained semi-precious stones such as lapis lazuli from the region of Badakshan in north-east Afghanistan, and turquoise from Iran, Kashmir, or further afield in Central Asia (Tibet); these natural resources were exported to areas as far away as southern Mesopotamia (Allchin & Allchin 1982: 186-87; Asthana 1982; Lal 1997; Chew 2007: 35; Clark 1977: 264; also see in *Appendix* Fig. 2.6, a map showing the list of natural

[24] Extracts of this Chap. 1.3.2 have already been published in the form of an article, in P.D. LeBlanc 2012a "The Indus Culture and Writing System in Contact: At the Crossroads of Civilization in the Mesopotamian Realm."

[25] As it is known in the Mesopotamian texts, Dilmun corresponds to modern-day Bahrain and the adjacent Eastern Province of Saudi Arabia (McIntosh 2002: 161; Possehl 2002: 219) while Magan (or Makan) is usually identified as Oman (or the Omani Peninsula), situated on the southeast coast of the Arabian Peninsula (Bienkowski & Millard 2000: 218; Crawford 1998: 153; McIntosh 2008: 184).

resources the Indus traders had access to). Amethyst likely came from Maharashtra; agates, chalcedonies and carnelians were also sought in peninsular India (from Saurashtra and West India), while jade was imported from somewhere a little further into Central Asia (Allchin & Allchin 1982: 186; Chew 2007: 35; Clark 1977: 264). Carnelian, a semi-precious stone used in the manufacture of beads and pendants, was a particularly important local resource (Allchin & Allchin 1982: 202; see also Chew 2007: 35).

Gold was likely imported by the Indus traders from the goldfields of north Karnataka (probably from Mysore) in south India (Allchin & Allchin 1982: 183-90; Clark 1977: 264); silver, too, could have come from distant parts of the Subcontinent (Clark 1977: 264), while northwestern India (Rajasthan and Gujarat) provided a more local source for copper than Afghanistan and faraway Oman (ancient Magan) on the southeast coast of the Arabian Peninsula (Allchin & Allchin 1982: 186; Chew 2007: 35; Asthana 1982; Lal 1997). Lead may have been obtained from either East or South India (Allchin & Allchin 1982: 183-90) and fuchsite from north Karnataka (ibid. 186). Alabaster was possibly obtained from a number of local sources both east and west, but Shahr-i Sokhta, a large-scale manufacture of alabaster vessels, was also a probable source for the Indus merchants (ibid.).

Timber also played an important part in the Indus trade, both local and long-distance. As a natural resource that was "harvested in the Western Ghats, the Jammu ranges, and the Punjab piedmont", Harappan timber was a major export to Mesopotamia for building and home construction (Chew 2007: 35). Teak came locally "from the Gir forests or from Panch Mahals, Surat, and the Dangs" (ibid. 35; see also Lal 1997), and deodar wood was obtained from as far away as the Himalayas (ibid. 35). In relation to the Indus timber trade, there was an elaborately established network of "[c]ollection centers on the western part of Gujerat […] to facilitate the

flow of timber for consumption in the Indus valley and for export via the Harappan coastal ports to the Gulf and beyond" (ibid. 25). The commercial activities of the Indus traders are poorly documented, but as Karl Moore and David Lewis (2009) state, "archaeology offers substantial evidence of the impressive infrastructure that once supported trading ties [from Indus] to Sumer" (55).

The Indus-Mesopotamian trading activities were conducted primarily by sea (Possehl 2002: 215-21; Moore & Lewis 2009: 55-6; McIntosh 2008: 168-81; also see in *Appendix* Figs. 2.4a, b, c). The important Indus port city of Lothal, on the Gulf of Khambhat (formerly known as the Gulf of Cambay, or Gambay) in the Arabian Sea, along the west coast of India, gives us a very good idea of the sheer scale of these maritime commercial activities and the economic importance they must have played for the Indus state. The port of Lothal was "an enclosed brick shipping dock over seven hundred feet long" that possessed a "sluice gate capable of loading ships at high and low tide" (Moore & Lewis 2009: 55). This is where the Indus traders would have loaded their cargo, such as gold, copper, and "the all-important timber from the Himalayas – a prized commodity along the flatlands of Mesopotamia" (ibid. 55). As in the Mesopotamian city-states "private merchants were an essential part of the Harappan economy" even if there is "not much evidence on how business was organized" (ibid. 55).

In the Ur tablets, the Mesopotamians describe the Harappan trading ships as originating from "Meluhha", their name for the Indus civilization (Kenoyer 1991: 360; Possehl 1990: 276-77; 2002: 218-21; McIntosh 2008: 183-87; Moore & Lewis 2009: 55-6). Corroborating the cuneiform inscriptions that mention "Meluhhan" (Harappan) traders and ships carrying on business in Mesopotamia, are the great number of Indus or Indus-related artefacts distributed in many Persian Gulf archaeological sites (Kenoyer 1991: 360; Moore & Lewis 2009: 55-6;

Possehl 2002: 221; see also in *Appendix* Fig. 2.4c, a map indicating where these artefacts have been discovered [sites marked with black triangles], and Fig. 2.7, quite specifically, maps the locations where Indus seals and inscriptions have been discovered). For instance, archaeological sites in and around the Arabian Peninsula, such as Maysar, Ra's al-Hadd and Ra's al-Junayz (in Oman, ancient Magan), Tell Abrak (on the border between the Emirate of Sharjah and the Emirate of Umm al-Qaiwain, United Arab Emirates), sites in Bahrain (ancient Dilmun), and even in Failaka have revealed evidence of the Harappan trade presence with some form of Indus inscription having been uncovered in these sites (as shown in previously referenced maps). Then, travelling onwards inland from the Persian Gulf into the lands between the Euphrates and the Tigris – into the heart of Mesopotamia – the dust from the ancient city-states of Ur, Nippur and Kish have also revealed to archaeologists many Indus artefacts; the same is true of Susa, the ancient capital of Akkadian-dominated Elam (Parpola 1994: 10; U. Singh 2008: 167).

In their examination of the importance of the Indus-Mesopotamian commercial ties, Karl Moore and David Lewis (2009: 46-62) look at the early origins of globalization. Their survey of the economic life of the Indus state mentions Harappan outposts discovered on the Makran coast: "The location of the ports of Sutkagen-dor and Sotka-koh near today's Iranian border show how important westerly connections by sea were for Harappan culture" (56). Even if there is little direct evidence of the type of vessel carried out to sea by the Indus traders, it is likely that the longest voyages were "made by timber-built boats, although boats made from reeds are depicted on a Mohenjo-Daro seal" (ibid. 56). Moore and Lewis (2009) argue that these timber-built boats "would have been much cheaper to make and could be quite seaworthy" whereas rowboats, "were better adapted for the rivers and short voyages, and their bigger crews incurred more costs" (ibid. 56).

Similarly, there existed a complex organizational structure surrounding the mining industries of semi-precious stones along with gold, lead, silver, copper, and tin. In many of these areas where these natural resources were exploited by the Indus traders, archaeologists have discovered evidence that the resource-based industry was developed "with the establishment of specialized Harappan outposts in these areas" (Chew 2007: 35). As in Mesopotamia, these Indus "gateway settlements or outposts were embedded in a wide periphery to facilitate the flow of goods and natural resources" (ibid. 35; refering to Asthana 1982, Algaze 1993b, Possehl and Raval 1989). Chew notes that these settlements "were established at locations near strategic routes/passes (e.g., Nausharo), located in hinterland areas close to the natural resources/commodities (e.g., Shortugai), or near to coastal areas to facilitate the maritime trade (e.g., Lothal)" (2007: 35). Undoubtedly, some of these Indus settlements faced some local hostility because they were fortified, such as Sutkagen-dor and Sutka-koh (ibid.). This detail adds to the important role they must have played for the Indus state, as "access points for the flow of natural resources much needed by the manufacturing economy of the Harappans" (ibid.).

There also existed "trading posts for the exchange of Harappan manufactured goods and some agricultural products" (ibid.). As noted by Chew, this essentially describes "the trading and production mechanisms circumscribing the exchange between the Harappans and its vast hinterland" in what are termed as "center-hinterland exchanges" that may have extended as far as Southeast Asia and East Africa (2007: 35). These commercial networks existed alongside the Indus center-center exchanges which occurred during the 3rd and 2nd millennium BC (ibid.; Edens 1992: 121).

Clearly the most remarkable of these Indus trading "outposts" or colonies is the lapis lazuli settlement discovered at Shortughai on the south plain of the Oxus in north-eastern Afghanistan

(Allchin & Allchin 1982: 168-69, 186-87). The most impressive aspect of the Shortughai Indus settlement is its remoteness in relation to the boundaries of the geographic extent of the Indus civilization, as well as its location beyond the high passes of the Hindu Kush mountain range (see Figs. 2.4c & 2.6). Aside from these Indus sites and settlements discovered in and around South Asia, literary evidence from Mesopotamia attests to an Indus settlement of merchants living in Ur (Allchin & Allchin 1982: 187), supporting the importance of the Indus-to-Mesopotamia trade network, with Dilmun (Bahrain) acting as a direct intermediary between the two.

Dilmun (Bahrain) in the Mesopotamian world-system was an entrepôt for sea trade between Mesopotamia and "outlying regions" (Allchin & Allchin 1982: 187; also, see Figs. 2.4a, b, c), and it held a particular trading relationship with its closer western neighbour on the southeast coast of the Arabian Peninsula – that of Magan (Oman).[26] Dilmun played a special role for the Indus traders (Possehl 2002: 219-20), and one of the main reasons for the important intermediary role it played was its geographic location, as a natural stopover for seafaring Gulf traders making their way inland toward southern Mesopotamian city-states with heavy cargo (Bibby 1969: 2). The many references in Mesopotamian cuneiform texts to this place as a commercial center suggest that "Dilmun was the operational nerve center for this early gulf and Arabian Sea trade" (Possehl 2002: 220).

Polished flint weights, such as ones in use in the Indus valley, have been unearthed in Dilmun, as well as several Indus seals[27], and other possible imports having originated from the Indus valley (e.g. ivory, carnelian, and copper [Bibby 1969: 192-93]). Of great importance is the

[26] The authors' use of the term "outlying regions" is undoubtedly what the world-system theorists would refer to as either "peripheral" areas (in relation to the Mesopotamian world-system's "center" or "cores", the city-states) or "outlying regions", which could also be considered to be "beyond" the world-system's "peripheral" areas.
[27] Bibby (1969: 192-93) makes reference to the 3 Indus seals he excavated in Dilmun.

discovery in Dilmun of two different ancient systems of weights and measures, and the use of the Indus standard alongside the standard of Ur (Bibby 1969: 188-93).[28]

What does all this mean in relation to Indus culture and language, and possible cross-cultural trading influences? First, the Indus traders were active participants in the (Mesopotamian-dominated) Gulf trade; and secondly, Dilmun (Bahrain) acted as a trade entrepôt for the long-distance traders. Unfortunately, the language of native Dilmunites is unknown. Nor is it known if they possessed their own distinct writing system – despite the fact that Dilmun was the economic "hub" of the Gulf trade. Large quantities of Dilmunite seals, tokens, and their impressions, have been uncovered. But, as far as archaeologists can tell, they were simply "used to stamp packages and bundles" and "used in a similar way to 'lock' doors closed with a lump of clay" (Crawford 1998: 94). Although some tokens or seals do contain some sort of graphic design, for the most part they do not qualify as any form of proto-writing, but are rather considered purely decorative or symbolic elements, such as arrow symbols and concentric circles (ibid.).[29]

Harriet Crawford looks at the reverse cross-cultural possibility, and explores the possibility of the Dilmunites having adopted the Indus script in the same way in which they had for the Indus system of weights and measures (ibid.). Such a theory is not impossible, for at the end of the 3rd millennium, locally fabricated seals from Dilmun and nearby Failaka begin to appear, Indus-

[28] Clark (1977) describes the Indus standard of weights and measures as follows: "A significant indication of the uniformity established over the whole extent of Harappan territory was the existence of a more or less standard system of weights and measures. The main linear units appear to have been feet (330-335 mm) and cubits (515-528 mm): the granaries of Harappa itself were 10 cubits wide and 30 long. The lower levels of weights were divisions or multiples of the traditional and still prevailing Indian unit of sixteen (e.g. 16 annas = 1 rupee). On the other hand, although Indian units differed from those prevailing in Sumer, it is significant that the bun-shaped type of copper ingot found at both Harappa and Mohenjo-daro was also favoured in Sumer" (Ibid. 264-6).

[29] Crawford's (1998) interpretation of these Dilmunite symbols: "Tokens with identical designs have been found at different sites and this suggests the possibility that they acted as authorizations or identification within some system which covered a number of settlements. For example, two tokens with a design of concentric circles decorated with little loops were found at Saar, while apparently identical ones come from the Barbar temple and the Qala'at" (Ibid. 94).

inscribed and –stylized.[30] Some of these seals incorporate Indus artistic elements on tokens, while others feature Indus signs alongside other stylistic elements (such as a Linear Elamite inscription over an image of an Indus-styled bull) (Glassner 1999: 135). Discoveries include "un cachet de Faylaka [qui] porte huit signes d'écriture harapéenne…, indéniablement de fabrication locale; le revers est en effet tout à fait caractéristique des cachets de Dilmun : une bosse centrale à trois lignes et quatre cercles pointés incisés" (ibid.). A second Dilmun type seal similar to the one found in Failaka has also been discovered; it contains "[u]n bovidé [qui] y est représenté, d'une facture très similaire à ceux que l'on trouve sur les cachets de Faylaka, et accompagné d'une grenade, représentée dans le champ ; au-dessus de l'animal sont figurés trois signes en élamite linéaire" (ibid.). These two distinct types of seal are remarkable pieces of epigraphic evidence that can be given as proof of the cultural hybridity at play between Harappans and Dilmunites. In addition, a locally fabricated cuneiform tablet has been uncovered in Bahrain dating approximately to the 20th century BC (ibid.).

The presence in Dilmun of these three different writing systems "de fabrication locale", (Linear Elamite, the Indus script, and the Mesopotamian cuneiform), ca. 2000 BC (Glassner 1999: 135-37), argues in favour of what archaeology has already proven: that Dilmun's role as a leading commercial center in the Mesopotamian world-system places it at the crossroads of civilizations as far as languages and culture is concerned.[31] As far as the reason for their usage,

[30] According to Glassner (1999: 135), it is specifically the "cachets ronds", that is to say a rounded seal style that begins to appear at this time in Dilmun and Failaka.

[31] As Glassner notes, the fact that archaeological discoveries reveal these three writing systems to be coexisting and simultaneously used in Dilmun at this time (ca. 2000 BC) is not at all inconceivable. He writes: "Trois écritures seraient donc simultanément en usage, à Dilmun, autour de 2000, deux d'entre elles sont notées sur des cachets [le linéaire élamite et l'harrapéen], la troisième [le cunéiforme mésopotamien] l'est sur des tablettes. Le fait est parfaitement concevable: ne serait l'origine étrangère des trois écritures, la situation est tout à fait comparable à celle de la Crète où, dans la première moitié du 2e millénaire, trois écritures coexistent dont l'une, notamment, de caractère linéaire (linéaire A), est notée sur des tablettes d'argile. On sait, d'autres part, que les Vay de Côte d'Ivoire utilisent également trois écritures" (1999 : 137).

Glassner suspects that it had something to do with the commercial trading activities occuring during this time period (ibid. 137). In relation to discoveries made in Magan (Oman), they are also quite significantly comparable to the Dilmunite finds, and there has even been unearthed in Magan a locally fabricated seal which contains the same Indus signs as one discovered in Lothal, the ancient Indus port city (ibid.).

It can therefore be observed that these archaeological finds do establish legitimate grounds for discussing the shared linguistic and/or cultural hybridity (or plurality) of the societies of Magan (Oman), Dilmun (Bahrain), and Meluhha (Indus). The fact that these same three lands are often mentioned together in the Mesopotamian (cuneiform) records – and even "often in the same sentence", as Bibby (1969: 219) remarks – lends support to the cross-cultural links between these ancient peoples. One might then think of the Indus businesspeople as similarly being exposed to these other contemporary writing systems, such as those of neighbouring Elam (either the proto-Elamite or later Linear Elamite script) or the Mesopotamian cuneiform that dominated the Gulf trade in which they were actively engaged. On the other hand, to try to make any sort of direct cross-cultural connection between Indus and Egypt during this epoch, is a completely different situation (as shall be explored in the following section, and again later in Chap. 3.2).

1.3.3 **The Question of Egyptian-Indus Trade Links:**——————— Simply Put: Are There Any?

There is no direct evidence of cross-cultural trade links between the Indus and Egypt. Such links can be made only by conjecture. Archaeological proof of trade between Egypt and Mesopotamia does exist. Artefacts that link Egypt with faraway Susa, in Elam (Iranian plateau) have been uncovered in the Nile valley. Elam, as previously explored, is one of the "peripheral" regions of the Mesopotamian world-system (see Fig. 2.4c). Located immediately west of the Indus civilization, the Elamites were in close proximity to them, so it is therefore not surprising that several Indus artefacts have been unearthed in Susa as a testament to their interrelated trading activities.

Unlike the Indus, Egypt was not an integral part of the Gulf trade. The Indus merchants traded in the western Indian Ocean's maritime zone, a commercial zone that "except during some rare moments of unity" can be further divided "between the Persian Gulf and the Red Sea" (Beaujard & Fee 2005: 413). The Persian Gulf and the Red Sea subsystems essentially each possessed their own "core" that "determined the nature of trade with its peripheries" (ibid. 413). While Egypt acted as a "core" in the Red Sea, the Indus acted as a "core" for the Persian Gulf maritime zone (ibid. 413). Such was the case during the early Dynastic period of Egypt (ca. 3050-2686 BC [Stocks 2003]), for Egyptian traders merely ventured out into the Red Sea commercial zone to purchase timber in the Levant (Demand 2011: 85-6), and as far as we know, not much else. The rest of their trading activities during this time were conducted along in the Nile in Egyptian core-hinterland trading activities in Nubia (for ancient Egypt's main imports, see Fig. 2.8.). Scholars such as B.K. Gills and A.G. Frank (1993), however, argue on economic grounds that it is the confluence of Mesopotamia and Egypt that initially gave birth to the world-system "some time in

the early or mid-third millennium BC, that is by 2700-2400 BC" (ibid. 16). This date coincides with the beginning of the Old Kingdom period, ca. 2686 BC (Stocks 2003), when Egypt attained its "first great peak of Egyptian civilization and in all essentials the matrix of the entire culture" (Johnson 1999: 34).

Notwithstanding opposing academic views on the subject of when the confluence occurred, ancient Egypt was not one of the main players in the world-system that formed in the 3rd millennium in the Indian Ocean. Popular scholarly consensus holds that the world-system was initially formed by the most commercially dominant of these forces, "the urbanized societies of Mesopotamia, Elam, and Indus through maritime roads in the Persian Gulf and land routes that ran all the way to Turkmenistan and Bactria (ca. 2600-1800 B.C.E.)" (Beaujard & Fee 2005: 417).

Some archaeological discoveries, however, suggest that this 3rd millennium world-system may have included some trade routes leading into East Africa. A copal necklace has been uncovered in a tomb at Tell Asmar (near Baghdad) and dated to 2500-2400 BC (Beaujard & Fee 2005: 417); this object likely came from North East Africa, more specifically from the vicinity of Zanzibar (ibid.).[32] The discovery of such an artefact (among others) has forced scholars to rethink the geographic extent of the Mesopotamian world-system. If objects such as this copal necklace can be proven with certainty to have made their way into the complex interrelated networks of the Mesopotamian world-system, as far as Baghdad, then it could reasonably be assumed that trade links existed between other regions (e.g., Indus). Yet, no artefacts like these have been discovered so far in the thousands of Indus archaeological sites.

[32] Beaujard & Fee 2005: 417: On the subject of the Tell Asmar "copal necklace" references, the authors refer to the following: C. Chase-Dunn and T.D. Hall, "Comparing World-Systems to Explain Social Evolution," in Denemark et al., *World System History*, p. 106; C.; C. Meyer, J.M. Todd, and C.W. Beck, "From Zanzibar to Zagros: A Copal Pendant from Eshnunna," *Journal of Near Eastern Studies* [1991]: 296-297.

Other discoveries made in support of North East Africa's inclusion in the world-system include archaeological finds unearthed in Egypt's Nile Valley. Cylinder seals and pottery with Near Eastern origins uncovered in Egypt belong to pre-dynastic times, prior to 3050 BC (Stocks 2003). Furthermore, the semi-precious stone, lapis lazuli, was brought into Egypt by Elamite traders from the faraway mines of Badakshan in north-east Afghanistan (Moorey 1999; see Fig. 2.8).

These archaeological finds testify to trading activities between Egypt and Mesopotamia in the late 4th millennium (Pre-Dynastic period), even if these are little-understood (McIntosh 2005: 326). Such an Egyptian involvement in the Mesopotamian-dominated Gulf trade could then theoretically link the Indus commercial network and culture through its common association with neighbouring Elam. Thus, although there is no direct evidence of Egypt-Indus trade links, indirectly Egypt can be linked with Indus through Elam, a mutual trading partner.

As alluded to earlier, this view is held by B.K. Gills and A.G. Frank (1993), who compare the world-system to a flowing river:

> The problem is how to set a fixed point of origin when in fact no such single point of origin exists for the river system as a whole. In the case of the world system it would be possible to place its origins far up stream in the Neolithic period. However, it may be more appropriate to discuss the origins further down stream, where the major branches converge. [ ] By the river-system analogy, we may identify the separate origins of Sumer, Egypt, and the Indus as at some time in the fourth to the third millennia BC. The world system begins with their later confluence […] at around 1500 BC. [when] the confluence of "Egypt" and "Mesopotamia" gave birth to the world system.
>
> B.K. Gills and A.G. Frank 1993: 181-82.

Gills and Frank (1993) use the criteria of "interpenetrating accumulation", to suggest that the confluence may have "occurred some time in the early or mid-third millennium BC, that is by 2700-2400 BC" (ibid. 181-82). As opposed to scholars who see the world-system as having been initially formed between the urbanized societies of Mesopotamia, Elam, and Indus through

maritime roads in the Persian Gulf and land routes that ran all the way to Turkmenistan and Bactria, ca. 2600-1800 BC (such as proposed by Beaujard and Fee [2005: 417]), Gills and Frank (1993) posit a "single system" which united Egypt, Arabia, Mesopotamia, and the rest of western Asia from the 3rd millennium BC – an earlier confluence that would have occurred about 2700-2400 (ibid. 181-82). Although there is some opposition to this inclusion of Egypt in the world-system (as voiced by Beaujard and Fee 2005: 417), archaeological discoveries support its inclusion in the early formation of the world-system (i.e., lapis lazuli and Susiana art discoveries made in the Nile Valley [Moorey 1999]; discoveries that attest to the trade linkages between pre-dynastic Egypt and the Iranian plateau).

If pre-dynastic Egypt is included in the early developmental stages of the world-system, North-East Africa could theoretically be part of the Indus culture/script equation. Some scholars are quick to rule out any possible cross-cultural influence between Egyptian hieroglyphs and the Indus script, while others readily make comparisons between the two writing systems. Some epigraphists see (e.g., John Ray 1986) an Elamite influence in the Egyptian hieroglyphs; these views interconnect with the trading realm of Indus merchants who were actively trading with neighbouring settlements in the Iranian plateau as well as with Elam (the possible implications of these cross-cultural links will be further explored in Chap. 3.2). Archaeological finds that attest to the sheer complexity of trade networks of the world-system also establish the existence of an ancient trade corridor that stretches out from the littorals of the 3rd millennium Indian Ocean, linking Asia to Africa, leading to Egypt and the Mediterranean world and into the Red Sea commercial maritime route (McIntosh 2008). These interrelationships between ancient civilizations make pertinent any comparisons drawn between their writing systems.

Chapter 2: Indus Epigraphic Perspectives

2.1 **The Indus Script Source-Books**:——————————— "Sign List" Databases, Corpora & Concordances

Approximately 3,700 Indus-inscribed objects have been discovered so far (McIntosh 2008: 365). Because few people have direct access to these objects, researchers often rely on published lists and databases (McIntosh 2008: 365).

The first images of the Indus inscriptions appeared in John Marshall's three-volume work *Mohenjo-daro and the Indus Valley Civilization* (1931). Marshall was the Director-General of the Archaeological Survey of India (ASI) from 1902 to 1928 (Murray 2007: 236). From 1921, ASI under Marshall's direction was responsible for the large-scale excavations of Mohenjo-daro and Harappa, the two greatest cities and most important Indus sites (Higham 2004: 214).

In 1939, Pran Nath published *Inscriptions of Harappa & Mohenjodaro* in which he presented six charts containing transcriptions of various Indus-inscribed objects taken from both the Government of India's Department of Archaeology as well as from John Marshall's catalogued photos of the inscriptions (Nabi Khan 1978: 119).[33] Although Nath's proposed decipherment has not been accepted by others in the field, his transcription charts are the first generated Indus "sign lists".

Another standard source-book for Indus script researchers is Iravatham Mahadevan's *The Indus Script: Texts, Concordance and Tables* (1977). Mahadevan, an already respected authority on Tamil-Brāhmī inscriptions, wrote this seminal work which is now credited to have laid the

[33] Quite specifically, in his references to the charts, Nath [1939] references only one (Vol. III) of the three volumes of John Marshall's (1931) work.

groundwork for the contemporary study of the Indus script.[34] In her description of the methodology used by Mahadevan to categorize Indus signs, Jane McIntosh (2008: 365) notes:

> Mahadevan (1977) compiled a concordance in which he listed all the texts then available, using a font generated to match his sign list. He accompanied this with background information on the settlement where each text was found and the design (or field symbol) on each seal, along with some analyses of the frequency and distribution of individual signs, within the texts and with respect to site and field symbol.

The only recent publication of this kind was undertaken by Asko Parpola and his collaborators in the 1980s. After having produced several of their own Indus sign lists or concordances, as early as 1973, Parpola and his collaborators were "dissatisfied with the quality and completeness of the data with which they were working" (McIntosh 2008: 365).[35] This dissatisfaction prodded Parpola to produce a complete photographic record of all known Indus-inscribed archaeological material (McIntosh 2008: 365). The final result is the UNESCO-assisted publication of the three volumes of the *Corpus of Indus Seals and Inscriptions* (CISI).[36]

The first volume of the CISI (Joshi & Parpola 1987) deals with the collections of Indus-inscribed material in India; the second (Shah & Parpola 1991) is devoted to those located in Pakistan; the third (Parpola *et al.* 2010) concerns, a) the remaining unpublished seals and inscriptions from Mohenjo-daro and Harappa, and b) material from sites and sources outside South Asia. A fourth and final volume to the CISI is said to be in preparation, but it has not yet appeared.

Another important reference tool was devised by Canadian scholar Bryan Wells (2011). Wells has produced his own computer-based (electronic) corpus of the Indus script's "characters" (or

[34] Most notably, it was Mahadevan's (1977) concordance which was used by Gregory Possehl in his *Indus Age: the writing system* (1996).
[35] In reference to these early concordances published by Parpola and his collaborators, Jane McIntosh (2008: 365) refers to the following publications: Koskenniemi, Parpola, and Parpola 1973; Koskenniemi and Parpola 1979, 1982.
[36] The three volumes of the CISI were published under the editorship of Joshi & Parpola (1987: Vol. 1), Shah & Parpola (1991: Vol. 2), and Parpola *et al.* (2010: Vol. 3).

"signs") and through a statistical analysis of their sequencing (as they appear in the original inscriptions) a software program gives a compilation of statistics regarding sign list distribution and use. Statistical probabilities are generated with the aid of a software program specially designed for this purpose. Wells then compares his electronically generated statistical finds to other known linguistic databases (of the world's languages) and based on these comparisons concludes that the Indus writing system is linguistic in nature (as opposed to non-linguistic sign systems, i.e. medieval heraldic signs, non-verbal ideograms). Wells's database contains a detailed sign list and interactive software, called the *Interactive Concordance of Indus Texts* program, or simply ICIT 5.2 (Wells 2011). Although the electronic version of this corpus of Indus signs (database) is not available to the public, Wells does include in his published dissertation a "user-friendly" printed version of his "database" in Appendix (ibid. 165-233). In comparison to Mahadevan's work and the CISI publications, Wells's record-keeping methodology gives more detailed information on the find context of each Indus inscription.

2.2 **The Indus Script as the Archetype of the Brāhmī Script**

Aside from the undeciphered Indus script, ca. 2600-1900 BC (Possehl 2002), the other most ancient writing system of the Indian Subcontinent is the well understood Brāhmī script – used by Indo-Āryan speakers to write down the Vedas – which dates to a much later timeframe, at least the early 4th century BC (U. Singh 2008: 42-50).[37] Thus there is nearly a thousand and a half year gap between the latest disappearance of one script and the earliest appearance of the other. Some scholars see the Indus script as the proto-historic form of the much later Brāhmī script. The

[37] In addition to having been the most anciently known script used to write the Sanskrit holy Vedas, aside from this prestigious role, the Brāhmī is also the oldest member of the Brahmic (or Indic) family of scripts ancestral to most South and Southeast Asian scripts (e.g. Devanāgarī, Tamil Brāhmī) as well as several Central Asian scripts (e.g. Tibetan, Khotanese) (U. Singh 2008: 42-50).

scholars who belong to this school of thought base their views on an original idea first introduced by Alexander Cunningham (1877). Cunningham's views, however, reflect a total ignorance of the existence of the Indus Valley civilization, for he had actually mistakenly misidentified a Harappan seal as a Brāhmī inscription.[38] For this reason, the theoretical approach devised in the early 1930s by scholars Pran Nath (1931) and Stephen Langdon (1931) should receive full credit for this school of thought. This theory receives support from such scholars as G.R. Hunter (1934), D.C. Sircar (1957), R.B. Pandey (1965) and Iravatham Mahadevan (1970). Raymond and Bridget Allchin (Allchin and Allchin 1982) also fit into this particular categorization.

These scholars disagree with the two leading Indus scholars of their times, John Marshall (1924) and Mortimer Wheeler (1953). As noted earlier, Marshall (1931) compiled the first catalogue of Indus inscriptions. Mortimer Wheeler – like Marshall – had occupied the DG position at ASI, from 1944 to 1948 (Trigger 1989: 181). Wheeler's archaeological work, undertaken in the 1930s helped to paint a much clearer picture of the Indus cities and civilization as a whole (McIntosh 2002: 21). Whereas Marshall established the great antiquity of the Indus civilization, and by extension, its script, Wheeler uncovered the widespread standardization process discernible in so many areas of the Indus culture and recognized it as a hallmark of civilization (ibid. 21).

[38] Cunningham, as the "father" of the Archaeological Survey of India, was the first explorer to have discovered some material belonging to the Indus civilization while excavating at Harappa in the 1850s. However, at the time of his discoveries he did not recognizing great antiquity of the Indus sites and his finds (McIntosh 2002: 17-18). Only much later, in the 1920s, did John Marshall finally attest to the great age of the Indus sites (ibid 17-18). Basically, when Cunningham unearthed the first Indus-inscribed seal from his excavations at Harappa, nothing was known of the Indus civilization – it has not yet been "discovered". It is usually Marshall, in the 1920s, who bears the distinction of being the "discoverer" of the Indus civilization. Cunningham, as early as 1877, had therefore unknowingly estimated the Indus seal's date erroneously as not being any later than 500 or 400 B.C. (Salomon 1998: 20). In having found what was then a single inscribed seal from the site of Harappa, it is now a matter of historical record that Cunningham, in his 1877 work concerning the *Inscriptions of Asoka* (Ibid. 61) misidentifies the one and only Harappan seal he found and proposes the Indus script on it to be a possible ancestor of the Aśokan Brāhmī (ibid. 20).

Wheeler's work confirmed that there was a standard plan being used to construct the distant Indus cities, and discovered the first recorded use of the gridiron plan in the ancient world.[39] He had also uncovered the presence of a similar standardization process in the construction of the ancient drainage systems of the Indus cities, along with a notable similarity of artefacts uncovered over the great geographical extent of the Indus civilization (McIntosh 2002: 21). This apparent standardization process also extends itself to other areas of the civilization. The Indus culture, as noted by Wheeler, can thus readily be seen in terms of its artefacts, such as pottery, stone, metal tools and beads – and this includes a standard process involved in the artisanal specialty of making and inscribing the Indus seals (McIntosh 2002: 21; Wheeler 1953: 86-125). In keeping with this uniformity in the ancient Indus arts and crafts, Wheeler concludes that the Indus script is a standard form of writing used by the Indus civilization (Wheeler 1953: 107). He also views it as a syllabic form of writing that is usually read from right to left, although at times boustrophedon (ibid. 107). Wheeler, however, does not ascertain there to be any relationship between the Indus script and any other contemporary (e.g. Egyptian hieroglyphs/hieratic, Mesopotamian cuneiform) or near-contemporary scripts (ibid. 107). Concerning this point, Wheeler shared the academic views of Marshall (1924) who agreed that the Indus script (ca. 2600-1900 BC) was totally unrelated to any other writing system (McIntosh 2002: 18-9), including the much later Brāhmī script of the early 4th century BC used by Indo-Āryan speakers to write down the Vedas (U. Singh 2008: 42-50).

Shortly after Marshall and Wheeler's pioneering work in the field, Pran Nath (1931) and Stephen Langdon (1931) proposed a relationship between the Indus-Brāhmī scripts, thereby undoing the consensus view that had been established by their predecessors.

[39] Quite specifically, Wheeler confirmed the standard use of the Indus gridiron plan after having completed excavations at Harappa and the smaller town of Chanhu-daro (McIntosh 2002: 21).

Despite its relative success, the Indus-Brāhmī school of thought faces two stumbling blocks: i) The nearly one thousand year gap between the disappearance of the Indus script, *c.* 1900 BC, and the earliest possible appearance of the Brāhmī script, in approximately the early 4th century BC (U. Singh 2008: 42-50); ii) the absence of an accepted decipherment scheme for the Indus script, despite the fact that the Brāhmī script is very well read and understood by scores of epigraphists. Further compounding the issue is the great polemical debate pertaining to the nebulous origins of the Brāhmī script itself.

Scholars that argue for an autochthonous origin of the Indus-to-Brāhmī scripts theorize that both writing systems are purely indigenous ancient "Indian" inventions. Richard Salomon (1998) suggests that the "indigenous" Brāhmī (Āryan/Vedic) script historical perspective has led to the view that the prototype of the Brāhmī script must be located in the Indus Valley (as the Indian Subcontinent's most ancient culture), thereby making the Indus culture, and its script, the homeland and cultural achievement of the Vedic Āryans. Salomon (1998: 19) comments that

> The origin of the Brāhmī script is one of the most problematic and controversial problems in Indian epigraphy. Most opinions on the question fall into one of two camps: the proponents of an indigenous Indian origin for Brāhmī, and those who see it as a borrowing or adaptation from some non-Indian (usually Semitic) prototype. Within each camp there are also several versions of the two principal theories […].

The academic debate surrounding the nebulous origins of the Brāhmī script has clearly fused itself to the one surrounding the earlier Indus script.

The more Indian "nationalist" camp that interprets the Indus script as an "indigenous" Indian predecessor to the Brāhmī "prototype" has received far less acclaim (ibid. 29). The Indus-Brāhmī school of thought and the various methods employed by their proponents are often discredited and termed as "speculative" by Western (mostly non-Indian) scholars (ibid. 29). Nonetheless, until the Indus script is deciphered to demonstrably prove otherwise, the Indus-Brāhmī faction will continue to be relevant to this ongoing polemical debate. As Salomon notes, the "various

theories of an indigenous Indian origin for Brāhmī are all more or less speculative, and hence impossible to either prove or disprove", but "it would be imprudent to dismiss them entirely" (ibid. 29-30). He also suggests that a relationship between the Indus and Brāhmī scripts "cannot be decisively ruled out […] until some significant progress toward the decipherment of the former is achieved" (ibid.).

Critically Assessing the Main Proponents

The main proponent of this school of thought is Stephen Langdon (1931). His work has been criticized by Western (non-Indian) scholars on the grounds that in arguing in favour of a relationship between the Indus-Brāhmi script, he rejects the theory of the Semitic alphabet's early developmental period. By contrast, the theory has received academic support from such reputed scholars as D.C. Sircar (1957), R.B. Pandey (1965) and Iravatham Mahadevan (1970).[40]

The main criticism pertains to Langdon's methodology. Langdon's points of comparison between the various characters found in the Indus and Brāhmī writing systems, are criticized as "superficial connections" (Salomon 1998: 20) that do not yield a successful decipherment proposal, nor do they ascribe any legitimate phonetic value to Indus "signs". In short, Langdon's efforts do not lead to a reading of any Indus inscription, although his view that the Indus script is autochthonous is accepted by many Indian scholars.

One major critic of the Indus-Brāhmī school of thought is Asko Parpola. In his seminal work *Deciphering the Indus Script* (1994), rather than seeing the Indus script as the original precursor to the Brāhmī, Parpola adopts the theoretical middle-ground, arguing for an initial Semitic-

[40] Concerning the "nationalist bias" of the Indus-Brāhmī school of thought, Salomon suggests that the pro-Semitic Western perspective on the origin of an ancient "Indian" script may also reflect an "imperialist bias" (Salomon 1998: 19). Salomon's exact words are the following: "It has been noted (e.g., S. R. Goyal in OBS 6-7) that nowadays most of the proponents of the theory of indigenous origin are Indians, while nearly all Western scholars subscribe to the theory of Semitic borrowing; and there is no doubt some truth in Goyal's comment that some of their views have been affected by "nationalist bias" and "imperialist bias," respectively" (ibid. 19).

borrowing for the Brāhmī script which was in time then further adapted and naturalized to better represent the sound values found in Indian languages (Parpola 1994: 56). Parpola thereby defends the traditional pro-Semitic hypothesis, and provides a chart of the development of the Semitic alphabet in order to illustrate its affinities to the Brāhmī characters. The aim is to demonstrate that the Brāhmī script forms an integral part of the long history of a firmly established tradition – the history of the alphabet (see Fig. 2.9 for a reproduction of Parpola's [1994: 37] comparison chart showing the stylistic similarities between the Brāhmī characters with other Semitic "alphabets").

Even if Langdon's analytical approach is often discounted, it has made an important contribution to the debate. The same cannot be said of Pran Nath's 1931 work, a decipherment proposal for the Indus script, which is often dismissed as "highly intuitive" and non-verifiable (Possehl 1996: 88-9).

2.3 The Late Indus Script, Predecessor to the Phoenician Alphabet

The Phoenician alphabet first appeared around the 13th century BC in what corresponds roughly to modern Lebanon (Garbini 2001: 101-19). This ancient Semitic writing system, inspired by the Egyptian hieroglyph and hieratic writing systems, used the principle of acrophony to attach sound (phonetic) values to pictographic signs in order to make them into syllabic letters. The Phoenician alphabetic is related to the earlier Proto-Sinaitic inscriptions that were found at the ancient Egyptian turquoise mine and temple in the Serabit el-Khadim area, in the mountains of the Sinai region (Egyptian-dominated Palestine) and datable to the 15th century BC (ibid. 105-7). The importance of the Phoenician script is its role as the parent-system to the Greek alphabet, ca.

the 1st millennium BC (ibid. 114-15), which in turn inspired our own Latin alphabet. By the ninth century BC, the Phoenician alphabet had "spread quickly beyond the borders of the homeland" to Greece and had also been "adopted by a variety of neighbouring tongues, including Aramaic, Hebrew, Ammonite, Moabite, and Edomite" (Markoe 2000: 112). Even if "[i]n each of these languages, the alphabet soon evolved along its own lines", there remained a "clear distinction" from the original Phoenician letters that may be seen in the use and shape of the letters (ibid. 112). Due to its dissemination in various forms, the ancient Phoenician alphabet is the most widely used form of writing in existence today and nearly all alphabets in the world descend from it.

Some scholars propose that the origins of the Phoenician alphabet are to be found in the Indus script's inventory of signs/letters, despite the absence of any valid historical framework on which to base any comparisons between the two distant writing systems.

Indus-Phoenician theorists disagree, like the Indus-Brāhmī theorists, they argue that the Indus script possesses an indigenous "Indian" origin. This view was first proposed by Shikaripura Ranganatha (S.R.) Rao (1979, 1982, 1991) as a challenge to the classical theory that the first Semitic alphabet was the 15th century BC Proto-Sinaitic script (Garbini 2001: 101-19). The Proto-Sinaitic script's "primitive" letters are largely accepted by scholars to have been Egyptian-derived or -inspired from either the hieroglyphic and/or hieratic writing systems (Gardiner 1916), and it is also considered to be the direct forerunner to the Phoenician alphabet which appeared a little later around the 13th century BC (Garbini 2001: 1916).

S.R. Rao's Theory & Method: An Indigenous Āryan Approach

S.R. Rao led many excavations all across India. Most important were discoveries of the sites of the great Indus cities of Rangpur, the submerged port of Dwarka (or Dvaraka, a.k.a. Kushasthali)

and Lothal. Lothal was a famous Indus-era port city and is one of the most important sites in India (S.R. Rao 1979, 1985, 1999). S.R. Rao is also the founder of the Society of Marine Archaeology in India (S.R. Rao 2001).

In his initial study of the Indus-inscribed seals uncovered in Lothal, S.R. Rao argued for graphic similarities between the Indus and old Semitic scripts (the ancient alphabets of West Asia) (S.R. Rao 1979, 1982, 1991; see also Bryant and Patton 2005: 180; Sreedharan 2007: 268). S.R. Rao ascribed phonetic values (sounds) from what he proposed were the descendant Semitic "letters" to their original parent script, meaning the Indus script's "signs". This method resulted in "Sanskritic" or Sanskrit-like readings, most specifically pertaining to numbers and ancient Āryan divinities.

S.R. Rao's analytical perspective places him squarely in the Indigenous Āryan camp; and in opposition to scholars who see the Indus civilization as ultimately being a Dravidian cultural achievement. These two opposing camps encompass the Dravidian vs. Āryan debate, a scholarly point of contention which situates itself at the crux of the Indo-Āryan Invasion theoretical debate (the following § 2.4 is devoted entirely to the exploration of this topic).[41] The Dravidian camp usually dismisses the possibility of the Indo-Āryan language as a viable candidate for the Indus culture on the grounds that (according to the Indo-Āryan Invasion theory) it entered the subcontinent at circa 1500 BC (Bryant and Patton 2005: 180-81), therefore after the Collapse of the Indus Valley civilization period, ca. 1800-1600 BC (McIntosh 2002: 25-6). For now, though, it is enough to say that S.R. Rao's claim of decipherment "is the best known attempt from the Indigenous Aryan school because of this scholar's preeminent status in Indian archaeology" (Bryant and Patton 2005: 180).

[41] A theory first proposed by Mortimer Wheeler, will be covered in greater detail in following section.

As noted earlier, the number of Indus-inscribed seals and objects so far uncovered total around 3,700 (McIntosh 2008: 365). The exact number of Indus signs that appear on these inscriptions, however, is unclear (Possehl 2002: 132), due to the fact that "what could be considered one [Indus] sign is open to interpretation" given the possible number of sign variants that may be present in the inscriptions (ibid. 132). Despite the "substantial disagreement on the total number of Indus signs", it can nevertheless be stated that "all experts agree that it is in the range of a few hundred" (ibid. 132). Furthermore, "[v]irtually all scholars who have studied the Indus script […] have used the term logo-syllabic" to describe it (ibid. 132). S.R. Rao agrees that the Indus script was logo-syllabic in nature, but only in the Early Harappan period (Bryant and Patton 2005: 180).

S.R. Rao argues that from the Early Harappan period (c. 3200-2600 BC [Possehl 2003; Parpola 2005]) onwards, the Indus script evolved from logosyllabic to phonetic in the Mature (c. 2600-1900 BC [Possehl 2002], and Late Harappan (c. 1800 or 1700 to c. 1000-900 BC [Shaffer 1993]) periods (Bryant and Patton 2005: 180). The exact number of signs in the decipherment process is important. "It sets the limit on the number of signs to be deciphered as well as determines which signs be related and therefore have similar meanings or functions in the writing system" (Possehl 2002: 132). Secondly, the number of signs "also plays a role of fundamental importance in an examination of sign frequency, which can be a source of many clues and productive lines for research for the would-be decipherer" (ibid. 132). Where S.R. Rao's epigraphic perspective diverges from other scholars, is in his categorization and classification of what exactly constitutes an Indus sign. As previously mentioned, scholars have for the most part established the number of Indus script's signs in the hundreds. Possehl (2002: 132) notes that Langdon (1931b) estimates 288 distinct Indus signs; Hunter (1932) counts 149;

Von Meriggi (1934) counts 270; Dani (1963: 16) counts 537; Koskenniemi and Parpola (1982) count 396; Mahadevan (1977) counts 417; and Fairservis (1992: 6) counts 419 Indus signs. S.R. Rao by contrast, "identifies thirty-four basic cursive signs that occurred in the Mature Harappan period, but, since he considers some of these to be alternative signs, he reduces the number occurring in the Late Harappan period to twenty-four" (Bryant & Patton 2005: 180). This small number of signs supports his hypothesis of the connection between the Indus and Phoenician scripts, since the Phoenician alphabet contains twenty-two consonantal "letters" (characters or graphemes) (Markoe 2000: 111).

S.R. Rao proposes that the Indus writing system may have evolved over the span of at least one thousand years from its earliest initial developmental period in the Early Harappan period, beginning around 3300 BC until its disappearance in the Late period, c. 1000-900 BC. Yet, he cannot provide any explanation or scheme showing the sign evolutions as they would have occurred over time, nor can he account of the presence of signs that seem unrelated to his group of thirty-four. Thus, S.R. Rao's theoretical conclusions do not account for most of the Indus signs, but merely a fraction of them.

Another problem is the argument that this "essential core" of thirty-four Indus signs stem from the early Semitic script, or more "specifically the Old North Semitic and South Semitic scripts of the Phoenicians, Hebrews, and South Arabs" since "[t]he oldest inscriptions in these [Semitic] scripts date from 1600 to 1200 B.C.E., a period that overlaps with the Late Harappan period and the latest attested samples of the Indus script" (Bryant 2001: 180). This argument completely ignores the received scholarship on the matter of the alphabet's history.

As mentioned at the beginning of this section, the first known Semitic alphabet is the 15th century BC Proto-Sinaitic script, a consonantal alphabet system from which the later 13th century

Phoenician alphabet descends (Garbini 2001: 101-19). Alphabet historians agree that this ancient Semitic writing system was inspired by the Egyptian hieroglyph and hieratic writing systems (ibid. 101-19). The main innovation of the consonantal alphabet system was the use of acrophony to attach sound (phonetic) values to Egyptian pictographic signs in order to make them into syllabic letters (Fromkin *et al.* 2003: 591-92; Gardiner 1916). This means that the Phoenician alphabet system is related to the earlier Proto-Sinaitic inscriptions found at the ancient Egyptian turquoise mine and temple in the Serabit el-Khadim area, located in the mountains of the Sinai region and datable to the 15th century BC (Garbini 2001: 105-7; Darnell *et al.* 2005). Inscriptions in both the Proto-Sinaitic and the related Phoenician scripts have been successfully deciphered by the pioneering Egyptologist Sir Alan Gardiner and published in his 1916 article *The Egyptian origin of the Semitic alphabet*. The rebus principle Gardiner invokes in his transliteration scheme *works*, and as proof of it, he was able to identify on a sphinx at Serabit el-Khadem (in the Sinai) the four "primitive" consonantal letters representing the Semitic word *baalat*, "lady" (the feminine form of *baal*, "lord") which was commonly used as the title or name of a goddess in various Semitic cultures, in this particular case in reference to the Egyptian goddess Hathor (Gardiner 1916; see also Sacks 2003; Goldwasser 2010).

Therefore, the theory that the Semitic alphabet as evolved from – or was inspired by – the Egyptian writing systems (both hieroglyphic and hieratic) seems very solid. By contrast, S.R. Rao's hypothesis that the Semitic alphabet was derived from the Indus signs in the faraway lands of (what is for the most part) modern-day Pakistan and India, rather than in the Sinai Peninsula, is counter-intuitive and is not easily explained by our current historical knowledge of this time period.

S.R. Rao's Use of the Rebus

S.R. Rao's argument is least convincing in the application of his rebus. The sounds (phonetic values) and meanings (phonemic values) he attempts to apply to the Indus signs are found in Vedic Sanskrit. This approach is based on the assumption that the Indus culture was inherently Āryan, not Dravidian (non-Āryan), in nature.[42] For instance, he suggests that the Indus pictographic sign of what appears to be a "man (standing)" (which scholars simply refer to as the Indus "man" sign) be read in Vedic Sanskrit as nṛ/nara, "man" (S.R. Rao 1982: 83; see also Bryant and Patton 2005: 180-81). S.R. Rao theorizes that over its long period of use, this sign would have degenerated and lost its original meaning and shape, until the Mature (c. 2600-1900 BC [Possehl 2002]), or Late Harappan periods (c. 1800-1000 BC [Shaffer 1993]), by which time it would have "assumed phonetic value and attained at least syllabic, if not alphabetic, status" (Possehl 1996: 144). S.R. Rao proposes that the Indus "man (standing)" sign initially retained a shortened syllabic form of "nṛ" (nara), which in the course of its evolution further degenerated to a simple 'ṛ'. But he cannot explain why the sign would not have retained its initial 'n' sound instead of its final sound 'ṛ'. The example of the Semitic alphabet's development comes to mind, since it has retained the initial consonantal sounds of the rebus contained in each one of its letter signs. For example, the second letter *bayt* (derived from a primitive pictograph of a 'house') has retained the initial sound 'b' as the letter's sound, and not the final 't'. Other signs, however, retain their initial sounds, such as the so-called Indus "fish" sign which he identifies with the Vedic Sanskrit rebus "śakala" (fish). In S.R. Rao's view, it has retained the sound value of its initial sound, the 'ś' (Bryant & Patton 2005: 180-81).

This assignment of sounds to various Indus signs is considered to be too "arbitrary" (Bryant 2001: 181). S.R. Rao's highly subjective approach can also be seen in the rest of his rebuses

[42] The Āryan vs. Dravidian debate shall be further explored in the following section, in Chap. 2.4.

where "[h]e follows a similar procedure in assigning sound values to various other common pictographic [Indus] signs, except, in these instances, instead of extracting a single phoneme, he chooses to assign a full syllable from the Sanskrit word corresponding to the sign (i.e., sak for the 'bird' picture)" (ibid. 181). The justification given by S.R. Rao for "such apparent arbitrariness" is "simply because it works" and that for whatever reason certain "words meaningful to his sensibilities are produced by the assignment of certain syllables as opposed to others" (ibid. 101). But, evidently – and as Bryan and Patton (2005) are right to point out – "[t]he problem, of course, is that the script can also be made to 'work,' at least to the satisfaction of other would-be translators, by assigning a wide variety of syllables to the same symbols" (ibid. 181).

Another problem is the language S.R. Rao proposes for his rebuses – that of Vedic Sanskrit. The specific words or terms (i.e., nṛ ["man"], śakala ["fish"]) he uses as rebuses in his method belong to a much later culture. Both historically and linguistically, the earliest possible date that can presently be linked with Vedic Sanskrit culture and language is c. 1700 BC (Avari 2007: 60-85) in the Gangetic Valley, in what is commonly termed the Rgvedic period (which forms the early part of the Vedic period) (ibid. 60-85). It is during this historical timeframe that Indo-Āryan tribes first appear in the Gangetic Valley Plain and compose the earliest of their literary works – the Ṛg Veda – which ultimately provide historians with records of their language, beliefs and travels. This is relevant to S.R. Rao's approach, because in his Indus decipherment proposal he takes words that belong to the Vedic Sanskrit language as it existed at the earliest around 1700 BC and applies these same terms to Indus signs – signs that first appeared on shards of pottery c. 3300 BC, at the beginning of the Ravi phase (ca. 3300-2800) in the Early Harapan period (McIntosh 2008: 420). No less than 1600 years separate the existence and use of the

Vedic Sanskrit word nṛ ("man") and the first appearance of the Indus script. S.R. Rao nevertheless assumes that such a word as nṛ ("man") would have remained the same. The same charge can also be levelled towards all of his other rebuses, for they are all Vedic Sanskrit terms that belong to a much later period.

2.4 Indus Culture & Language:———————————— *Dravidian or Āryan?*

In relation to the problems and perspectives that exist surrounding the study of the Indus culture, there have emerged two opposing camps; each one belonging to either one of India's two dominant historical language groups, the Dravidian-speakers and the Sanskrit (Indo-European) speaking Vedic people who called themselves Āryans.[43] In general terms, while the majority of North Indians identify with Āryan culture and/or language (i.e. Hindustani or Hindi-Urdu, Bengali, Punjabi, Marathi, Gujarati…); South Indians generally identify with Dravidian culture and/or language (i.e. Telugu, Tamil, Kannada, Malayam…).[44] The Dravidian and Āryan camps oppose each other in all of the analytical perspectives surrounding the Indus script's underlying language. Each side argues in favour of identifying their own culture or language to that of the ancient Indus Valley inhabitants.

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[43] Whether spelled with an initial grave accented "a" (Āryan) or without (Aryan), regardless, the term is the same; simply when Romanized, the Devanāgari long vowel **आ** (ā) is out of expediency often omitted by scholars in their transliterations into an unaccented "a" (Macdonell 2004: 42, **आर्य** art.). This Sanskrit term Ārya (**आर्य** (ā́rya) n.) in the Indian/Hindu cultural context simply means "noble" or "noble one" and does not specifically possess the same racial connotation (B.B. Lal 2005: 52; Rodrigues 2006: 12) as would later be applied to it in all of its contemporary Western negative uses, or more specifically by the German nationalist (Nazi propaganda) misappropriation of the "Aryan myth" in order to better serve their racially motivated ideologies (Figueira 2002).

[44] As a referential aid to show the present-day distribution of the modern Indo-Āryan (and related Indo-European Nuristani) languages in what is primarily located in North India, see my Fig. 1.9a map. And, for the distribution of the unrelated Dravidian (non-Āryan) languages, see Fig. 1.9b map, which shows them to be primarily situated in South India.

The Dravidian *versus* Āryan debate is situated at the crux of yet another issue, what is commonly termed as either the *Indo-European (i.e. Āryan) Migration Thesis*, the *Indo-Aryan (or Aryan) Invasion Theory* (Bryant 2001; Bryant and Patton 2005; Rodrigues 2006: 12-7; B.B. Lal 2005: 5-74). The theory was first put forth by the renowned British archaeologist Mortimer Wheeler who, in 1944, as Director-General of the Archaeological Survey of India, established the existence of a fortification around the site of Harappa. In so doing, Wheeler focussed on Ṛgvedic passages that describe the conquering Āryans and their war god, Indra, as being "fort-destroyers" (Wheeler 1947: 82; B.B. Lal 2005: 52; U. Singh 2008: 179).[45] He interpreted his newly found data as sufficient proof that the Āryans had invaded the ancient Indus cities and were therefore responsible for the destruction of the Indus civilization. Such an interpretation depicts the Āryans (Indo-Europeans) as the winners and the Dravidian-speakers as the losers.[46]

Wheeler had misinterpreted the principal Ṛgvedic passage he had used to support his views. In a reference found in the Ṛg Veda (RV 6.27.4-8), Wheeler had proposed an association between a place called Hariyupia with the site of Harappa (Kenoyer 2005a: 44; Majumdar *et al.* 1961; Wheeler 1968; Singh 1995; Joshi 1999). But, as Jonathan Kenoyer (2005a) points out, "[i]n this Vedic reference, there is a description of a battle [fought at Hariyupia] between forces, one led by Abhyavartin, son of Chayamana (Puru clan) and the other by Turuvasa (Turuvasa

[45] The Vedas basically describe the Āryans as "warrior-nomads who had the horse-drawn war chariot, which enabled them to conquer many of the cultures they encountered. The Vedas tell of the Āryans conquering the darker skinned Dāsas and Dasyus, and scholars [e.g., Wheeler] originally speculated that this referred to a conquest of the people of the Indus Valley" (Rodrigues 2006: 12).

[46] Although Wheeler was instrumental in shaping the Āryan Invasion hypothesis, it is noteworthy to understand that his personal conception of a romanticized mythical Āryan people was not of his pure own invention. In *Aryans, Jews, Brahmins*, Dorothy M. Figueira (2002) explores in detail the construction of the Āryan myth and its uses in both India and Europe from its first appearance in the 18th c. Enlightenment period to the 20th c. She examines how "the Aryan past can be studied as a myth or a form of discourse that can be employed in the construction or the deconstruction of society," and examines in particular how the discourse concerning "the Aryan race as a 'shared myth'" occurs both in 19th c. India and in Germany (ibid. 1). Aside from the uses/abuses of the Aryan myth and the role it plays in "the ideological interests of Europe", Figueira notes that in regards to Indian identity politics, ultimately the Aryan myth "has given historical value to ancient Indian history and has contributed to Indian nationalism during the colonial period and after the departure of the British" (ibid. 1).

clan), leader of the Vrichivat, seed of Varasika" (ibid. 44). As Kenoyer (2005a) indicates, "[t]he correct translation of the text indicates that Wheeler was totally mistaken in his assumption that Hariyupia was a 'non-arya' settlement and that it was being attacked by a hoard of Indo-Aryan invaders" because it is a matter of fact that both the winner (Abhyavartin) and the defeated leader (Turuvasa) belonged to "arya" clans" (ibid. 44).

This *Aryan Invasionist* perspective argues that when the Āryan people hypothetically arrived at the northwestern entry-point of the Subcontinent, they "invaded" or "attacked" the natives living in local settlements of the Indus civilization. A more nuanced view suggests that rather than an invasion, there was an "influx", "immigration", or "trickling in" of the Āryans into the Subcontinent (Witzel 2005: 383). These perspectives describe the Āryans as a *foreign* cultural element coming into the ancient Indian landscape from the *outside*, whether *in peace* or not (Elst 1999, 2005a, 2005b).

The Invasionist view argues that the Āryans were a daughter branch of the Indo-European (IE) language family that originated from somewhere in the Southwestern Russian Caucasus Mountain range and over time spread into the neighbouring Iranian Plateau and eastward into the Indian subcontinent, with the Indo-Aryan branch penetrating India ca. 1500 BC (Parpola and Carpelan 2005; Witzel 2006a: 160-61; Bryant & Patton 2005: 180-81). According to this widely accepted theory, other groups related to these ancient Āryans would also have migrated westward into Europe, and over time their languages evolved into what are termed to be sister branches in the Indo-European language family that are still dominant to this day (e.g., Celtic, Germanic, Greek, Italic , Balto-Slavic…).

This current approach is criticized by some on the grounds that it is a "Caucasian"-centred or Eurocentric approach.[47] On this basis, the Invasionist approach as a whole is suspected of "being based on a white-supremacist ideology and a colonial paradigm" (Rodrigues 2006: 12). In response, other scholars (notably S.R. Rao, Koenraad Elst, and Shrikant Talageri) argue that the Āryans originated in or somewhere close to the Indus Valley, and that the Indus civilization would therefore possibly be a viable candidate for the original IE homeland, instead of Southwestern Russia. This Indocentric approach contrasts sharply with the generally more accepted Eurocentric scholarship that clearly dominates the field at present time. The more common names given to those schools of thought that ultimately share an Indocentric view are the *Indigenous Aryan* or *Indigenous Aryanist* perspective, and their works usually revolve around what is often termed to be the *Cultural Diffusion Hypothesis* or the *Out of India Theory* (OIT).

The debate surrounding the alleged origins of the Āryans (or Indo-Aryans as some scholars prefer) and the PIE *Urheimat* whence they hail, has been carried out in a flurry of articles in which each side accuses the other of nationalist bias or chauvinism.[48]

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[47] "Eurocentric" because the Southern Caucasus region which is at the origin of the outdated expression "Caucasian race," historically equated by early physical anthropologists with "white skin" (has remained in use predominantly in U.S.A.), is a region situated in Eastern Europe, straddling the border between the two continents of Europe and Asia. Thus, to see the Āryans as "Caucasian" in origin makes them into Europeans as opposed to being Asian in origin, and this in spite of the fact that it is located on the peripheries of "Iran" in Asia, the name which in Persian means "the land of the Aryans". Hence, the Eurocentric approach placing the historical Aryans somewhere in the Caucasus Mountains makes them Europeans whereas in the neighbouring Iranian Plateau or beyond in the Indus Valley Plain makes them Asian in origin. Even if the two continents are at a "stone's throw away" in and around the Caucasus area, it has nevertheless created a great divide in creating different ancient-historical perspectives. This standard model of early IE migrations, as it is often termed, ultimately derives from the popular Kurgan hypothesis formulated in the 1950s by Marija Gimbutas (1956), which situates PIE somewhere in the Pontic-Caspian steppe in the course of the 5th millennium BC.

[48] For instance, Shrikant Telagari (2000: Chap. 7) argues "the theory that the Indo-European family of languages originated in India" instead of in Southwestern Russia, a Eurocentric view which he opposes. Another example of this debate can be found in the exchange between Michael Witzel (Eurocentric) and Koenraad Elst (Indocentric). Witzel's (2005) article that attempts to demerit and dismiss some of the Indocentric views previously proposed by Elst (2005a), is in turn met with an anti-Eurocentric tirade by Elst (Elst 2005b). Other examples can be found in the collection of papers edited by Edwin F. Bryant and Laurie L. Patton (2005), *The Indo-Aryan Controversy. Evidence and Inference in Indian History.*

Wheeler's theory of an *Aryan Invasion* is considered pure speculation and has been relegated by many scholars – Indian and non-Indian alike – to the realm of myth (Rodrigues 2006: 12-3; B.B. Lal 2005: 5-74).[49] Yet the theory has endured and over time contributed to draw the proverbial line in the sand between the two positions. The *Aryan Invasion* theory has also had a hand in casting the ancient Vedic Āryan people in a negative light, not only as destroyers of civilization – but also as an intrusive cultural element in the Asian Subcontinent – and adversely, the Dravidians to be perceived as autochthonous and the purveyors of the Indus civilization.

As explored earlier (in previous section, Chap. 2.3), S.R. Rao's analytical perspective of the Indus script places him squarely in the *Indigenous Āryan* camp – meaning that his working assumption is that Indus inscriptions reveal Āryan (IE) linguistic terms (as opposed to Dravidian ones). He argues that the Indus culture and civilization should be seen as Āryan cultural achievements (and not Dravidian). The *Cultural Diffusion Hypothesis* and its *Indigenous Āryan* views is "bolstered by orthodox Hindu political ideologies" (Rodrigues 2006: 12), because Āryan racial identity, in India, has been "developed through a continued rearticulation of the authority vested in 'Vedic' texts" (Figueira 2002: 1). Since the ancient arrival/appearance of the

[49] As a direct forbearer to Wheeler's understanding of the exact meaning of "Āryan," in as early as 1808, one of the main intellectual leaders of German Romanticism, Friedrich Schlegel, mused about the Āryans as the West's primeval source of inspiration. In *Über die Sprache und Weishit der Indier* (1808), Schlegel writes of what India promises for the West, going so far as to say that with Sanskrit, which he perceives to be the "mother tongue of Indo-European languages" (Figueira 2002: 30), the Orient (India) emerges as a sort of cradle of humanity that could serve to revitalize mythology (Schlegel 1906: 1.136; in Figueira 2002: 28-9). Schlegel says this because he opines that "the modern Occident had no mythology of its own… that "one would have to be invented" (Schlegel 1846: 4.197; quoted by Figueira 2002: 28-9). And as Figueira observes: "The inspiration for this new mythology and hence the new Romantic poetry was to be found in the Orient (Schlegel 1906: 2.362). By Orient, Schlegel meant India (Schlegel 1906: 2.357 ff). [ ] What the West recognized as religion, mythology, and poetry originated in the Orient. Classical Indian culture exhibited in a pure, undiluted form what, in the West, was a mere vestige of the union of philosophy and poetry. Just as one would go to Italy to learn about art, one should now go to India to learn about beginnings (Schlegel 1966: 7.261, 263), God, and poetry (Schlegel 1966: 7.74). […] The unique fruit of his metaphorical journey, *Über die Sprache und Weisheit der Indier* (1808), comprised, as it were, the Romantic manifesto on India." (ibid. 28-9).

Aryans in the Indian subcontinent, the "Veda [has] functioned as the touchstone for Hindu orthodoxy as well as for their understanding of the Aryan" (ibid. 1). It is mostly on this basis that certain Hindu ideologues support the *Indigenous Āryan* camp, for the association they make between a *native* Āryan population – as opposed to a *foreign* one, as an Invasionist perspective implies – is evidently interpreted in a positive light in the anti-colonialist "national identity" politics of modern-day India.

One of the Indus script's leading authorities, the Finnish scholar Asko Parpola, is a main proponent of the Dravidian camp. In his *Deciphering the Indus script*, Parpola (1994) dismisses the views of S.R. Rao as examples of a "nationalistic [Indian] bias" (see following quote). In doing so, however, Parpola (1994) exposes his own Dravidianist biases: "Nationalistic bias makes it difficult for some North Indians to admit even the possibility of the Indus Civilization being pre-Aryan; they deny the very concept of Aryan immigration and insist that the Harappan and Vedic cultures are one and the same. So the language chosen has usually been Sanskrit" (ibid. 58).

Parpola's mention of the term "pre-Aryan" shows that he sees the Āryan cultural element as having been introduced *into* the Indian Subcontinent from the *outside*, as a *foreign* element. Consequently, he assumes that the Indus culture is Dravidian in origin. Until one of these two opposing camps – either the Dravidianist or pro-Āryan camp – succeeds in putting forth an acceptable proposal in deciphering the Indus script, the polemical debate shall continue.

2.4.1 The Refutation of the Āryan Invasion Myth:——————————— Exploring Some Other Possible Causes of the Indus Collapse

Many of Mortimer Wheeler's arguments in support of the "Āryan Invasion" as a contributing factor to the eventual downfall or decline of the Indus civilization have been refuted (by P.V. Kane [1955], Georges Dales [1964], and more recently B.B. Lal [1997]), at least in part on the grounds that the Ṛg Veda, the most ancient text composed in Vedic Sanskrit (called archaic Indo-Aryan by linguists) by ancient Āryans – and still central to the Hindu canon today – is a religious text that cannot be accurately dated with any level of certainty.

The language of the Ṛg Veda is an archaic form of Indo-European, and the Ṛg Veda is also the oldest surviving text of any Indo-European language, estimated to have been composed at the earliest somewhere in the Greater Punjab roughly between 1500-1200 BC (Witzel 2006a: 160-61). However, because of the uncertainties in relation to the exact dating of the text, it is not a reliable historical source (U. Singh 2008: 179). Wheeler's use of the Vedic text to make sense of what he perceived to be evidence attesting to the destruction of the Indus civilization was *achronological*, since the earliest possibility of an Indo-Aryan influx of people penetrating the Punjab region occurs between 1700 and 1500 BC (J. McIntosh 2008: 400); a period "well after the disintegration of the Harappan state" (ibid. 400). Further, as Upinder Singh (2008: 179) points out—

> [I]f there had been an [Āryan] invasion, it should have left some traces in the archaeological record. There is, in fact, no evidence of any kind of military assault or conflict at any Harappan site. The 37 groups of skeletal remains at Mohenjodaro do not belong to the same cultural phase and, therefore, cannot be connected to a single event. […] The fact that there is a sterile layer between the mature Harappan and Cemetery-H levels goes against Wheeler's hypothesis that the latter represents the settlement of the Aryan invaders.

Importantly, U. Singh also goes on to add that an analysis of these skeletal remains unearthed at Mohenjo-daro (in reference to K.A.R Kennedy's [1997] work) "does not show any

discontinuity in the skeletal record in the north-west at this point in time, making it clear that there was no major influx of new settlers with a different physiognomy" (ibid. 179).

Some researchers have indicated that "natural disasters" such as flooding caused by tectonic movements or other such calamities were likely the main catalysts behind its "decline" and eventual disappearance (U. Singh 2008: 179). Some of the main proponents of the "natural disasters" approach include M.R. Sahni (1956), Robert L. Raikes (1964) and George F. Dales (1966), who view the multiple layers of silt discovered at Mohenjo-daro as "evidence of the city being affected by repeated episodes of Indus floods" that "were the result of tectonic movements" (U. Singh 2008: 179). Neither Upinder Singh nor Jane McIntosh, however, find these "natural disasters" scenarios and arguments very convincing, as no major earthquake or flooding damage can be detected during this period in time (McIntosh 2008: 398).

To explain the decline of the Indus civilization, McIntosh (2008) points to the poor health of the Indus residents (ibid. 396), as evidenced by skeletons discovered in the upper levels of Mohenjo-daro, either "deposited in abandoned houses or streets" (ibid. 396). These skeletons, which Mortimer Wheeler had misinterpreted as victims of warfare in Indo-Aryan raids, do not bear traces of violence except of two cases, in which non-related injuries were observed (ibid. 396).

"Environmental concerns," natural or humanly induced disasters, are also mentioned (McIntosh 2008: 397). Other possible causes include climate change, environmental degradation, a shrinking coastline, as well as major change having occurred in the course of the Mature Harappan period's agricultural regimes (ibid. 396-400). These causes cast further doubt on Mortimer Wheeler's "Aryan Invasion" myth as a main catalyst behind the Indus decline.

There is, however, archaeological and linguistic evidence in favour of an Indo-Aryan influx of people penetrating the Punjab region some time later, between 1700 and 1500 BC (McIntosh 2008: 400), "well after the disintegration of the Harappan state" (ibid. 400). In the early 2nd millennium Indus region, "overland traders, raiders, and settlers", who originated from the BMAC in Bactria and Margian, "expanded into adjacent regions, including Seistan, from where they penetrated the Indus region or traded with its inhabitants" (ibid. 399).[50]

A variety of factors have led researchers to associate this particular influx of people from the BMAC culture with the arrival of the Indo-Aryan tribes in the Indian Subcontinent (McIntosh 2008: 399-400; see also Lamberg-Karlovsky 2005: 142-233), but the "most apparent archaeological trace of their arrival is the appearance, for the first time in the subcontinent, of domestic horses" (ibid. 399-400), their arrival in the Punjab dated to around 1700 to 1500 BC (ibid. 400). The horse "has become almost synonymous with the Vedic Aryans and, by extension, the whole Indo-Aryan migration debate" and it is considered to be "an essential part of the Indo-European world" (Bryant 2001: 116). The importance of this animal is based mostly on linguistic grounds, since a term for horse existed in Proto-Indo-European (**ekwos*); evidence that makes the first domestication of the horse an "essential clue" (Beekes 1995: 50). This theoretical approach "has long favored the Russian steppe homeland hypothesis and is the mainstay of Gimbuta's homeland theory" (Bryant 2001: 115).

Although several horse figurines and clay models of the animal (Bryant 2001: 170-71) have been uncovered at various Indus dig sites, only a handful of reports of horse bones can be confirmed. There are bones from Harappa belonging to a small horse, as well as horse bones and

[50] The term BMAC is an abbreviated form that stands for the Bactria-Margiana Archaeological Complex (also termed the Oxus civilization), a modern archaeological designation for a Bronze Age culture located in Central Asia, ca. 2300-1700 BC (Lamberg-Karlovsky 2005: 142-233). Scholarly discussions surrounding the BMAC culture often include a theoretical link with the Indo-Iranians, the community of Indo-European speakers "that spoke a common language prior to their branching off into the Iranian and Indo-Aryan languages" (ibid. 142).

teeth in archaeological reports from Kalibangan, Lothal, Surkotada, and Malvan (ibid.; see also A.K. Sharma 1992-93). The result of this paucity of horse bones in the South Asian archaeological record "tends to haunt any attempt to argue for an Indian *Urheimat*, and even, any efforts to correlate the Indus Valley Civilization with the Vedic culture, which is a horse-using one" (Bryant 2001: 116). This absence may mean that the Indo-Aryans must have therefore entered the Indian Subcontinent after having dispersed from the original PIE homeland, located elsewhere (Bryant 2001: 169-75; McIntosh 2008: 132-33; Danino 2006).

2.4.2 The Linguistic Identity of the Indus Script: What it Means to the Indo-Europeanists (IEists) and Out-of-India (OIT) Theorists

The debate about the origins of the Indus culture is particularly important for Indian scholars because they are "committed to exerting a major role on the construction and representation of the history of South Asia" in the present-day "postcolonial context of ancient Indian historical construction" (Bryant 2005: 468).[51] This re-evaluation of the ancient past "involves revisiting and scrutinizing the versions of history inherited from the colonial period" (Bryant 2005: 468). It is therefore to be expected that scholars attempt to reconstruct the history of the Vedic and pre-Vedic Indo-Aryan speakers since this is also a fundamental part of the cultural re-evaluation process. Vedic culture and the Sanskrit language are key cultural components of Hinduism (whatever this term may be taken to mean) and Indian identity – whether North or South Indian.

The attraction of the Indus civilization for Western scholars is linked to a related debate. Since the 18th century discovery of the Indo-Aryan branch of the Indo-European (IE) language family tree, many Western scholars and Indo-Europeanists (IEists) have had two interrelated

[51] Extracts of this thesis Chap. 2.4.2 have been published in P.D. LeBlanc (2012b) "Aryan Culture and Language: A Possible Candidate for the Linguistic Identity of the Indus Civilization and Script." *The Inquestia Times.* Online article made available by author, dated Dec. 2012.

concerns; i) to reconstruct the proto-historical language of the Indo-European speakers, and ii) to locate its original homeland (Bryant 2005: 468). Only a successful decipherment of the Indus script can address these questions (ibid. 492).

If the Indus culture and language turn out to be Indo-European, then they qualify as PIE (the proto-historical Indo-European language); such a view would imply that Western civilization is a cultural import from Asia, rather than a native European development (as the Aryan Invasion scenario implies).

The history of India and the "shared myth" of the Āryan "invasion" and "race", despite its use by 20th century German nationalists, still serves the ideological interests of Europe (Figueira 2002: 1). Although the Āryan Invasion theory has "contributed to Indian nationalism during the colonial period and after the departure of the British," it also served European scholars "as a means of expressing nineteenth-century European concerns with origins" (Figueira 2002: 1). The legacy of the Āryan myth in the 19th century was an origin story that could compete with the Biblical one and could be used to diminish the importance of the West's Jewish heritage (Figueira 2002). In more recent times, Western scholars who adopt either the *Aryan Invasionist* or *Indigenous* views in relation to the Indus culture/script are more concerned to gain a better understanding of a genuinely historic ancient Indo-European past, rather than a falsely highly romanticized and anti-Semitic one.[52]

The view that the Indus civilization is an *Indigenous Aryan* culture, and that Sanskrit – the Indo-European (IE) language spoken by the Āryans – is the *mother tongue* (the original progenitor) of the entire IE language family have been combined in the *Out of India theory (OIT)*, also called the *Indian Urheimat (or Indian Homeland) theory.* The proponents of the OIT

[52] Figueira (2002) explores this notion of the "Romantic Aryans" as it existed during the Romantic period in the European intellectual movement of the 2nd half of the 18th c. (ibid. 27-49).

propose that the IE language family originated in the Indian subcontinent, that is the Indus civilization, and that subsequently it spread out over time to the remainder of the Indo-European speaking regions (mostly found in Europe) through a series of migrations.

One of the main proponents of the theory was the leader of the German Romantic intellectual movement, Friedrich Schlegel, who, as early as 1808 – in his *Über die Sprache und Weisheit der Indier* – viewed Sanskrit as the "mother tongue of Indo-European languages" (Figueira 2002: 30) and thus perceived India as a sort of "cradle of humanity" (ibid. 28-29; in reference to Schlegel 1906: 1.136). In his work, Schlegel was essentially "following up on Sir William Jones's celebrated observations of 1786 concerning the relationship between Sanskrit and the major European languages" (Koerner 1995: 154). Linguistically, Schlegel's work was pioneering, for he was the first to move "from 'linguistic botanizing' and superficial taxonomy toward more sophisticated attempts at language typology" (ibid. 154). His academic research helped to establish not only the very basis of contemporary linguistic analysis but also "the Indo-European language family as a large group of genetically related languages and as distinct from all other languages of the world" (Koerner 1995: 154).[53]. Therefore, as an authority in the nascent field of Indo-European studies, Schlegel's endorsement of Sanskrit – the language of the Vedic Āryans – as the mother-tongue of PIE (the proto-historical IE language that spawned all the rest of the descendant languages) was instrumental in shaping the origins of the OIT.

These views, however, led many to see India as the Āryan homeland and as a sort of European or Western "cradle of humanity". These oriental romantic ideals were shared by early Indo-Europeanists and leading figures from the Enlightenment period, such as Schlegel's

[53] Specially along these three lines of "the genetic or historical, the comparative, and the typological strain of linguistic analysis" (Koerner 1995: 154).

contemporaries, Voltaire and Immanuel Kant, who both "declared India [to be] the source of all arts and civilization" (Goodrick-Clarke 1998: 29).

These romanticized views surrounding ancient India and the Vedic Aryans, however, also gave rise in the 19th and 20th centuries to that same Aryan myth "which exercised a powerful and fatal influence on Nazi racial doctrine" (Goodrick-Clarke 1998: 29; see also Figueira 2002).

In linguistic circles, the original 18th century Enlightenment version of this *Out-of-India* scenario fell into disfavour due to Ferdinand de Saussure's (1879) proposal that the hypothetical language of PIE should contain "laryngeals," which no surviving IE language possesses, Sanskrit included. Only in the 20th century, long after de Saussure's death, with the discovery of Hittite were his observations corroborated by the decipherment of Hittite cuneiform texts, which date from the 16th to 13th century BC (Bryant 2001: 68-75). The decipherment of Hittite and the validation of de Saussure's laryngeal theory officially dethroned Sanskrit as a main contender for PIE[54], and consequently sidelined the theory that the homeland (*Urheimat* in German) of the Āryans was to be identified with *ancient India.*

At present time, both the Indo-Aryan language branch – which includes among its ranks Sanskrit – and the Hittite branch, are considered *sister* branches in the IE family tree. Indo-Aryan and Hittite are both considered to be *daughter* languages of a mysterious as-yet unidentified PIE progenitor. According to scholars who adopt the Kurgan hypothesis formulated in the 1950s by Marija Gimbutas (1956), PIE should be situated somewhere in the Pontic-Caspian steppe at some point in time during the course of the 5th millennium BC.

[54] The use of the term *dethroned* in relation to the dismissal of Sanskrit as a most viable candidate to be the mother-tongue to the IE language family is not my own, but is the general term used by historical linguists. See Bryant's (2001) *Chapter 4: Indo-European Comparative Linguistics: The Dethronement of Sanskrit* (ibid. 68-75).

2.4.3 The Recent Out-of-India (OIT) Revival

Nevertheless, as recently as the late 1990s, with the appearance of Koenraad Elst's (1999) *Update on the Aryan Invasion Debate*, followed up by Shrikant G. Talageri's (2000) *The Rigveda: A Historical Analysis*, the Out-of-India Theory (OIT) has experienced a revival. Unlike the Romantic (e.g. Schlegel) and Enlightenment (e.g. Voltaire, Kant) European authors, contemporary OIT proponents endorse this theory because it justifies the *Indigenous Aryanist* views (in regards to the Indus culture).[55] The Romantics, such as Schlegel, were not aware of the existence of the Indus civilization when the original OIT was formulated. Until the 1920s, when excavations began at Mohenjo-daro and Harappa, the only traces of ancient India's past were the cities of the Mauryan Empire (McIntosh 2008: 4). The recent revival of the OIT focusses specifically on the Indus Valley culture and not simply a mysterious *ancient India* as the theoretical PIE homeland (*Urheimat*). (Maybe then, it should be suggested, that the theory's name should be further revised to *Out-of-Indus* instead of *Out-of-India* in order to differentiate between the theoretical nuances of these two terms.)

The revived OIT theory has been adopted in the public sphere by various Hindu nationalists, such as Shrikant G. Talageri, B.B. Lal, and the Belgian scholar Koenraad Elst, whom scholars often accusingly describe as a sort of radical "prominent foreign sympathizer of Hindutva" (A. Sokal 2006: 319, 354, nota 97), who have made it the subject of a contentious debate in Indian politics. As mentioned earlier in this section, B.B. Lal (2005) was also a supporter of the Indigenous Aryan camp, since he argues that "the Harappans […] were a Sanskrit-speaking people" and that the Sanskrit language is the mother-tongue of the entire IE language family (ibid. 63).

[55] Parts of this chapter 2.4.3 have been published in P.D. LeBlanc (2012b) "Aryan Culture and Language: A Possible Candidate for the Linguistic Identity of the Indus Civilization and Script." *The Inquestia Times.*

Talageri (2000) does not consider Sanskrit to be the Proto-Indo-European language (PIE), the common ancestor of the language family. This distinction contrasts with the original European proponents of the OIT, namely William Jones and the German Romantic Schlegel, who argued that Sanskrit was PIE. Instead, Talageri argues that Vedic Sanskrit is mother-tongue to the Indo-Iranian sub-family (or branch) of the IE language family – and not the entire IE family.

Talageri's (2000) adaptation of the *Out-of-India* theory implies that the Indo-Iranian "mythical homeland" is to be situated in the Kashmir, while the PIE homeland (according to him) ultimately traces its origins in the region of Haryana, from where Rigvedic Āryans (speaking a related language that could possibly be a sister to the Indo-Aryan branch) would have then migrated to other areas before moving on westward into Iran and onwards to Europe (ibid. I.5 and II.7). Talageri claims that his views are based on "scriptural evidence in the Puranas (texts of the first millennium AD only) for his emigration" (Witzel 2006b: 223). However, as Witzel (2006b) remarks, Talageri has misinterpreted the Puranic passages in question, therefore making his unfounded theoretical viewpoints "simply a product of revisionist fantasy" (ibid. 223). The fact that Talageri makes PIE and its "people" come from the Maharashtra area coincides with the fact that it is "Talageri's own homeland" (ibid. 223). For this reason, Witzel describes Talageri's ideas as "truly Indocentric, pseudo-*Purānic* fantasy" (Witzel 2005: 355) that mainly relies on "some king lists of the Epics and Puranas, which date to millennia after the alleged facts and refer to a different political situation" (Witzel 2006b: 223; in reference to Witzel 1995, 2001a: 30, §12.2).

The more radical views expressed by Hindutva[56] adherents make it difficult to have any association with this school of thought. The claims made by OIT scholars are often seen by non-supporters as being simply too "contentious" to be taken seriously (Bhatt 2001: 205).

2.5 The Linguistic *versus* Non-Linguistic Question:———— *The Computational Approach and their Opposition, the Authors of the Indus "Illiteracy Hypothesis"*

An altogether different methodology in deciphering the Indus script is the computational linguistic approach, developed by a joint Indo-US team of scholars led by Rajesh P.N. Rao of the University of Washington, and Iravatham Mahadevan from the Tata Institute of Fundamental Research and the Institute of Mathematical Sciences (R. Rao *et al.* 2009). Rao and his collaborators compare the sequencing of the Indus signs to other types of sequences to see if patterns can be recognized in the limited amount of data (due to the brevity of the Indus inscriptions). Comparisons are made between the arrangement of the Indus signs with sequences of words and characters as they appear in natural languages (e.g. modern English, Tagalog) or writing systems (e.g. abugida scripts for Tamil and Sanskrit, cuneiform script for Sumerian) (R. Rao 2010). Also examined are other sequences that can be found in nature, such as the sequencing of amino acids for proteins or even in human DNA (ibid.).

After all the chosen sequences of Indus inscriptions are fed into a pattern-analyzing software programme by Rao and his collaborators, a "sequence length" or what is termed a "normalized block entropy" is generated (Rao 2010). The computational programme used in the analysis is

[56] "Hindutva *n* (in India) a political movement advocating Hindu nationalism and the establishment of a Hindu state [C21: Hindi, literally: Hinduness]" Dictionary.com. *Collins English Dictionary - Complete & Unabridged 10th Edition*. HarperCollins Publishers. http://dictionary.reference.com/browse/hindutva (accessed: August 10, 2012). See also Bhatt 2001, 77-113.

based on the Markov model and it calculates the level of entropy (degree of order) in all of the data sets it was provided. The reason for this calculation is that languages as well as other natural sequences do "exhibit a degree of order intermediate between random and rigid" (ibid. 79). The "intermediate degree of randomness" (R. Rao 2010: 79) generated by the Indus data set demonstrates that the patterns of the Indus signs' arrangement are moderately ordered, not unlike the sequences found in the spoken languages and other non-linguistic sequences (within the limited scope of the normalized block entropy). The study provides researchers with "statistically significant clusters of symbols" (R. Rao 2010: 77) that they can then analyze using *N*-gram models in order to work out transition probabilities (or algorithm) in the Indus script sequencing. This approach seeks to work out the phonetic underpinnings of the inscriptions, either by showing how the specific position of an Indus sign in a text can reveal phonological, syntactical or morphological rules. The study, however, has yet to yield any linguistic data, but merely concludes that the level of entropy (degree of order) in the Indus data set resembles the same level of ordered sequencing of other natural sequences (i.e., human DNA, writing systems, natural languages) (R. Rao 2010).

Steve Farmer, Richard Sproat, and Michael Witzel have widely disputed Rao's findings. The trio are often referred to as the authors of the Indus "illiteracy hypothesis", because they argue the Indus script to be non-linguistic (or non-literate) in nature, and therefore undecipherable (Farmer, Sproat and Witzel 2004). Their main argument against R. Rao *et al.* (2004) is that they did not compare the Indus signs with "real-world nonlinguistic systems" (Farmer, Sproat, and Witzel, 2009: 1) but rather to "two wholly artificial systems invented by the authors, one consisting of 200,000 randomly ordered signs and another of 200,000 fully ordered signs, thereby distorting their results (ibid. 1). R. Rao *et al.* (2010a) dispute this interpretation of their

study and defend their own approach by asserting that they mounted these two artificial non-linguistic systems (Type 1 and Type 2), to establish parameters (each representing extreme examples of patterned disorder/order, two controls that represent "sequences with maximum and minimum flexibility, for a given number of tokens" (ibid.), scientific controls "necessary in any scientific investigation, to delineate the limits of what is possible" (ibid.).

Another researcher who has undertaken a computational linguistics approach to study the Indus script is Bryan Wells (1998, 2011), who created a detailed Indus sign list and software, the *Interactive Concordance of Indus Texts* program (or simply ICIT 5.2). This database has become a very important sourcebook or reference tool for epigraphers (as explored earlier, in Chap. 2.1) (Wells 2011).[57]

Wells needed to develop his expansive database in order to conduct a statistical analysis of the sequencing of the Indus signs. Wells argues that the manner in which the signs are being utilized clearly demonstrates the Indus script to be logo-syllabic in nature (Wells 2011). Wells also includes in his statistical analysis an important discussion pertaining to various types of writing systems. He indicates that even if "[m]any ancient scripts are logo-syllabic, that is, they combine word signs (logographs) and syllable signs to form phrases and sentences" (ibid. 90), they tend to become increasingly abstract over time. Examples include cuneiform and hieroglyphic Egyptian writing (ibid. 90). Wells makes some concessions in regards to his Indus data set, mentioning that although the "sign contexts" and "sign order" are statistically in favour of a logo-syllabic script, it is possible that the Indus script "may be employed in unique ways" (Wells 2011: 92); "new classes of signs could also be employed, or signs may be combined in

[57] As previously noted in Chap. 2.1, although the electronic version of this corpus of Indus signs (database) is not available to the public, Wells does include in his published dissertation a "user-friendly" printed version of his "database" in his Appendix (Wells 2011: 165-233).

unusual ways" (ibid. 92). These disclosures reinforce his discussion to further 'stress the similarities' (to paraphrase him) in the general structure of ancient scripts (ibid. 92).

Whereas in their computational analysis, R. Rao *et al.* use the Markov model and *N*-grams to calculate the level of entropy (degree of order) of the Indus inscriptions, Wells analyses the Indus signs and their sequencing through a statistical analysis of "sign contexts" and "sign order" with the aid of ICIT 5.2. Both computational approaches employ a probabilistic analysis of the Indus script's properties. While their collective efforts do not portend any definite answer as to the linguistic identity of the Indus culture (although Wells [2011] does eliminate Dravidian languages as viable candidates), they both view the Indus script as a writing system that was employed to communicate language (as opposed to a writing system used to relate ideas, i.e. ideogrammes).

This pro-linguistic view of the Indus script is opposed by the authors of the "illiteracy hypothesis", Steve Farmer, Richard Sproat, and Michael Witzel (2004), who argue the Indus script to be non-linguistic (or non-literate) in nature – therefore for them it is not a "script" at all.

Witzel's academic opposition to Wells's (2011) theory, is due to his view that it contains far too many singly occurring signs (singletons) even to qualify the Indus script as a writing system at all (Farmer, Sproat and Witzel 2004). Although Wells argues that the Dravidian languages can be eliminated as viable candidates for the linguistic identity of the language underlying the Indus script, he does not eliminate any other of the possible candidates, which theoretically means that Vedic Sanskrit and PIE are – as far as Wells's conclusions are concerned – still in the running.

It appears then that Wells's view is pro-Āryanist in nature. Even if Wells's approach is considered to be "quantitative, contextual, and empirical" (Lamberg-Karlovsky 2011: xiv), and

that his conclusions argue against the pro-Dravidian perspective, we may detect an Indigenous Āryanist *working assumption*. Even if Wells does not *openly* embrace one camp or the other (Dravidianist or Āryanist), his conclusions do lend credence to the pro-Āryanist camp – due to his anti-Dravidian views in relation to the linguistic candidacy of the Indus script he presents in his work. This might help explain Witzel's opposition to his dissertation; Witzel does not operate on either one of the hypothetical assumptions (proto-Dravidian or proto-Āryan) but adopts a more neutral position by speaking of a gradual 'influx' of Āryans into the Subcontinent over a long period of time (Witzel 2006b: 219; in reference to Witzel 1999a, 1999b, 1999c). While he 'treads lightly' between the opposing Dravidianist and Aryanists camps (Witzel 2006b), Witzel clearly adopts the Eurocentric perspective in situating the PIE *Urheimat* (homeland) somewhere in the Southwestern Russian Caucasus Mountain range in his defense of the *non-autochthonous Āryans* position (Witzel 2001; see also Witzel 2006a: 160-61).

In spite of Wells's best academic intentions, it appears that his work does remain at some level theoretically affiliated to another type of scholarship that is greatly frowned upon in Western scholarship, which Bhatt (2001: 205) calls an "enormous body of autodidact and dilletantist literature" published in India (specially by Hindutva supporters), Pakistan, and the US, which is "preoccupied with demonstrating that Aryans were indigenous to India […] and that India is the original Aryan homeland" (ibid. 205). Aside from all of the polemics surrounding Wells's work, it can be surmised that his computational approaches or R. Rajesh *et al.*, are high-tech approaches that give us a probabilistic analysis of the Indus script and nothing else. Their results do not yield any linguistic data but simply give researchers *some fair odds to bet on* in formulating their own working hypothesis in an attempt to *crack* the Indus code.

Chapter 3: **Africa, Mesopotamia & Elam: ——————** *Newly Emergent Historical Frames of Reference in Making Sense of the Indus Script's Origins and/or Cultural Spheres of Influence*

3.1 The Afro-Dravidian Thesis, an Afro-Asiatic Perspective

As explored earlier (§§ 1.2 and 2.4), the terms "Dravidian" and "Āryan" denote India's two predominant traditional national cultures. The majority of North Indians identify with Āryan culture and/or language whereas South Indians identify with Dravidian culture and/or language; the Dravidian language family is at present represented by the principal languages in South India, such as Tamil, Kannada, Malayalam, and Telegu.[58]

We have seen that both of these cultures and languages, in the post-colonial Indian context, are often superimposed on the ancient Indus's own 'national identity', resulting in the Āryan *vs.* Dravidian debate with regard to the linguistic identity underlying the Indus script.

Defenders of the pro-Dravidian theory argue for a "similarity between Sumerian and Dravidian ethnic types" (Nath Sen 1999: 29). Additionally, since the recent discovery of the Brahui language, a Dravidian language still spoken by a Baluchi tribe today (in nearby Baluchistan), some scholars now argue that in ancient times, "the Dravidians invaded India from Western Asia through Baluchistan" (ibid. 29; see also Witzel 2006b: 219). Hence, this pro-Dravidian viewpoint speaks of an ancient 'Dravidian invasion' in response to an 'Aryan invasion' into ancient India; for this reason, the pro-Dravidian stance is often derided as being

[58] In very general terms, the majority of North Indians identify with Āryan culture and/or language as opposed to South Indians who identify with Dravidian culture and/or language. As a referential aid to show the present-day distribution of the modern Indo-Āryan languages in what is primarily located in North India, see my Fig. 1.9a map. For the distribution of the unrelated Dravidian (non-Āryan) languages, see Fig. 1.9b map which shows them to be primarily situated in South India.

nothing more than a counter-'myth'. Michael Witzel (2006b) entirely dismisses the pro-Dravidian school of thought (in relation to the Indus script), which according to him "is a mere extrapolation from the dominant ("colonialist") assumption that the invading Aryans conquered the earlier inhabitants of the subcontinent, the Dravidians" (ibid. 219).

The possible Dravidian passageway *from Western Asia through Baluchistan* is an "ongoing linkage made between Dalits and blacks" (Prashad 2000a: 242, nota 53); this connection is explored by recent scholars who continue to work on what is called the Afro-Dravidian thesis (ibid.; see also Prashad 2000b). The Dravidian association with Africa is based primarily on a racial categorization, as the Dalits, often termed the "Black Untouchables of India" (Rajshekhar 1995) or "Brown folk" (Prashad 2000a), have reputedly suffered through 'caste' discrimination in India. The Dalits are viewed as 'victims of *karma*'. According to Hindu tradition, they cannot change their social standing, for it has been given to them as their birthright to remain outside the 'caste' system, which is the lowest rung of Indian society (Prashad 2000b).

This question of African 'blackness' and Indian 'brownness' goes along with a shared sense of discrimination at the hands of 'white' societal powers. The Afro-Dravidian thesis intersects with another school of thought that attempts to retrace Dravidian origins in the dawn of time back to Africa.

For our purposes, the main question is whether the Afrocentric approach is useful in re-contextualizing the Indus culture and the origins of their writing system.

3.1.1 The Afrocentric Discourse & What It Says About The Indus:————
Exploring Afrocentrism as a Potentially Valid Frame of Reference

> *The Puranas, the ancient historical books of India, speak of the civilization of Ethiopia as being older than that of Egypt. These Sanskrit books mention the names of old Cushite kings that were worshipped in India and who were adopted and changed to suit the fancy of the later people of Greece and Rome. [ ] The Hindu Puranas speak of the Cushites going to India before they went to Egypt, proving Hindu civilization coeval with that of Chaldea and the country of the Nile. These ancients record that the Egyptians were a colony drawn out from Cusha-Dwipa and that the Palli, another colony that made the Phoenicians followed them from the land of Cush. In those primitive days, the central seat of Ethiopia was not the Meroe of our day, which is very ancient, but a kingdom that preceeded it by many ages; that was called Meru. Lenormant spoke of the first men of the ancient world as "Men of Meru." Sanskrit writers called Indra, chief god of the Hindu, king of Meru. He was deified and became the chief representative of the supreme being. Thus was primitive India settled by colonists from Ethiopia. Early writers said there was very little difference in the color or features of the people of the two countries. [ ] Ancient traditions told of the deeds of Deva Nahusha, another sovereign of Meru, who extended his empire over three worlds.*
>
> Drusilla Dunjee Houston (1926), p. 29.

Drusilla Houston's (1926) pioneering work *Wonderful Ethiopians of the Ancient Cushite Empire* is a perfect example of the Afrocentric historian's revisionist account of history. It not only explores the history of the Kushite civilization, but also romanticizes ancient Kush (Ethiopia) as the origin of all civilized cultures, including ancient India. More recent Afrocentric historians uphold this romanticized vision of ancient Africans colonizing the world. Evidently, in her day, Drusilla Houston did not have much knowledge of the Indus civilization since it had only just recently been discovered and its great antiquity had not yet been clearly established.[59] But, nevertheless, it is quite interesting to see the slight shift in perspective that has occurred in many

[59] Even if Alexander Cunningham (1877), as the "father" of the Archaeological Survey of India, was the first explorer to have identifiably discovered some material belonging to the Indus civilization while excavating at Harappa in the 1850s, however at the time of his discoveries he did not recognizing great antiquity of the Indus sites and his finds (McIntosh 2002: 17, 18). Only much later, in the 1920s, did John Marshall finally attest to the great age of the Indus sites (McIntosh 2002: 17, 18). Basically, when Cunningham unearthed the first Indus-inscribed seal from his excavations at Harappa, at this point in time nothing was known of the Indus civilization—it has not yet been "discovered". It is usually Marshall, in the 1920s, who usually bears the distinction of being the "discoverer" of the Indus civ.

Afrocentric circles. Instead of seeing 'ancient Kushites' or 'Ethiopians' as responsible for bringing civilization to the Indian Subcontinent, there has recently emerged a newly revised version of the facts that has seemingly incorporated the Dravidians into the Afrocentric narrative (or viewpoint). Afrocentrism now includes the 'Brown folk' (to use Prashad's [2000a] expression) or oppressed South Asians in their revisionist view of Asian history. Thus, ancient Dravidians – as proto-historical predecessors to the contemporary *Brown folk* – have made a place for themselves in the Afrocentric discourse.

Edward Bynum's 2012 *African Unconscious* discusses the cross-fertilization that would have occurred in ancient Africa's Black populations as they were absorbed into a native Dravidian-Indus population, which as a consequence left them darker-skinned in contrast to the 'invading' lighter-skinned Aryans (ibid.). Bynum's viewpoint has become enmeshed with the Dalitcentric approach. The following quote shows clearly that the emergence of the Afro-Dravidian thesis is presently to be found in the *African unconscious*:

> From Kemetic Egypt and Nubia, the warm dark thread of human civilization moved eastward and north, unfolding like organs from the embryonic neural crest. It also moved south and west. Great familial systems were involved in this spreading. To the East in India it stimulated and cross-fertilized with the civilization of the Dravidians, with the earliest great cities being Mohenjo-Daro and Harappa. Actually the Harappan episode came first, with its greatest flowering between 3000 and 2500 B.C.E. Its earliest towns and villages reach back to 7000 and 6000 B.C.E. When the Indo-Aryans descended into the Indus Valley, the Harappan episode had already been absorbed by other Black populations, who in time became known to us as the Dravidians. […] When they arrived, the Aryans found peoples already practicing a religion that went back millennia, which today is called Jainism. Jainism's lineage included Mahavira, Parsava, and the whole religious Tirthankara line, all rooted in pre-Aryan antiquity (Zimmer, 1969).
>
> Bynum 2012: 38-9.

According to the Afrocentric interpretation, the "Egypto-Nubian civilization of the Nile Valley" is a primordially important "reference point" or "orienting position" in the exploration of how these "earliest Egyptians, the dark-skinned migrating inhabitants of the upper Nile Valley,

[who] called themselves 'Kemits'" would basically colonize the world (ibid. 37).[60] In relation to the Indus culture, these Kemetic Egyptians and Nubians (ibid. 37-8) *stimulated and cross-fertilized with the Dravidians*, depicted as the original authors of the Indus civilization as well as the originators of Jainism (ibid. 38-9).

3.1.2 The Jain Connection with the Indus Culture:——————————
Traditional Anti-Brahmanical Views and the Dalit/Anti-Caste Movement

Some scholars (more often than not, Jain scholars) argue that the iconographic figures featured on Indus seals are sitting in a meditative yogic posture, commonly associated with a Jain Tīrthankara ("spiritual leader") or even a Jain monk ("muni, sadhu" or "sadhvi") (A.K. Jain 2009: 20-1; Pruthi 2004: 1). Jain scholars believe the Indus civilization to have flourished between the times of Sambhava to those of Puspadanta, respectively the third and the ninth Tīrthankaras (out of the traditional 24) (J.P. Jain 2006: 13-4; Pruthi 2004: 2). Jyoti Prasad Jain (2006) even goes so far as to theorize that it was in the age of Śitalanātha, the tenth Tīrthankara, that "the Vedic Āryans and their Brāhmanical culture and civilization" arose, and that it continued to rise over the life spans of the next nine Tīrthankaras (ibid. 13-4). This long historical period "witnessed the gradual Āryanisation of the country and the expansion of the power of the Vedic Āryans" (ibid. 14). The existence of such a rich historical tradition within the Jain tradition, combined with the discovery of Indus artefacts that seem to share many similar

[60] The term *Kemetic Egypt, as used by* Afrocentric scholars, comes from the Ancient Egyptian name of "Kemet" (or "Kemit") which is what they called their land, what we more commonly refer to simply as Ancient Egypt (Bynum 2012: 37-8). Because "Kemet" has linguistically been shown to have originally meant something along the lines of "black" or "dark", as a consequence of this etymological meaning of the term, consequently when "Kemet" is used as a self-designator it is – according to the Afrocentric perspective – then taken to designate a "dark-skinned" or "Black" person from *Kemet*, quite literally "the Land of the Blacks" (ibid. 37-8). In his section dealing with ancient "Kemetic Egyptians" and their cross-cultural activities, aptly, Edward Bynum's (2012) title is quite telling, for it is called "The Emergence of Kemetic Egypt and its Contact With Other Peoples: Asia, Mesopotamia, 'Olde Europe,' and West Africa" (ibid. 37).

iconographic representations found in Jain art, associate the Indus culture with the origins of Jainism.

Gail Omvedt (2006) notes that alongside Buddhism and the Indian Cārvāka [read "Charvak"] materialist philosophical tradition, "Jainism's claim tracing its heritage back to Mohenjo-daro has some validity" (ibid. 8). Omvedt's work explores various Dalitcentric perspectives on India's anti-caste movement and the construction of an Indian identity. It is therefore not too surprising to find mention of Jainism in such a work, as it is often said that Jainism is fundamentally anti-caste (Babb 2004: 181; also Cort 57-60, and Laidlaw 1995: 111-16). As Anne Vallely notes, the Jain tradition has always "rejected the authority of the Vedas – the ancient Hindu scriptures – and denied the caste system any legitimacy" (Vallely 2002: 14-5). For this reason, Jainism has traditionally "opposed the authority and privilege of the Brahmans, and claimed, contrary to the conventional wisdom of the times, that it was possible for all humans to achieve liberation through their own efforts" (ibid. 15; in reference to Folkert 1987). These historical anti-caste and anti-brahmanical views, as expressed by the Jains, to a certain extent have assured their inclusion in the more recent discussions that pertain to the Dalit/anti-caste movement.

Much of the Dalitcentric scholarship explores the ancient cultural strands of India's past. Thus, an exploration of "the history of contesting Hinduism" is tantamount to redefining the origins of Hinduism itself, for—

> Hinduism, as we know it, was in other words, only one of many consolidations within a diverse subcontinental cultural tradition, and attained social and political hegemony only during the sixth to tenth century A.D., often after violent confrontations with Buddhism and Jainism.
>
> Omvedt 2006: 8.

Defining Hinduism as a by-product of the complete *brahmanic hegemonization of Indian culture* or eventual Āryanization of the Subcontinent's various cultural traditions, is more

inclusive of the Dalit point-of-view, and certainly also coincides well with the Jain historical perspective (J.P. Jain 2006: 1-20).

The Jain narrative surrounding the Indus culture is intrinsically related to the pro-Dravidian camp (as opposed to the pro-Aryanist one), which ultimately means it is Dalitcentric in nature, and consequently forms an intrinsic part of the Afro-Dravidian thesis. This theoretical approach permits scholars to make connections between Africa and Asia in early antiquity, as well as to compare various cultures/languages.

On this basis, Edward Bynum (2012) describes shared similarities between hypothetically (re)constructed Afro-Asian interactions in early antiquity.

The Afro-Dravidian thesis expresses anti-caste and anti-Āryan sentiments, referring to 'invading' Aryans who came from Europe to the Indus in order to 'conquer' the 'darker-skinned' indigenous 'dark' Harappans (a 'cross-fertilization' of African and Dravidian peoples), and thus imposed a 'brutal caste system' in a long and fierce 'battle for supremacy' (Bynum 2012: 133-35). In addition to these Indian anti-caste sentiments there are feelings of anticolonialism and antiracism that unite the Afrocentric scholars with their Indian counterparts.

In order to understand where this (theoretical) ground shared by the Afrocentrists and Dalitcentric scholars comes from, one merely needs to take a quick look at some key historical events that have unfolded in recent history; the "fights of the anticolonial and antiracist forces" against their colonialist European regimes (V. Prashad 2001: 37) until the European powers finally conceded and saw the withdrawal of colonial rule in India/Pakistan in 1947, Indonesia in 1948, and soon after, similarly in Ghana in 1957 (ibid. 37). "Colonialism", soon resurfaced in the newly formed independent State. This was "neocolonialism", as labelled by Kwame Nkrumah, the first president of Ghana and an influential 20th-century advocate of Pan-Africanism (ibid. 37).

"The essence of neocolonialism," wrote Nkrumah, "is that the State which is subject to it is, in theory, independent and has all the outward trappings of international sovereignty. In reality its economic system and thus its political policy is directed from outside," that is, by U.S. and European finance capital (V. Prashad 2001: 37-8).

"Neocolonialism" was then replaced by "neoliberalism" after the collapse of the USSR in the 1990s "in which freedom came to mean liberty of the moneyed to act unburdened by notions of justice and democracy" (ibid. 38).

What bearing does the advent of neoliberalism in the post-colonial African and South Asian (India/Pakistan) context have on the Indus script? The antiracism and anticolonialism movements in South Asia (Pakistan/India) and Africa (e.g., Ghana), have united to explore Afro-Asian connections in antiquity. Dalitcentric and Afrocentric scholars are attempting to (re)construct a valid historical framework from which history can be "revised" with not a new "falsified" account of the past, but possibly a more "just" one – or at least one that does not have all the racial trappings built into it by Eurocentric scholars with their own interests.

Not surprisingly, the scholarly views that argue in favour of an ancient 'Dravidian invasion' in response to an 'Aryan invasion' into ancient India, are often derided as counter-'myths' (Michael Witzel 2006b). The interest of the Afro-Dravidian theorists is not any different than those of Western scholars (Eurocentrists) who are attracted and interested to the cultural origins and linguistic identity of the Indus Valley because the question is intimately interrelated to the preoccupying concern of locating the (proto-)Indo-European homeland (PIE) and where PIE was spoken.

3.1.3 "Biological Translocations" Across the Indian Ocean:
The Prehistoric Movement of Plants and Animals, Archaeological Evidence in Support of Afro-Asian Connections in Antiquity

Another set of evidence relevant to the spread of human culture can be found in the study of the prehistoric movement of plants and animals in the ancient world. Archaeobotanists and biological scientists work alongside historians and researchers to fit the pieces together in the complex jigsaw puzzle of prehistory (Fuller *et al.* 2011: 544).

Archaeobotanical research can assist in order to help reveal "processes of cultural contact, trade and biological translocations in the Indian Ocean in later prehistory, from what can be termed the Bronze Age (in western Asian chronologies) through to the Iron Age and later" (Fuller *et al.* 2011: 545). McIntosh has concluded that the presence of African crops in the Indus region was the result of "direct seaborne expeditions by the Harappans to the African coast" (ibid. 2011: CiC *Research topic description*[61]).

Harappan Crops

A number of cereals brought under cultivation by the Indus civilization are not indigenous to the geographic expanse it covered, nor any other contemporary South Asian cultures in proximity to it. Wheat and barley were the main staples of agriculture in the northwest of the Indian subcontinent, their seeds having been uncovered from as early as the Ravi period (ca. 3300-2800 [McIntosh 2008: 420]) at Harappa until the last centuries of the Mature Harappan period (ca. 2600-1900 BC [Possehl 2002]) (McIntosh 2008: 110-11; Possehl 1999: 238-40). Aside from wheat and barley, however, there are also an important number of plants of African origin that appeared in Gujurat during the early 2nd millennium "and were incorporated into the range of

[61] http://www.cic.ames.cam.ac.uk/pages/mcintosh.html

crops grown by the local Harappans" (McIntosh 2008: 111; see also Possehl 1999: 240-46). Gregory Possehl (1999: 240) observes:

> Wheat and barley are both represented all through the Regions of the Indus Age, from the very beginning of the village farming community. As a generalization, it is fair to say that these people were wheat and barley farmers who concentrated on the keeping of cattle. But, there are other important plants and animals that complemented these subsistence resources. The most important is a class of grasses we have come to call "millets."

The introduction of African millets[62] in the early 2nd millennium Gujurat transformed the agricultural landscape of the Harappan crops from thousands of years ago, and it is these same African millets that in contemporary India's yearly production of cereals rank in the 3rd (Jowar), 5th (Bajra), and 6th (Ragi) positions of importance in the top 6 list, accounting for more than 20,000 thousand tons of grain.[63]

The so-called indigenous Indus cereals include "little millet" (*Panicum sumatrense*) which "was common at Mature Harappan Rojdi, Oriyo Timbo, and Babar Kot in Gujarat, and present at Harappa around 3000 BCE" (McIntosh 2008: 111), and browntop millet (*Brachiaria ramosa*) "also grown at Rojdi" (ibid. 111).

These native species of crops that originate either in or around the Indus river basin differ from those that made their way from faraway Africa in the early 2nd millennium. Whereas "domesticated cereals of the Asian neolithic (wheat and barley)" are "winter grasses" (Possehl 1999: 240) or "seed plants that matured in hot weather without large seeds" (ibid. 240), African millets "mature and bear seeds in the summer" (ibid. 240). Whereas Harappan wheat and barley

[62] Simply to provide us with a working definition of what is understood by a "millet" as it relates to the Subcontinent's agriculture, Possehl (1999) defines it as follows: "The term 'millet' is used for grasses with large heads of spherical seeds. It is not a term related to the taxonomy of the plants involved, and 'millet' has a generic quality about it" (ibid. 240).

[63] As per numbers given by Possehl (1999: 241, Table 3.2), these ranks are representative of India's cereal production for the year 1988-89: According to Possehl's figures, the African millets (Jowar, Bajra, Ragi) account for 20,684 thousand tons of grain, just over 13% of the total of India's cereal yearly production (again these stats are for 1988-89) (ibid).

cultivators had previously depended on one single annual crop harvest in the summer, cultivators now had "an option for summer, monsoon cultivation" (ibid. 240). After the summer harvest, Harappan cultivators would simply sow the seeds of their African crops with the beginning of the first rains of the monsoon season, and harvest these crops in the autumn. These crops are referred to as the Kharif (automn) crops.[64] Alongside the Rabi (spring) season, the Kharif is the other main agricultural season in India/Pakistan to this day (S.K. Jain et al. 2007: 42).

It is striking that these African plants appear within the geographic expanse of the Indus civilization at the very same time that the complex process of urbanization first appeared in the riverine valley of the Indus (around the beginning of the Mature Harappan, ca. 2500 BC). Indeed, Anthony Penna (2010), an ecological historian, suggests that "the rapid spread of the production of millet provided the stability for the early development of [Indus] urbanization" (ibid. 127).

It is not known how the original seeds of the three African kinds of millet (jowar, bajra, and ragi) made their way into the hands of Harappan cultivators. What *is* known, is that the process of Indus urbanization (whether or not as a direct result of Mesopotamian influence) encompassed complex trade linkages extending well into the huge hinterlands of Baluchistan, Afghanistan, Iran, Central Asia, and peninsular India (as explored in Chapter 1). Furthermore, the Indus linkages extended well beyond these areas right down to the Persian Gulf and further onwards, to southern Mesopotamia (Chap. 1).[65] The foreign long-distance trade connections of the Indus extended far beyond Mesopotamia, and all the way to the ancient lands of Dilmun (Bahrain) and

[64] The harvest terms *Kharif* (autumn) and *Rabi* (spring) are the usual Arabic terms which are used in the Indian Subcontinent.
[65] Asthana 1982; Kenoyer 1997; Chew 2007: 35; Chew 1999: 94-5.

Magan (Oman)[66], two distant lands located in and around the faraway Arabian Peninsula (for maps of these local and long-distance Indus trade routes, see Figs. 2.4a, b, c and 2.5).

Essentially, the Harappan traders, through their active involvement in the Mesopotamian world-system of interrelated trade networks, were not only connected to the Persian Gulf trade, but also to African agricultural commodities that would then make their way into the hands of Harappan cultivators in Gujarat. The Harrapan presence has already been well attested at Dilmun (Bahrain), as well as the particular trading relationship the latter held with its closer western neighbour, Magan (Oman), which is situated on the southeast coast of the Arabian Peninsula (Possehl 2002: 219-20; see also Chap. 1). It is possible therefore that the Harappan business-folk came into contact with the seeds of these African plants in Dilmun. As previously explored (in Chap. 1), Dilmun's geographic location made it a natural stopover for seafaring Gulf traders who were making their way inland toward southern Mesopotamian city-states with heavy cargo (Possehl 2002: 220; Bibby 1969: 2). It could therefore be reasonably assumed that Dilmun, invariably described as the "commercial center" (Possehl 2002: 220) and "operational nerve-center for this early gulf and Arabian Sea trade" (ibid. 220) could arguably also have served as an intermediary – perhaps both as a cultural and agricultural linchpin – in the biological translocations of African plant and animal life across the Indian Ocean and into the hands of Indus cultivators and farmers.

Even if the specific details of how, when, and where the Harappans acquired their African seeds are not known, it is certain that African crops were introduced in the Indus region by the latest around 2000 BC (Fuller *et al.* 2011; McIntosh 2011). The African plants did not make their

[66] As previously seen in Chapter 1, as it is known in the Mesopotamian texts, Dilmun corresponds to modern-day Bahrain and the adjacent Eastern Province of Saudi Arabia (McIntosh 2002: 161; Possehl 2002: 219) while Magan (or Makan) is usually identified as Oman (or the Omani Peninsula), situated on the southeast coast of the Arabian Peninsula (Bienkowski & Millard 2000: 218; Crawford 1998: 153; McIntosh 2008: 184).

way through the complex Indus trade linkages that extended into the huge hinterlands of Baluchistan, Afghanistan, Iran, Central Asia, and peninsular India, as there are no ancient crops of these African millets (jowar, bajra, and ragi) that appear (in the archaeological records) in the lands that separate Africa from South Asia (Fuller *et al.* 2011: 545). (See Fig. 3.4, a schematic map of major Bronze Age translocations between South Asia, Arabia and Africa.) Jane McIntosh (2011) therefore concludes that they were most likely the result of a direct Harappan seafaring expedition made between Africa and South Asia:

> The presence of African crops in the Indus region by 2000 BCE reveals contacts of some sort between Africa and South Asia. Indirect and direct routes by which this transmission might have occurred were investigated: it became clear that by far the most probable mechanism was direct seaborne expeditions by the Harappans to the African coast. Further work will now be undertaken on the possible nature and implications of this connection.
>
> Ibid. 2011: CiC *Research topic description*[67]

It has even been determined that some of the three African millets present in the Harappan crops, such as bajra (or pearl millet) "may have been present" at a much earlier time – as is the case in late 3rd millennium Babar Kot in Saurashtra (McIntosh 2008: 112). This is significant because this period is simultaneous with the early nascent phases of Indus urbanization; the Pre-urban Harappan phase is now dated between approximately 3200-2600 BC (Possehl 1990) with the Mature Urban Phase Harappan style "occupying the century from about 2650 BC to 2550 BC", so the median date often being used is circa 2550 BC (ibid. 275).

The presence of African millets among the Harappan crops in the Pre-urban Harappan phase (ca. 3200-2600 BC [Possehl 1990]) lends support to the world-system theorists who include pre-dynastic Egypt (North East Africa) in the newly emerging world-system of the 3rd millennium BC (Chap. 1), such as Frank and Gills (1993) (Beaujard and Fee 2005: 417). This early confluence is theorized to have occurred sometime around 2700-2400 BC, and would have

[67] http://www.cic.ames.cam.ac.uk/pages/mcintosh.html

linked the early commercial activities of the Red Sea with those of the Persian Gulf (Frank and Gills 1993: 82). This is the same period in which the rapid onset of Indus urbanization occurs, ca. 2650-2550 BC (Possehl 1990). The presence of African millets in the Indus region at this point in time could very well serve as proof of this early confluence between Africa, Mesopotamia, and Asia.

Within Cambridge's *Civilizations in Contact* (CiC) research project, an important part of Jane McIntosh's research focus is an examination of the Harappan commercial involvement with these ancient trade routes between Egypt and Mesopotamia – what Beaujard and Fee (2005) see as wholly separate exchange networks (ibid. 417). Rather, McIntosh's (2011) research appears to be more in line with the views of Frank and Gills (1993):

> A complex system of exchange began with the first voyages between India and Mesopotamia in the 3rd millennium BCE and culminated in the emergence of the global exchange network in the 16th century CE. [ ] A key area in the system is the Indian Ocean and its littorals – Indian, Iranian, Indonesian, Arabian and African. As early as the later 3rd millennium BCE a regular maritime route through the Gulf, linking Mesopotamia with Oman, the Indus and Gujarat, was established. This may well be the oldest of all commercial maritime routes, and there is evidence that it may have extended to that other corridor leading to Egypt and the Mediterranean world: the Red Sea.
>
> Ibid. 2011: CiC *Research topic description*[68]

The archaeoethnobotanical evidence points to cross-cultural exchanges around this same time. The authors of Oxford's *Sealinks Project* – Dorian Fuller *et al.* (2011) – also argue for these Afro-Asian trade links; in their view "[t]he connections between Africa and India, which constitute the first act of the narrative of transoceanic connections in the north-western part of Indian Ocean, took place as the hitherto separate trading spheres of the Persian/Arabian Gulf and the Red Sea/Gulf of Aden became interlinked, probably at the end of the third millennium BC" (ibid. 545; see Fig. 3.4, a reproduction of a map found in Fuller *et al*. [2011]).

[68] http://www.cic.ames.cam.ac.uk/pages/mcintosh.html

Contrary to McIntosh (2011), Fuller *et al.* (2011) conclude that these African crops having arrived in the Indus region during the Harappan urban period (ca. 2600-2000 BC), brought there by Harappan seafarers, is nothing more than a "popular argument" (Fuller *et al.* 2011: 547). Their views are largely formed by botanical evidence, which, they argue, points more towards the end of the Harappan urban period (*c.* 2000 BC) instead of the beginning (c. 2600 BC) for the initial appearance of the African plants in the Indus region (ibid. 547).

Fuller *et al.* argue that the transfer of African crops into the Indus region occurred at the end of the Indus civilization's urban period, and not prior to its beginning. This view rules out any African cross-cultural possibilities in the development of the Indus script (since its use appears around *c.* 3300 BC, the beginning of the Ravi phase [Bryant 2001: 178]). As the authors point out, their preferred date of 2000 BC for Harappan (or South Asian) contacts with north-east Africa (and/or Yemen) is based on "the lack of any other material evidence" proving otherwise, although this does not necessarily mean that such earlier contacts between the two continents did not occur (Fuller *et al.* 2011: 547). For instance, as they write, the second half of the 3rd millennium BC saw "trade between urban actors" with the Harappan involvement in the Mesopotamian world-system (the Gulf trade). Such trade, however, "increasingly appears to have been built on earlier regional contacts between small-scale coastal fishing and agropastoral societies" (ibid. 547). Perhaps some of these "earlier regional contacts" (ibid.) as they would have existed at the beginning of the Ravi phase (*c.* 3300 BC), when the protoscript at Harappa first appears, might then be considered in order to better contextualize the genesis of the Indus culture/script. Fuller *et al.* draw on Peter Bellwood's archaeological approach which drew "namely his focus on small-scale societies as major forces of cultural history" (Fuller *et al.* 2011: 545).

Fuller *et al.* conclude that it was not Harappan trade (at the end of the 3rd millennium) that was directly responsible for the introduction of the African plants in the Indus region, but rather that this was "intensified trade [that had built] on the foundations of earlier contacts amongst small-scale societies" (ibid. 548). As it relates to our topic, this may mean that the ancient relationship between Africans and the Indus inhabitants may well lie in the Afro-Asian connection that occurred in the Indus civilization's prehistory, as Afro-Dravidianist theorists suggest. The Dravidian 'invasion' (Bynum 2012: 38-39) of India might not be a counter-'myth' (Michael Witzel 2006b) to the Aryan invasion theory after all. Perhaps these cross-cultural linkages that Dalitcentric and Afrocentric scholars are making between a proposed African point of origin (for a Dravidian homeland) can find support in the current research surrounding biological translocations across the Indian Ocean. Is it not possible that the Dravidians themselves find some sort of genetic, cultural, or linguistic affiliation with their ancient African counterparts? Apart from the Afro-Dravidian theorists who propose such a link, interestingly, the French scholar Bernard Sergent in *Genèse de l'Inde* (1997) is one of the few Eurocentric scholars who share in these views, in proposing an African origin for the (proto)Dravidian populations, yet all the while defending the traditional Aryan invasionist theory.

3.2 Recontextualizing the Mesopotamian Cultural Sphere: *From Africa to Indus,——————————————— Pre-Dynastic Egypt and Canaanite Middlemen Traders Linked to Elam – Where Harappans Trade Lapis*

The discovery of proto-Indus writing on potsherds dating back to as early as 3500 BC (a little earlier than the Ravi phase, which begins *c.* 3300 BC [Bryant 2001: 178]) situates the origins of the Indus script around the same time as the earliest appearance of Egyptian hieroglyphic writing. The earliest proto-hieroglyphs date back to the Naqada IIIa period of the 33rd century BC.[69] This is the same period in which the Ancient Egyptians were using the semi-precious lapis lazuli stone "in relatively abundant quantities at least as early as the Naqada IIc phase of the Predynastic period (*c.* 3500 BC)" (Nicholson & Shaw 2000: 39). Significantly, there were no native Egyptian sources of the stone (ibid. 39). In fact, the "principal ancient source of lapis lazuli" is the region of Badakhshan in northeastern Afghanistan, "where four ancient quarries have so far been identified: Sar-i-Sang, Chilmak, Shaga-Darra-i-Robat-i-Paskaran and Stromby" (ibid. 39; in reference to Kulke 1976; Wyart *et al.* 1981). These quarries "lay at the centre of vast trade networks whereby lapis lazuli was exported to the early civilizations of western Asia and northeast Africa from at least the Fourth millennium BC" (ibid. 39; in reference to Herrmann 1968; Payne 1968; Majidzadeh 1982; Sowada 2009: 183-85).

Scholars point out that "[s]ome of the earliest uses of lapis lazuli in Egyptian jewellery certainly suggest a Western Asiatic trade-link," especially since "[a] necklace of lapis lazuli

[69] The famed Narmer Palette discovered in Hierakonpolis (modern Kawn al-Ahmar) in the 1890s , which has been dated to ca. 3200 BC, was formerly considered to be the earliest known hieroglyphic inscription. Yet, in 1998, under the supervision of Günter Dreyer, while excavating at Abydos (modern Umm el-Qa'ab), a German archaeological team uncovered "a series of small inventory tags" (Mattessich 2002: 195) filled with three hundred clay tablets incribed in proto-hieroglyphics, documenting the provenance of various commodities (Mattessich 2002; Dreyer 1998). These were found in the tomb (identified as tomb U-j) of King Scorpion I (c. 3400 B.C. to 3200 B.C.), a predynastic ruler dating back to the Naqada III period (Mattessich 2002; Dreyer 1998).

beads in the late Predynastic grave T29 at Naqada, for instance, included a cylinder seal imported from Mesopotamia" (ibid. 39; in reference to Frankfort 1939: 293, pl. XLVIa).

Even if the Egyptian-Levantine commodities trade cannot be demonstrated during Egypt's Old Kingdom period (2686-2181 BC [Sowada 2009]) (i.e. because of the question of 'invisible' Egyptian exports like "foodstuffs and other organic materials" [ibid. 183]), there does exist archaeological evidence for the Egyptian-Levantine commodities trade that give us "a detailed understanding of the interregional and international commodities exchange" (ibid. 183). The Egyptian commercial interaction with these neighbouring Syro-Palestinian powers of the 3rd millennium BC may have been modeled on prior trade relationships between pre-dynastic Egypt and the land of Canaan (or Syro-Palestine), whose traders acted as middlemen in the acquisition of many of ancient Egypt's foreign goods (Sowada 2009: 184-85).

It is now widely accepted that the Egyptian hieroglyphic writing system "came into existence a little after the Sumerian script and is thought probably to have been invented under the influence of the latter" (Sampson 1985: 78), a fact which supports a Mesopotamian cultural influence in pre-dynastic Egypt. There is also abundant evidence of trade between pre-dynastic Egypt and the countries east of it (Demand 2011), which suggests a direct cross-cultural link between it and the Mesopotamian sphere. The only piece of land that separated the ancient Egyptians from the Mesopotamian city-states and their foreign markets (i.e., in the Sumerianized Iranian plateau, a consequence of the 4th millennium Uruk expansion [Hamblin 2006: 71]) was the neighbouring land of Canaan (Syro-Palestine). The ancient Canaanites/Palestinians therefore provide us with the missing link between the Egyptian commercial sphere and the Mesopotamian.

The Egyptian interaction with the land of Canaan in the 4th millennium BC began with the initial Egyptian expansion of "competing local leaders in Upper Egypt", principally leaders from Naqada, Abydos, and Hierakonpolis who "gradually moved northward" into southern Canaan, ca. 3900-3650 BC (Naqada Ia-b in Egyptian chronological terms) (Demand 2011: 79; see also Watrin 1998). This expansion culminated in the "outright Egyptian colonization of Canaan" around 3150-3000 BC (identified as Naqada IIIb and Dynasty 0; and Late EB I in Canaan) (ibid. 80-1). The initial impetus behind this northward expansion was the commercial relationship between Egypt and Palestine, "characterized by 'middleman trading'" (ibid. 79).

The foreign markets accessed by the Palestinians were therefore not purely restricted to the Levant. Rather, these middlemen traders travelled as far as Anatolia and Elam (ancient Iran) to import choice products for the Egyptian elite (Demand 2011: 79-80). In sum, the picture that archaeology paints is the following: In spite of all the polemics surrounding ancient Egypt's inclusion/exclusion in Mesopotamian world-system (Chap. 1), Egypt can readily be linked through these Palestinian middlemen traders to the Mesopotamian sphere. One of the main reasons that Palestinian middlemen traders were at this point in time able to access – or to tap into – such distant foreign markets as those in the Iranian plateau (Elam), was because "[a]lthough ethnically distinct and speaking their own language, the Elamites had in many ways been integrated economically and culturally with Sumer during the Uruk expansion of the late fourth millennium" (Hamblin 2006: 71). (See Fig. 3.3, which shows the Sumerian settlements and colonies in the Iranian plateau).

The Uruk expansion of the 4th millennium had gathered Elam into the Mesopotamian sphere (Hamblin 2006). The Sumerian cultural presence in the Iranian plateau predates considerably the later Mesopotamian influence when Sargon of Akkad (as previously explored in Chap. 1.3)

would manage to spread the hegemony of the Mesopotamian trade system through warfare and forceful subjugation in order to create a veritable world-system under his Akkadian empire, 2334-2190 BC (Teissier 1984: 12; Hamblin 2006: 73-101). The Elamites had therefore been exposed to Mesopotamian influences long before the arrival of the Akkadians, at the same time as the Egyptian expansion into southern Canaan, ca. 3900-3650 BC (Naqada Ia-b in Egyptian chronological terms) (Demand 2011: 79).[70]

Significantly, it is during this same time period that the Iranian plateau (as a direct consequence of the 4th millennium Uruk expansion), around c. 3500-3000 BC (Hamblin 2006: 40-2), sees the "development of trading towns and trade networks from Mesopotamia to Turkmenia and Baluchistan" along with a "settlement in Seistan and foundation of Shahr-i Sokhta" (McIntosh 2008: 420). The existence of this trade link between Elam and Baluchistan is important for the emergence of the Indus culture and script. This is because Baluchistan settlements are associated with the very earliest cultural periods in the Greater Indus Region; the considerable increase in "the number of settlements known in Baluchistan and in the adjacent lowlands had greatly increased" by around 4300 BC, and they included important settlements such as Periano Ghundai (in the Zhob Valley), Mundigak (in the Kandahar region), Faiz Mohammad (in the Quetta Valley), Togau (in the Sarawan region), and Sheri Khan Tarakai (in the Bannu Basin) (McIntosh 2008: 62). These newer settlements are additional to the previously

[70] The Uruk Expansion, is a phenomenon that occurred in the Late Uruk period, c. 3500-3000 BC (Hamblin 2006: 40-2), and it is "characterized archaeologically by the spread of a similar style of material culture of pottery, bowls, clay tablets, and cylinder seals from Sumer (southern Mesopotamia) to far beyond its original core zone; during this period Uruk-style material culture spreads to northern Mesopotamia, Syria, and western Iran. The cause of this expansion seems to have been largely economic. Mesopotamia has few natural resources besides clay, reeds, and grain. The massive population growth and high demand for prestige and luxury products by the new emerging Sumerian elites created an extensive search outside Mesopotamian valley for metal (initially copper, then tin, lead, silver, and gold; ME 143-76), stone (for building, and semi-precious stones like lapis lazuli for ornamentation; ME 177-216), and building timber" (ibid. 40).

established Mehrgarh (period III) and other existing settlements, whose occupation continues during this time (ibid. 62).

The Mehrgarh culture, including these other nearby Baluchistan settlements (mentioned above), are the precursor to the Indus culture and civilization (Chap. 1.2). The archaeological record of Mehrgarh begins with the earliest farming settlements, as early as the 8th-6th millennia BC, and is continually occupied through the mid-3rd millennium BC (Kipfer 2000: 345; Allchin and Allchin 1982; Allchin 1995; Jarrige and Meadow 1980; 1992; Shaffer 1984; Jarrige 1991; Shaffer and Lichtenstein 1995); a site occupation which "covers continuously the development from the prepottery Neolithic to the phase immediately preceding the appearance of the Indus Valley cities" (McEvilley 2002: 242).

The excavations at Mehrgarh therefore suggest that the Indus culture and civilization was a purely indigenous cultural process, and has required scholars to rethink the hypothesis of a Mesopotamian diffusion (ibid. 242). Baluchistan (Kechi Beg phase, 3800-3200 BC [McIntosh 2008: 420]) would see a "further substantial increase in the density of settlement" in the 4th millennium, that which resulted from "the expansion of people from this region into the Indus Basin, particularly Cholistan (Hakra phase)" (McIntosh 2008: 63).[71] The "deeply rooted" Indus culture, having originated as "the result of deep cultural processes" in the Neolithic "local traditions" of nearby Baluchistan, gave rise to urbanism at the same time as lower Mesopotamia and Sumer (McEvilley 2002: 243).

The Mature phase of the Indus civilization (Harappan period, ca. 2600-1900 BC), which saw the rise of cities and the use of the Indus script (the Harappan protoscript can be dated to the

[71] In regards to the Kechi Beg phase in Baluchistan, there are currently about 150 sites attributed to it, "many more than are known in the preceding period" (McIntosh 2008: 63): "These include both existing settlements, such as Mundigak, Gumla, Rana Ghundai, and Mehrgarh, and new sites, such as Damb Sadaat in the Quetta Valley and Adam Buthi in southern Baluchistan" (ibid. 63).

Ravi phase, ca. 3300-2800 [McIntosh 2008: 420]), can therefore be seen as a result of the local Baluchistan cultural traditions (Kechi Beg phase, 3800-3200 BC [McIntosh 2008: 420]). These early Baluchistan cultures were cross-culturally linked in trade ties with neighbouring Sumerian settlements in the Iranian plateau (due to the 4th millennium Uruk expansion, c. 3500-3000 [Hamblin 2006: 40-42]); trade linkages that existed when the Harappan protoscript first emerged, ca. 3300-2800 (Ravi phase) (McIntosh 2008: 420). Hence, the historical origins of the Indus script is directly tied with this "development of trading towns and trade networks from Mesopotamia to Turkmenia and Baluchistan" along with a "settlement in Seistan and foundation of Shahr-i Sokhta" (McIntosh 2008: 420).

In his interpretation of the Mehrgarh data, McEvilley (2008: 244) remarks that—

> Jarrige and Meadow divide the strata at Mehrgarh into seven levels, the sequence being characterized by increasing complexity along with increasing trade contacts with Central Asia. The village system was growing along with foreign trade – but there is no sign of *West* Asian contacts in these seven levels. Then at the end of this period, when the Indus cities arose, evidence of West Asian trade appears. It looks as if the long village-growth process, had partly prepared the area for the transition to urbanization before Mesopotamian contact, then was tipped over into urbanization by that contact. For most of its long, seven-stage, 4000-year development, though there are signs of gradual complexification, the site of Mehrgarh shows in various ways the static quality of cultures that have not yet experienced cultural takeoff.

McEvilley goes on to give some examples of the "static quality" of the Mehrgarh site (i.e. stone sickles remained unchanged from level 2 to level 7, "a period measured not in centuries but millennia" [ibid. 244]) before its "cultural takeoff"). This "cultural takeoff" is important, for it assists researchers in retracing the socio-cultural influences surrounding the origins and development of the Indus culture/script. Mehrgarh, as a precursor to the Indus culture and civilization, readily gives the appearance "of a semi-stagnant provincial Chalcolithic culture lacking pretensions to urbanism and cultural complexity", but which at the point of Mesopotamian contact is "suddenly stimulated into 'take-off'" (ibid. 244).

The fact that the Indus script also *takes off* during this period, ca. 3300 (at the beginning of the Ravi phase [McIntosh 2008: 420]) is quite relevant, because it can be considered as a cultural product of these local Baluchistan cultural traditions present at Mehrgarh (Kechi Beg phase, 3800-3200 BC [McIntosh 2008: 420]). One of the links in what appears to be a long interconnecting chain that interrelates cultures right across Baluchistan into the Iranian plateau, and onwards to Mesopotamia and beyond – to the Sumerian outposts of Syro-Palestine – until reaching far-flung ancient Egypt (possibly via Canaanite/Palestinian middlemen traders); is the trade of lapis lazuli. An exploration of the lapis trade – and the societies or cultures that traded it – can be used as a sort of historical strand in order to explore the genesis of the Indus culture, since it seems to have evolved directly alongside of it. (One cannot help but think that the trade of lapis in the ancient world connected these cultures in a similar way as the Silk Routes would thousands of years later.)

The early trading networks of the 4th millennium Iranian plateau saw new colonies "founded and occupied, largely by Sumerians" (Hamblin 2006: 40).[72] These trading towns saw "Sumerian merchants and craftsmen, and perhaps other colonists as well" taking up "residence in already existing indigenous towns in northern Mesopotamia, Syria and Elam, bringing with them Sumerian technology, culture, and other social practices" (ibid. 40). Also, "many cities on the highland fringes were regularly visited by Sumerians or were indirectly influenced by secondary exchanges" (ibid. 40). In the midst of the Uruk expansion, Elam – with Susa as a "major colonial center" – emerged as a hub of Sumerian cultural and commercial activities in and around the major trade routes that crossed the Iranian plateau (ibid. 41). Two of the major trade routes that traversed the Iranian plateau between east and west at this time, are described by McIntosh

[72] The "three forms" of the Uruk expansion being described are adapted from Hamblin's (2006: 40-2) breakdown or successive phases of these events.

(2008): "One (later a part of the famous Silk Road) ran north of the desert interior and crossed the Zagros Mountains through the Diyala Valley to reach Assyria and Babylonia; the other ran to the south of the desert, passing through Anshan to Elam and from there into southern Mesopotamia" (165). Lapis lazuli, among many other materials, "found its way to centers throughout the trade network, small amounts reaching Baluchistan, Elam, and the Gulf, while considerable quantities were imported into southern Mesopotamia, where it was used to decorate many valuable objects" (ibid. 166).[73]

Another one of these nodes in the Sumerian trade routes is Habuba Kabira (or Tell Habuba), the site of an Uruk settlement along the Euphrates in Syria. (See Fig. 3.3, which shows the location of Habuba Kabira [No. 9] in relation to the other Sumerian settlements and colonies in the Iranian plateau [Nos. 6, 8, 25]). Along with Susa (in Elam), Habuba Kabira presents "the greatest evidence for direct Sumerian colonization" and is therefore one of the Sumerian centres of trade that link the Iranian plateau to the rest of the Mesopotamian sphere (Hamblin 2006: 41). Founded in the Late Uruk period (ca. 3500-3000 BC [Hamblin 2006: 40-2], Habuba Kabira is significant to this discussion because it links Elam to Egypt. It is also this same period which saw the gradual emergence of the cuneiform script, and for this reason it is termed the Protoliterate period.

Cedars, other timber, and metals found their way from the Iranian plateau through the Euphrates route to Habuba Kabira, in what constitued one of the major Uruk expansion trade routes leading into Western Asia (Hamblin 2006: 41). But more importantly, aside from the material commodities that linked a Sumerianized Elam in the Iranian plateau to faraway Habuba

[73] McIntosh (2008) lists the other "key materials involved in this trade", which included "chlorite from Kerman, copper from a number of sources including the arsenic-rich deposits at Anarak in western Iran, tin from Afghanistan and the south Caspian, silver from Iran, steatite from southern Iran, turquoise from Central Asia, and gold from western Iran. A major source of minerals, including copper, alabaster, steatite, diorite, and aragonite, lay in the Chagai Hills of western Baluchistan […]" (ibid. 165).

Kabira; in addition to these, the Sumerian innovation of the stamp seal – or more specifically, the same as those early stamp seals found in Elam – have been uncovered at the site of Tell Habuba (Matthews 1997: 60).[74] More importantly still, similar Sumerian-style motifs have also been found on Predynastic Egyptian artifacts (Hamblin 2006: 41), but as Hamblin remarks, "the precise implications of these connections are disputed" (ibid.). Even if the exact *implications* of such an Elamite cross-cultural influence in pre-dynastic Egypt might be at times disputed in the academic arena – despite all of the polemics – what is not disputed is the fact that the Euphrates route, "with extensions southwest to Egypt via Canaan or the Mediterrenean Sea" did constitute one of the major Uruk expansion trade routes (ibid. 41). To summarize, Habuba Kabira (Syria) is established in the Late Uruk period (34th to 32nd centuries BC, in the Protoliterate period), around the same time as the earliest appearance of the Egyptian hieroglyphic; the earliest proto-hieroglyphs dating back to the Naqada IIIa period of the 33rd century BC (Mattessich 2002; Dreyer 1998).

At a stone's throw away from Egyptianized Canaan (Syro-Palestine), the Sumerian settlement of Habuba Kabira (Syria) was likely a trade center where Palestinian middlemen frequented in order to obtain some of the commodities sought by the early Egyptians, which could help explain how the Elamite seals might have provided the original source of inspiration for these early proto-hieroglyphs of the 33rd century BC (Naqada IIIa period) (Mattessich 2002; Dreyer 1998;

[74] In relation to the exact similarity in style that can be seen to exist between the early stamp seals of Iran and the whole Near Eastern stamp seal tradition, Matthews (1997) explores this in his discussion around the work of Teissier (1987), she who "has demonstrated the close links which exist between stamp seals and early Levantine cylinders, especially in the glyptic of Byblos, in features such as tête-bêche, animal protomes, the griffin, and exuberance in the rendering of tails, feet and hands" (Matthews 1997: 60). Teissier's thesis, according to Matthews, is that "these are features held in common in Elam and predynastic Egypt, which also occur in Syria and represent evidence for early links along a route through Syria by which early Egyptian civilisation was inspired by Elam" (ibid. 60). For the most part, Matthews agrees with Teissier's interpretation, that "for some motives, such as the griffin" he accepts that "the early stamp seals of Iran were one of the major sources of inspiration for the whole Near Eastern stamp seal tradition" (ibid. 60).

Demand 2011: 79-80). All these links connect a distant Sumerianized Elam to predynastic Egypt, *par l'entremise de* Habuba Kabira (Syria) and the Palestinian middlemen traders; the Mesopotamian and Egyptian spheres interrelated through a highly Egyptianized Canaan.

This places the origins of the Indus script squarely next to a Sumerianized Elam (Iranian Plateau) (post-Uruk expansion) where the first early stamp seals would be produced. These same seals were a likely source of inspiration for the whole Near Eastern stamp seal tradition (Matthews 1997: 60; Teissier 1987). The Egyptian proto-hieroglyphs (dating back to the Naqada IIIa period of the 33rd century BC [Mattessich 2002; Dreyer 1998]), significantly, appear shortly thereafter, around the same time as the first proto-Indus signs.[75] The Mesopotamian Protoliterate period (Late Uruk period, 34th to 32nd centuries BC) and the Predynastic Egyptian emergence of proto-hieroglyphs (Naqada IIIa period of the 33rd century BC) are two distinct historical periods that gave rise to two separate writing systems that were at some level interrelated through their cross-cultural trade activities. The archaeological discovery of Sumerian-styled motifs found in Egypt attest to the direction of cultural influence; the Mesopotamian writing system inspired the Egyptian (Sampson 1985: 78). Similarly, Sumerianized Elam is connected in trade linkages (much as it is with Egypt) with the genesis of the Indus culture and writing system around this very same time. Therefore it is logical to suspect that the Sumerianized stamp seal tradition of Elam (which inspired the whole Near Eastern stamp seal tradition [Matthews 1997: 60; Teissier

[75] The proto-Indus writing on shards of pottery could possibly date back to as early as 3500 BC, a little earlier than the Ravi phase (Bryant 2001: 178), but scholars more often than not – perhaps as a matter of expendiency – ascribe the origins of the Indus script to the Ravi, which dates to a little later around 3300-2800 (McIntosh 2008: 420).

1987]) along with the Egyptian proto-hieroglyphs [Sampson 1985: 78]) may also possibly have somehow *inspired* the proto-Indus signs.[76]

The early trade networks surrounding lapis lazuli provide us with an invaluable commercial link that serves to better interrelate the cross-cultural activities of the Iranian plateau and the Indus region. Given the important role that lapis played much later (during the Mature Harappan period, ca. 2600-1900 BC) when Harappan traders were involved in the Gulf trade (Chap. 1.3), P.R.S. Moorey (1994) suspects that these more developed commercial exchanges (in relation to lapis) were likely modeled on much earlier and more localized trade relations between early Indus sites found in Baluchistan (western Pakistan) such as Mehrgahr I-III and Mundigak I_{3-4} and the Iranian plateau (Moorey 1994: 89, 90). Moorey's suspicions are more or less the same as Fuller *et al.* (2011), who also concluded that these later developments culminating in Harappan urban trade "increasingly appears to have been built on earlier regional contacts between small-scale coastal fishing and agropastoral societies" (547).

The fact that Mehrgahr connects to all of these trade activities in the Iranian plateau is of prime importance; the culture of Mehrgahr is considered to have formed the "beginnings" of the Indus Age (Possehl 1999; see also Chapters 1 and 2). Or, as Kipfer (2000) succinctly describes it, "[a]lthough no Harappan civilization phase is represented here, the culture of Mehrgarh provides a plausible local antecedent for this civilization" (ibid. 345). Mehrgarh is the earliest farming site to have been discovered in Baluchistan (western Pakistan), dating to as early as the 8^{th}-6^{th} millennia BC (ibid. 345). Moorey (1994: 89, 90) also explores this particular trade relationship that existed between early eastern Iranian sites (Shahr-i Sokhta and Shahdad) and

[76] Chap 1.3.3: Archaeology has evidenced finds from Egypt in the late 4^{th} millennium (Pre-Dynastic period) that does lend support to establishing cross-cultural ties and trading links between Pre-Dynastic Egypt and Elam, e.g., lapis lazuli and Susiana art discoveries made in the Nile Valley (Moorey 1999).

Mehrgahr, along with the Mundigak site (near Kandahar in Afghanistan); these two latter sites are closely associated to the genesis of the Indus culture and both dealt in the lapis trade routes that extended into the Sumerianized Iranian plateau.

Linking these two sites (Mehrgahr and Mundigak) with these early lapis trade routes places proto-Harappan traders in the Elamite world, in there were "an assortment of administrative artifacts that includes Proto-Elamite tablets, cylinder seals, and clay sealings found in association at sites within a large geographical territory from Susa in the west [of the Iranian plateau] to Shahr-i Sokhta in the east [of the Iranian plateau]" (Sumner 2003: 1). The Proto-Elamite (hereafter P-E) script, like Near Eastern writing, derived from "a long evolutionary phase in which small clay tokens, often enclosed in clay envelopes bearing seal impressions, were used to record local transactions" (ibid. 1). Due to the long period of interraction between the Sumerian and Elamite cultures, it remains unclear if signs derived from the P-E had any influence on the proto-cuneiform Sumerian signs, or vice-versa. What is known is that "[t]he last refinements of the token system in the Elamite world occurred at Susa and other sites in Khuzistan at a time when the archaeological record indicates that Susa was under Sumerian political domination" (ibid. 1, 2). In relation to this convergence of Elamite and Sumerian cultures, William Sumner (2003) remarks that "[i]n addition to identical ceramics, the complex tokens from Sumer (Uruk) and Susa were practically indistinguishable" (ibid. 2; in reference to Schmandt-Besserat 1986, 1992).

To date the P-E script, we can rely on dates from Tal-e Malyan (north of Shiraz in Fars Province, Iran) which is the site of Anshan, a major Elamite city; it is here that during the Banesh Period, P-E texts were found to be present ca. 3500-2800 BC (ibid. 2). The cultural achievement of the P-E script as the "earliest marker of Elamite civilization" (ibid. 1) and it appears under

Sumerian political domination during the Mesopotamian Late Uruk (or Protoliterate) period, 34th to 32nd centuries BC; a period which is contemporaneous to the Sumerian proto-cuneiform system (the later Mesopotamian cuneiform). The fact that lapis traders from proto-Indus cultural sites (Mehrgahr and Mundigak) can be shown to have interracted in commercial exchanges within the Iranian plateau settlements (Shahr-i Sokhta and Shahdad) could therefore help to better frame and contextualize the innovation of a protoscript at Harappa which appears as early as 3500 BC (or more commonly assigned to the Ravi phase, c. 3300-2800 [Bryant 2001: 178; McIntosh 2008: 420]).[77] Traders from the cultural sites of Mehrgahr and Mundigak (the proto-Indus sites) were also possibly "inspired" or "influenced" to develop their own writing system somehow through their commercial dealings with the inhabitants of the Iranian plateau. When taking into account the cross-cultural trade linkages between the Sumerianized Iranian plateau and the proto-Indus sites, such ties further help to recontextualize the Mesopotamian cultural sphere with the fact that the Protoliterate period does not merely extend itself to Egypt (Mesopotamia's western neighbour), but also quite possibly extends to the Indus as well (its eastern neighbour).

[77] The Kechi Beg (Baluchistan) along with the Hakra (plains) cultural periods are dated to 3800-3200 BC (McIntosh 2008: 420), while the Ravi phase (Harappan area) is dated a little later around, ca. 3300-2800 (McIntosh 2008: 420); altogether, these three distinct cultural periods form the basis of what scholars now consider to constitue the very beginnings of the Indus culture. For instance, it is during this specific timeframe that Baluchistan would see an increasing number of farming settlements with some that were relatively "large" (McIntosh 2008: 420); pastoralist camps were established in the plains of the Cholistan Desert, there where the dry bed of the Hakra River runs through the area (McIntosh 2008: 420); and among other things, most importantly it is during this same period that Harappa was founded (McIntosh 2008: 420). It is here that the cultural roots and origins of the Indus script can be found, because it is in Harappa that proto-Indus writing on shards of pottery, some possibly dating back to as early as 3500 BC (Bryant 2001: 178) were uncovered. Therefore, the proto-Indus script is presently generally categorized as having been a cultural innovation that belongs to the Ravi phase from the Harappa area, ca. 3300-2800 (McIntosh 2008: 420).

Conclusion

This thesis has critically analysed the main epigraphic and historical perspectives surrounding the Indus script. Whether through a close examination of how modern-day influences and biases have possibly contributed to falsify the Indian subcontinent's past or even to romanticise its contemporary cultures, the study of the questions that pertain to the Indus civilization's culture, language, and script, reveals many complexities. As long as there is no accepted decipherment of the Indus script, these complex equations will remain.

A number of future research areas have been revealed in this thesis. Aside from having explored the strengths and shortcomings of various historical approaches in regards to understanding of the Indus culture, the exploration of the early history of the Sumerianized Iranian plateau in the course of the 4th millennium and the various trade links that existed with neighbouring proto-Indus cultural sites (i.e., Mundigak, Mehrgahr) have argued for cross-cultural linkages to have been plausible at this early developmental period of the Indus Age. The connection that existed between the early Indus traders, for the most part running along the lapis trade routes through the Iranian plateau, interrelates the Indus culture, language and script, at the very outset of its nascent phase with other contemporary societies with whom they had commercial ties. Such a view makes valid the comparisons made between the Indus script and those other writing systems which the early Indus traders would have been exposed to, namely those to be found in the Mesopotamian and Egyptian commercial spheres.

The archaeological discoveries that map out biological translocations across the Indian Ocean, thus connecting North East Africa (pre-dynastic Egypt) with the Indus civilization in a time when proto-hieroglyphs would first appear, further adds to the argument that the Indus

scribes were possibly also similarly influenced by these same early Elamite stamp seals that "inspired" the first Egyptian scribes and the whole Near Eastern stamp seal tradition. To pursue such a line of inquiry would entail the study of detailed stylistic affinitites possibly shared between the Indus script's earliest signs with, i) contemporary Mesopotamian proto-cuneiform signs to which they might have been exposed or may have borrowed and adapted, as well as with, ii) contemporary Egyptian proto-hieroglyphs that the early Indus scribes could have possibly somehow come into contact with through Canaanite (Palestinian) middlemen merchants.

Appendix

Figure 1.0: Indus-inscribed seals from Mohenjo-daro, from the Corpus of Indus seals and inscriptions (CISI), Vol. 1 (Joshi & Parpola 1987: 89).

Figure 1.1: A reproduction of Possehl's (1999: 156, Fig. 3.1) Map of the Greater Indus Region

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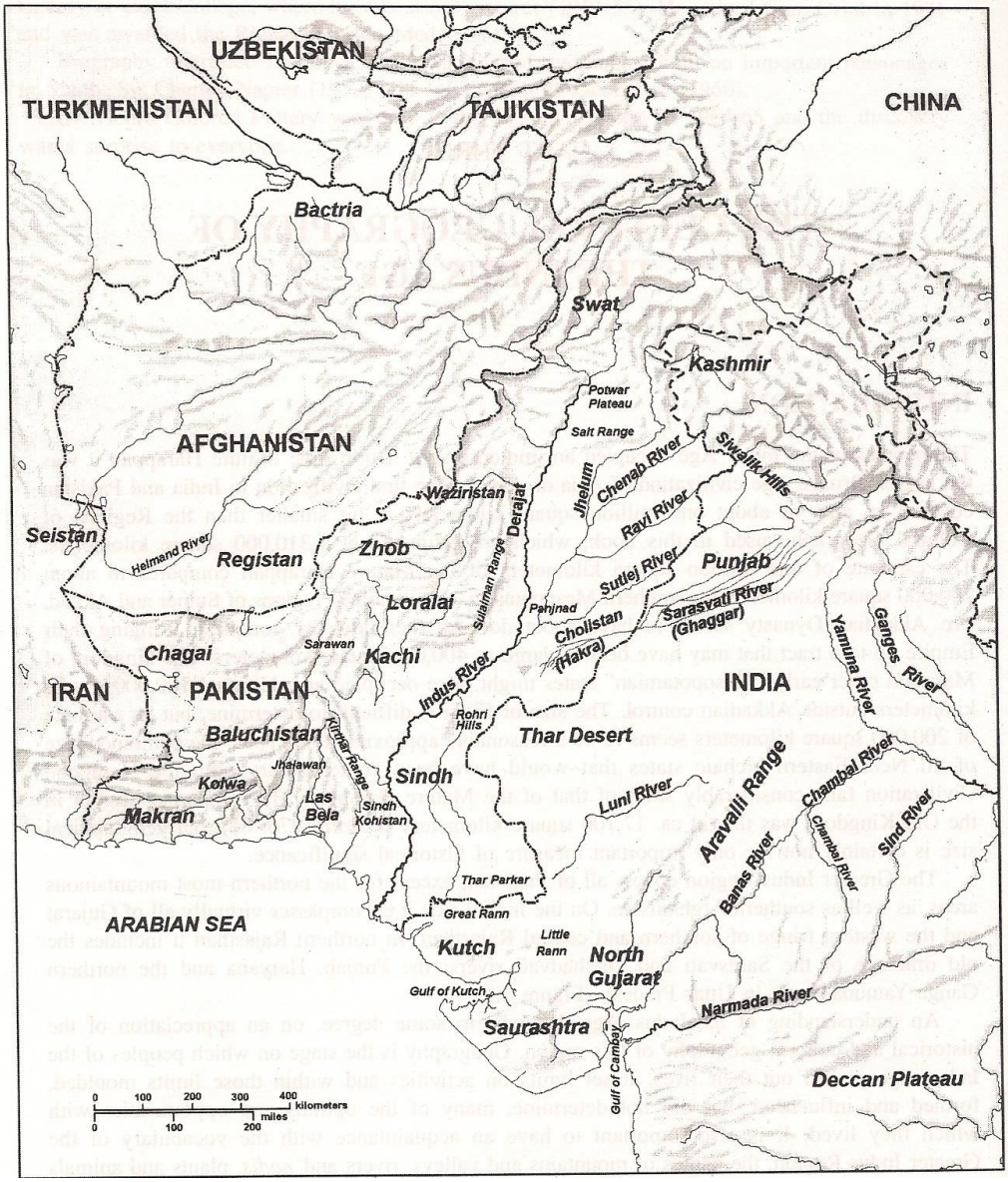


Figure 1.3: A reproduction of Possehl's (1999: 2, Fig. 1.1) Some sites of the Indus Age

2

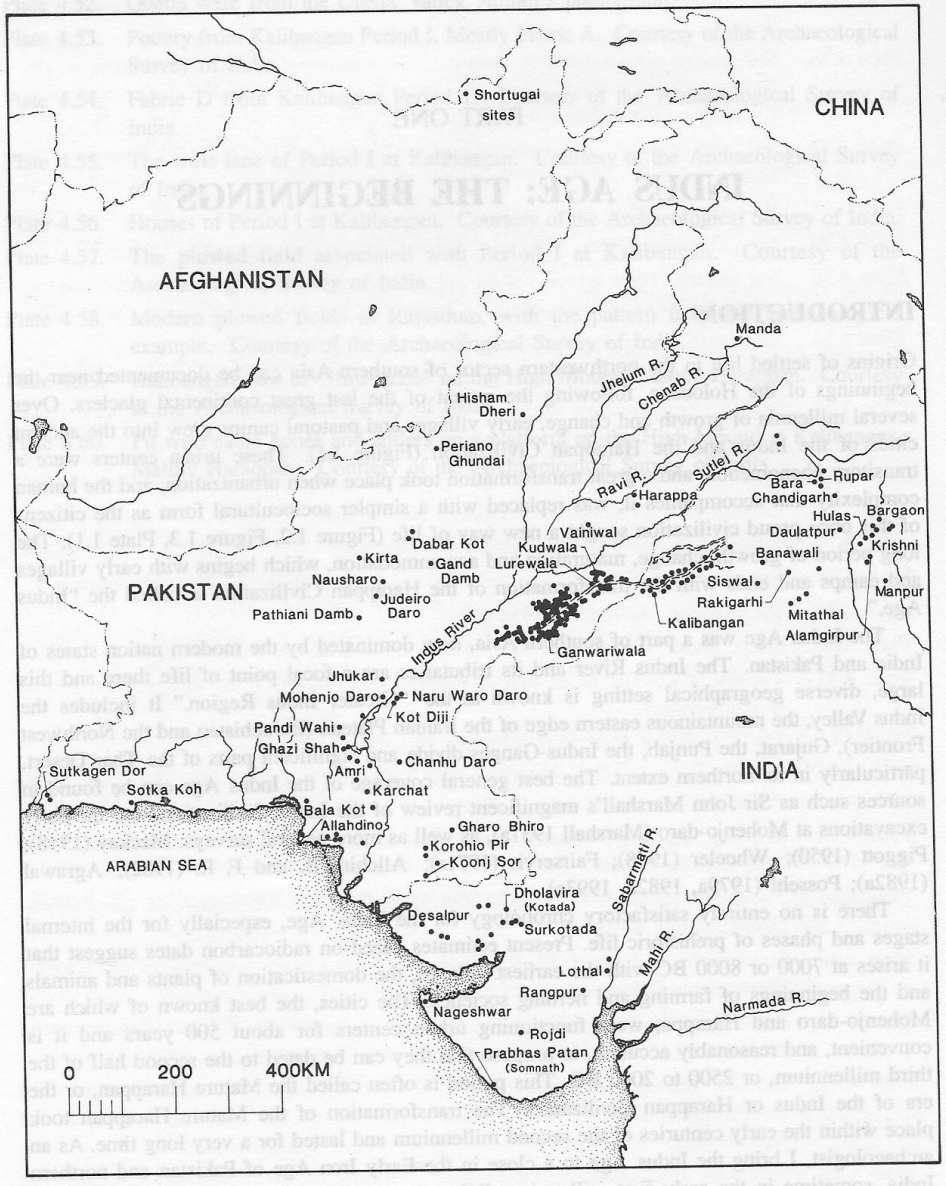


Figure 1.1. Some sites of the Indus Age

Figure 1.4: The absolute chronology of the Indus Age, by Possehl (1999: 23, Table 1.2)

that has been developed

TABLE 1.2
The Absolute Chronology of the Indus Age

Stage One: Beginnings of Village Farming Communities and Pastoral Camps	
Kili Ghul Mohammad Phase	7000-5000 BC
Burj Basket-marked Phase	5000-4300 BC
Stage Two: Developed Village Farming Communities and Pastoral Societies	
Togau Phase	4300-3800 BC
**Kechi Beg Phase	3800-3200 BC
**Hakra Wares Phase	3800-3200 BC
**The Kechi Beg and Hakra Wares Phases are thought to have been generally contemporaneous	
Stage Three: Early Harappan Four Phases thought to have been generally contemporaneous	
Amri-Nal Phase	3200-2600 BC
Kot Dijian Phase	3200-2600 BC
Sothi-Siswal Phase	3200-2600 BC
Damb Sadaat Phase	3200-2600 BC
Stage Four: The Early-Mature Harappan Transition	
Early-Mature Harappan Transition	2600-2500 BC
Stage Five: Mature Harappan Five Phases thought to have been generally contemporaneous	
Sindhi Harappan Phase	2500-1900 BC
Kulli Harappan Phase	2500-1900 BC
Sorath Harappan Phase	2500-1900 BC
Punjabi Harappan Phase	2500-1900 BC
Eastern Harappan Phase	2500-1900 BC
Two Related Phases in adjacent regions thought to be generally contemporaneous with the Mature Harappan	
Quetta Phase	2500-1900 BC
Late Kot Diji Phase	2500-1900 BC
Stage Six: Post-urban Harappan	
Jhukar Phase	1900-1800 BC
Early Pirak Phase	1800-1000 BC
Late Sorath Harappan Phase	1900-1600 BC
Lustrous Red Ware Phase	1600-1300 BC
Cemetery H Phase	1900-1500 BC
Swat Valley Period IV	1650-1300 BC
Late Harappan Phase in Haryana and Western Uttar Pradesh	1900-1300 BC
Late Harappan-Painted Gray Ware Overlap Phase	1300-1000 BC
Early Gandhara Grave Culture Phase	1700-1000 BC
Stage Seven: Early Iron Age of Northern India and Pakistan	
Late Pirak	1000-700 BC
Painted Gray Ware	1100-500 BC
Late Gandharan Grave Culture	1000-600 BC

Figure 1.5: "South Asia: general archaeological labels and chronology", by Possehl (1984: Table I; reproduced in Kenoyer (1991: 333, Table I)).

Table I. South Asia: General Archaeological Labels and Chronology

Archaeological Label	General dates
Early Historic Period begins around	600 B.C.
Post Indus	
Northern Black Polished Ware	+700 to 300 B.C.
Painted Grey Ware	+1200 to 800 B.C.
Indus Tradition	
Localization Era	1900 to 1300 B.C.
Integration Era	2600 to 1900 B.C.
Regionalization Era	ca. 5000 to 2600 B.C.
Early Food Producing Era	ca. 6500 to 5000 B.C.

Figure 1.6a: A reproduction of Kenoyer's (1991: 335) "Table II. General correlations of current terminologies and chronologies", which notably features frameworks proposed by Shaffer (1984, 1991) and Possehl (1991)

Table II. General Correlations of Current Terminologies and Chronologies[a]

Shaffer (1984/1991)	Mughal (1970/1990)	Site sequences (Jarrige *et al.*, 1980 to 1990)	Possehl (1991)	Lal and Thapar, Joshi, Dikshit	Fairservis (1967)	Dales (1965b, 1976)
						Phase A, Stone Age
Indus Valley Tradition Early Food Producing Era., +6000–5000 B.C.	Neolithic, 6500–5000 B.C.	Aceramic Neolithic, Period Mehrgarh 1A, +6000–5000 B.C.				
—Gap—No sites discovered		Ceramic Neolithic/ Chalcolithic, MRG IB/MRG II, 5000–4300 B.C.			Stage 1, Pastoralism, limited agriculture, +4000–3300 B.C.	Phase B, Neolithic, 5000–4000 B.C.
	Chalcolithic, 5000–3400 B.C.	Chalcolithic, MRG III, 4000–3500 B.C.				Phase C, Early Chalcolithic, 4000–3500 B.C.
Regionalization Era, Balakot, Amri, Hakra, Kot Diji Phases, 4000–2500 B.C.	Early Harappan, Kot Diji A, 3500–3000 B.C.	Chalcolithic, MRG IV, 3500–3200 B.C.	Pre-Urban Phase, 3200–2600 B.C.	Pre-Harappan, Sothi/Kalibangan I, 2900–2700 B.C.		Phase D, Growth and spread of settlements, Turkmenia-Indus, 3500–3000 B.C.
	Early Harappan, Kot Diji B, 3000–2500 B.C.	Chalcolithic, MRG V, 3200–3000 B.C.			Stage 2, Sedentary villages, regionalization, 3300–2500 B.C.	

Figure 1.6b: A reproduction of Kenoyer's (1991: 336) continuation of "Table II. General correlations of current terminologies and chronologies" (see previous, my Fig. 1.6a).

Table II. Continued

Shaffer (1984/1991)	Mughal (1970/1990)	Site sequences (Jarrige *et al.*, 1980 to 1990)	Possehl (1991)	Lal and Thapar, Joshi, Dikshit	Fairservis (1967)	Dales (1965b, 1976)
		Chalcolithic, MRG VI, 3000–2700 B.C. Pre/Early Harappan, MRG VII = Nausharo I, 2700–2500 B.C.			Stage 3, Sedentary Villages, regionalization and intraregional contact, 2500–2300 B.C.	Phase E, Protourban, incipient-urban, 3000–2500 B.C.
Integration Era, Harappan Phase, 2500–2000 B.C.	Kot Diji C, 2500–2100 B.C. Mature Harappan, 2500–2000 B.C.	Mature Harappan, NSH II and III, 2500–1900 B.C.	Urban Harappan, 2550–?2000 B.C.	Mature Harappan, 2500–2000 B.C. 2100–1700 B.C.	Stage 4, Period of urbanization, 2300–1700 B.C.	Phase F, Mature Harappan, Full urban, 2500 B.C.
Localization Era, Punjab, Jhukar, Rangpur Phases, 2100–1500 B.C.	Late Harappan, 2000–1700 B.C., Jhukar, Cemetery H	Late Harappan/ Post Harappan, NSH IV, Jhukar, Pirak, 1990–1300 B.C.	Post Urban, ?2000–?1700 B.C.	Late Harappan, Jhukar, Cemetery H, Late Harappan, 1700–1000 B.C.	Stage 5, Decline and abandonment, 1700–1200/800 B.C.	
	Post Harappan, < 1700 B.C.			Painted Grey Ware Culture, 1200–800 B.C.		

"The B.C. dates are presented as published and many of the differences are due to the use of different calibrations for the radiocarbon dates (Dales, 1965b, 1976, 1979b; Dikshit, 1984b; Fairservis, 1967; Jarrige 1984a; Jarrige and Meadow, 1980; Joshi, 1972, 1978; Lal, 1978; Lal and Thapar, 1967; Mughal, 1970, 1990; Possehl and Raval, 1989; Possehl, 1990a, 1990b; Possehl and Rissman, 1991; Shaffer, 1991).

Figure 1.7a: A reproduction of Kenoyer's (1991: 341) "Table IV. Archaeological traditions of Northwestern South Asia (After Shaffer, 1991)"

Table IV. Archaeological Traditions of Northwestern South Asia (After Shaffer, 1991)

Indus Valley Tradition	Baluchistan Tradition	Helmand Tradition
Early Food Producing Era	Early Food Producing Era	Early Food Producing Era
Mehrgarh Phase	Mehrgarh Phase	Ghar-i-mar Phase[a]
Regionalization Era	Regionalization Era	Regionalization Era
Balakot Phase	Kachi Phase	Mundigak Phase
Amri Phase	Kili Gul Muhammad Phase	Helmand Phase
Hakra Phase	Sheri Khan Tarakai Phase[a]	
Kot Diji Phase	Kechi Beg Phase	
	Damb Sadaat Phase	
	Nal Phase	
Integration Era		Integration Era
Harappan Phase	Kulli Phase	Shahr-i-Sokhta Phase
	Periano Phase	
Localization Era		Localization Era
Punjab Phase	Bampur Phase	Siestan Phase
Jhukar Phase		
Rangpur Phase	Pirak Phase	

[a]The Ghar-i-Mar (Dupree, 1972) and Sheri Khan Tarakai Phase (Khan, Knox and Thomas, 1989) are not identified by Shaffer because the excavations are only recently published or not fully analyzed.

Figure 1.7b: "Major sites and interaction networks of the Indus, Baluchistan, and Helmand Traditions, Regionalization Era", by Kenoyer (1991: 344, Fig. 2).

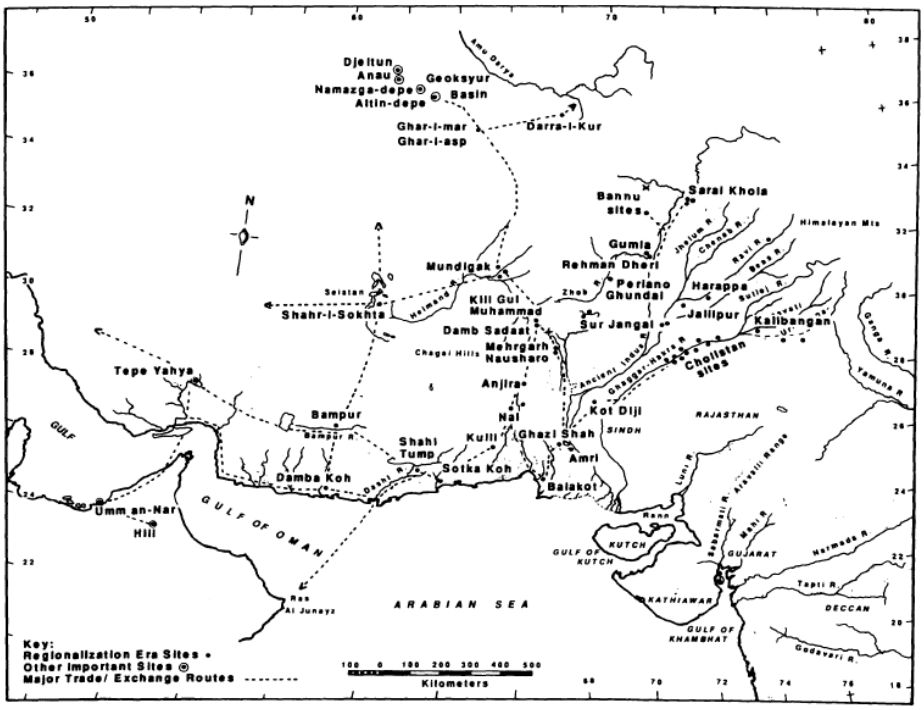


Fig. 2. Major sites and interaction networks of the Indus, Baluchistan, and Helmand Traditions, Regionalization Era.

Figure 1.8: "Major sites and interaction networks of the Integration Era, Harappan Phase", by Kenoyer (1991: 345, Fig. 3).

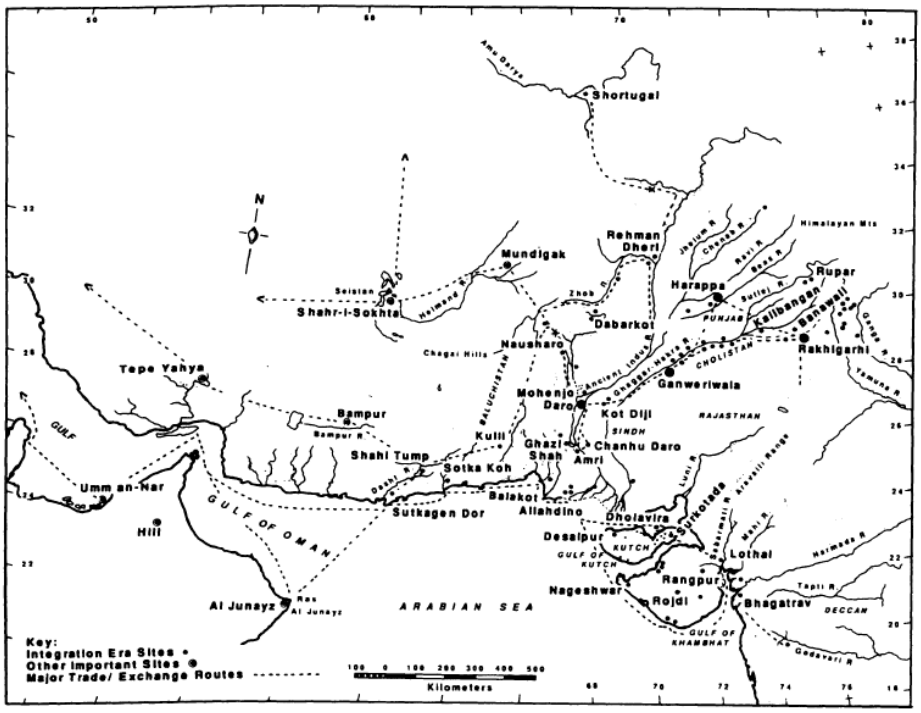
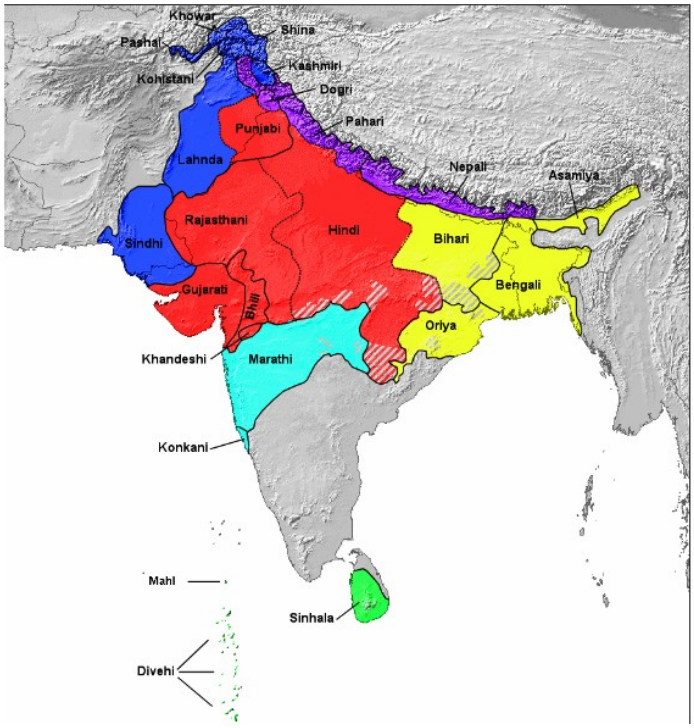


Fig. 3. Major sites and interaction networks of the Integration Era, Harappan Phase.

Figure 1.9a: Indo-Aryan languages map



Indo-Aryan languages, grouping according to SIL Ethnologue (Urdu is not shown because it is mainly a lingua franca with no prevalence as a first language.)

- Central and East Central zones
- Northern zone
- Northwestern zone
- Eastern zone
- Southern zone
- Insular

Figure 1.9b: Dravidian languages map

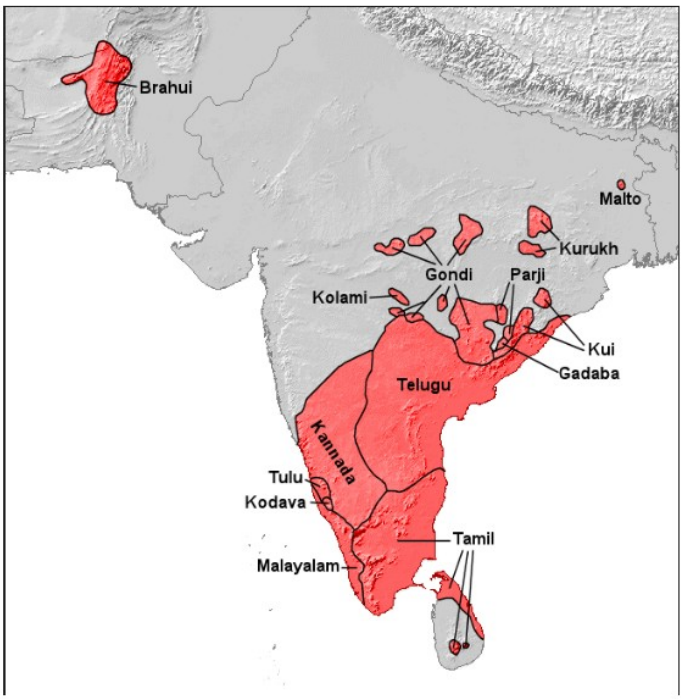


Figure 1.9b: Dravidian languages map, showing a geographic distribution to be found mostly in Southern India.

Figure 2.0: "Trade and the Mesopotamian 'world system'", by Edens (1992: 119, Fig. 1).

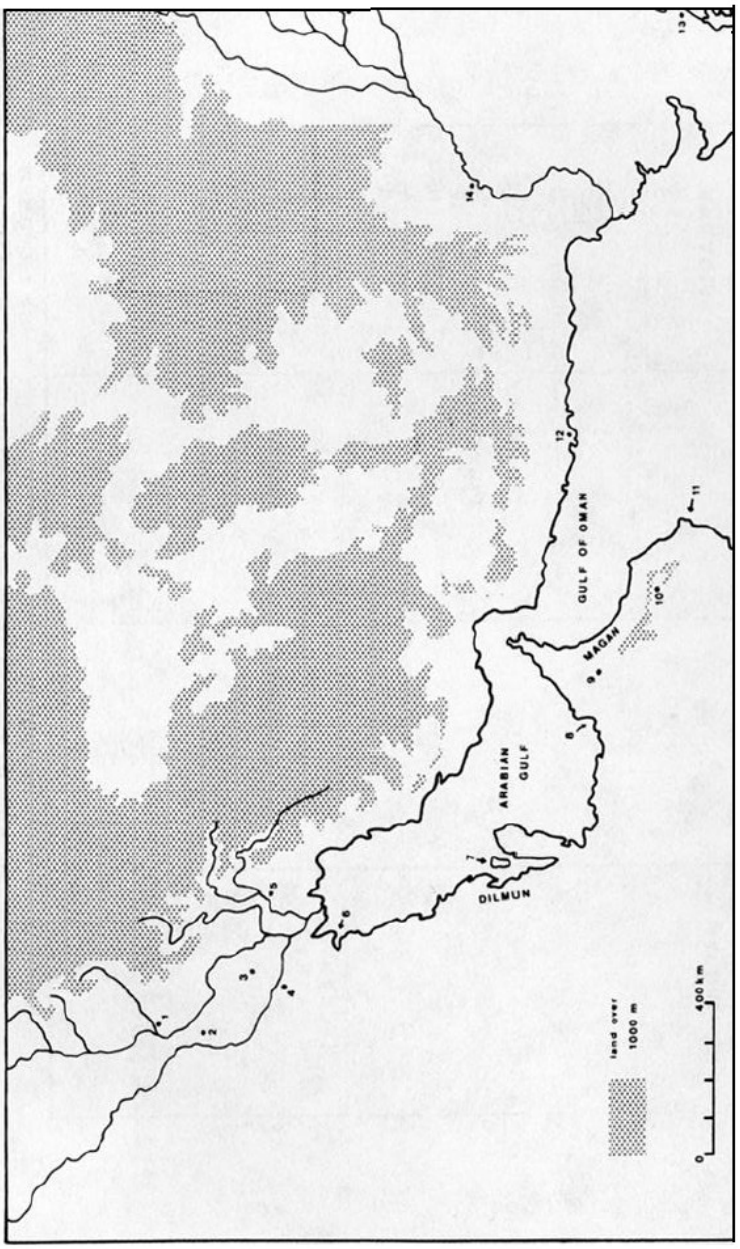


Figure 1
Map of Arabian Gulf in the Bronze Age (1 = Khafadje; 2 = Kish; 3 = Lagash; 4 = Ur; 5 = Susa; 6 = Failaka; 7 = Bahrain (Qala'at al Bahrain); 8 = Umm an-Nar; 9 = Hili; 10 = Maysar; 11 = Ras al Junayz; 12 = Sutkagen-dor; 13 = Lothal; 14 = Moenjo-daro; 15 = Harappa).

Figure 2.1: "Relative chronologies of the Circum-Gulf in the Bronze Age", by Edens (1992: 120, Fig. 2).

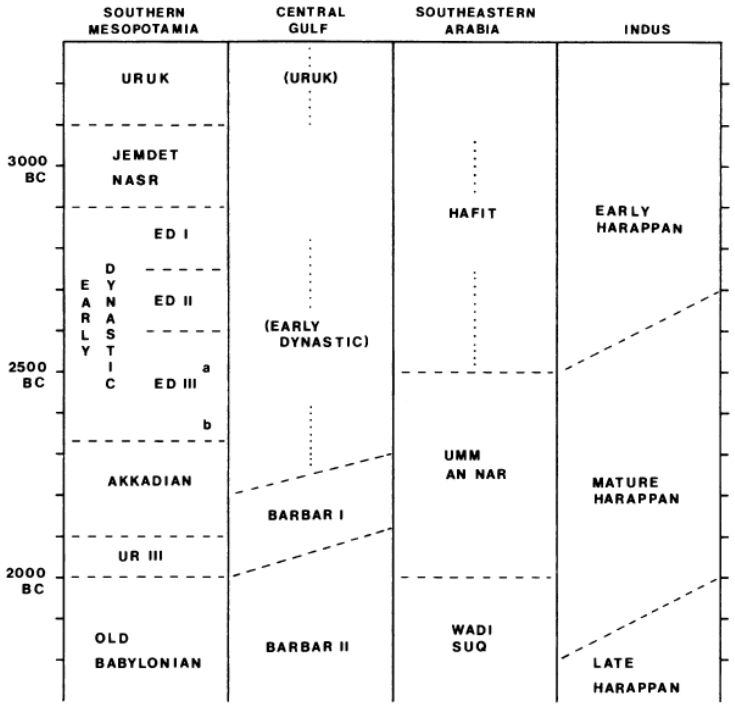


Figure 2
Relative chronologies of the Circum-Gulf in the Bronze Age.

Figure 2.2a: Map of the extension of the Akkadian empire (2334-2190 BC)

Figure 2.2b:
Map showing some of the core areas of the world-system and their cultural/linguistic geography

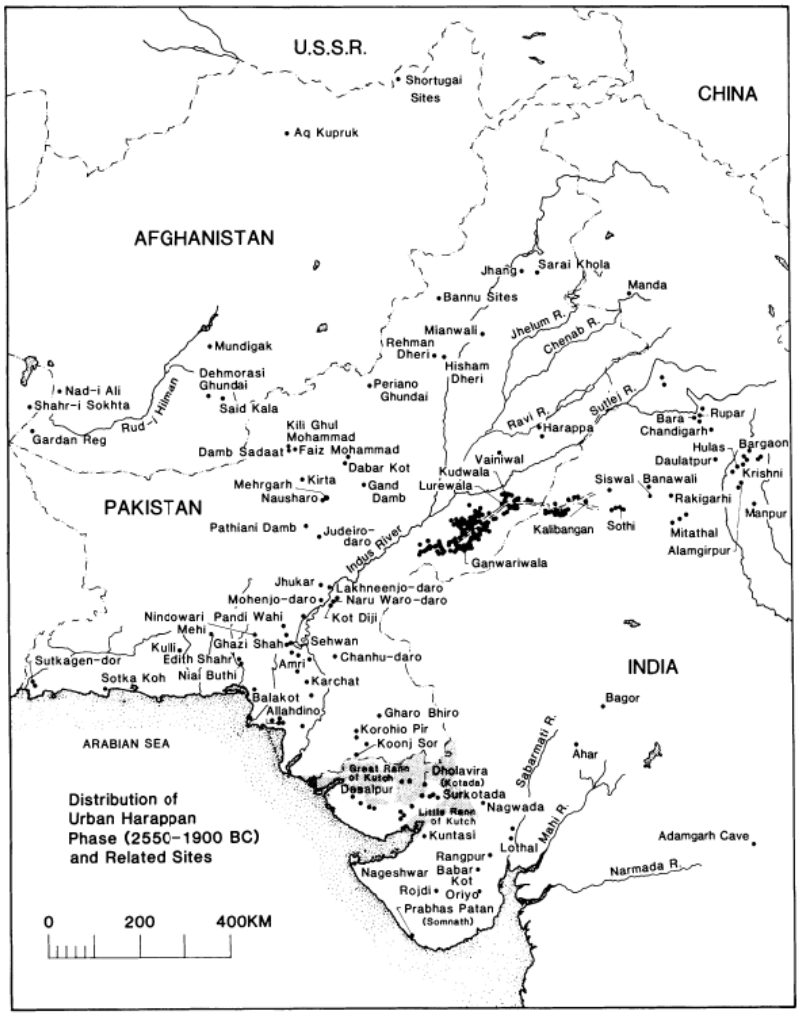


Figure 1 Distribution of Urban Phase Harappan sites

India and Pakistan. Prior to the partition of South Asia in 1947 there was little ambiguity in the meaning of the word "India." The creation of Pakistan, an independent Bangladesh, Burma, and Sri Lanka, however, demands a more explicit vocabulary. For the purposes of this paper, the terms "India"

Figure 2.3: "Distribution of Urban Phase Harappan sites", by Possehl (1990: 263, Fig. 1).

Figure 2.4a: The major trade routes of the Indus Tradition during the Integration Era Harappan Phase (2600-1900 BC)

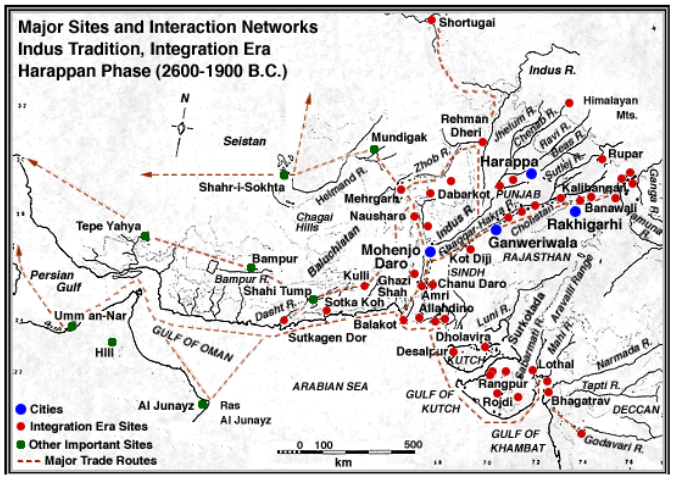
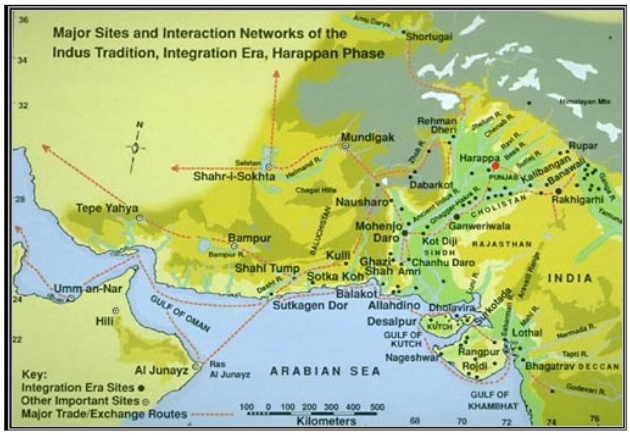


Figure 2.4b: "Major sites and Interaction Networks: Indus Tradition, Integration Era Harappan Phase (2600-1900 B.C.)"



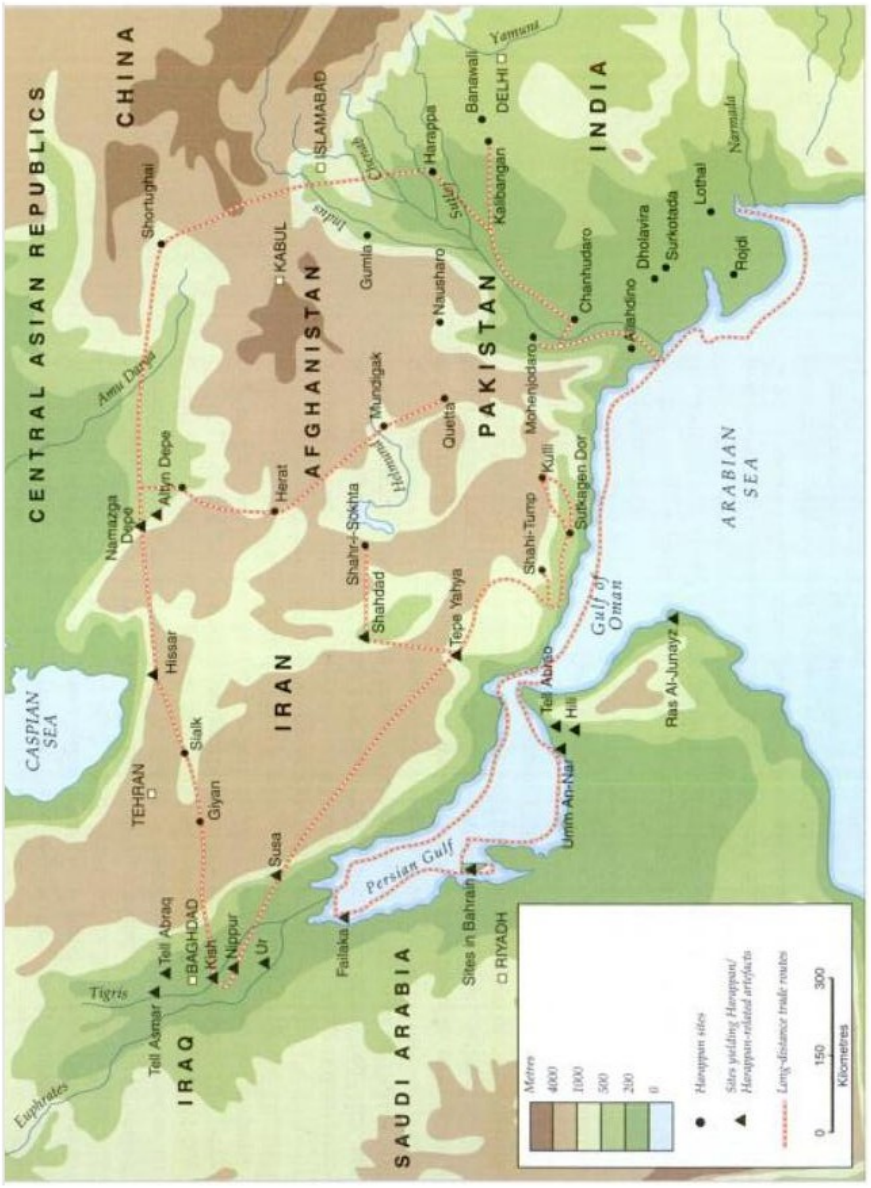


Figure 2.4c: "Long distance trade routes" by Upinder Singh (2008: 167, Map 4.4).

Figure 2.5: "Harappan routes of internal trade (after Lahiri 1992)" by Upinder Singh (2008: 166, Map 4.3).

MAP 4.3 HARAPPAN ROUTES OF INTERNAL TRADE (AFTER LAHIRI, 1992)

Figure 2.6: "Indus resources", by McIntosh (2002: 160, Map 10).

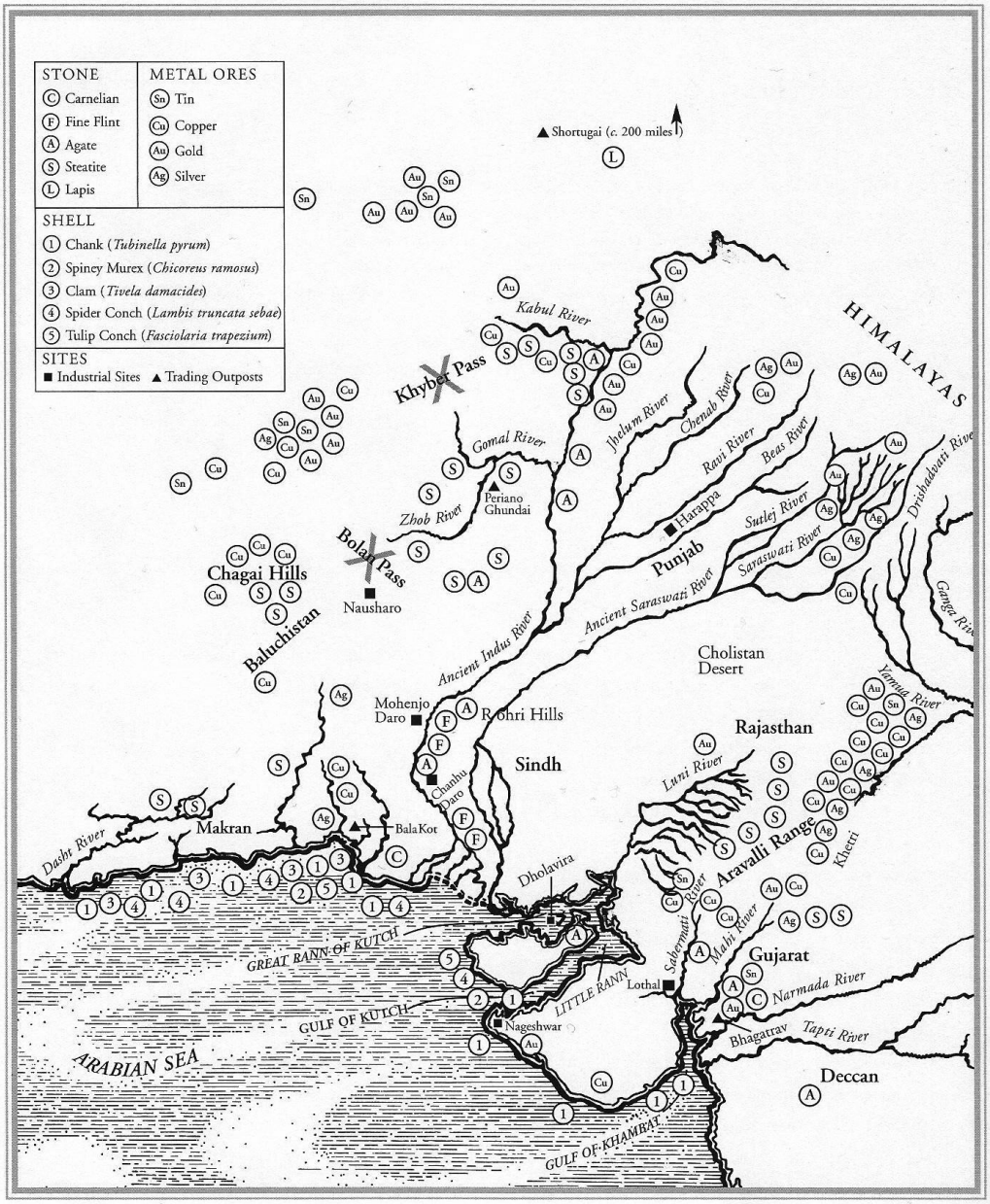


Fig. 2.7 : "Sites where Indus seals and inscriptions have been discovered" by Parpola (1994:10, Fig.1.5)

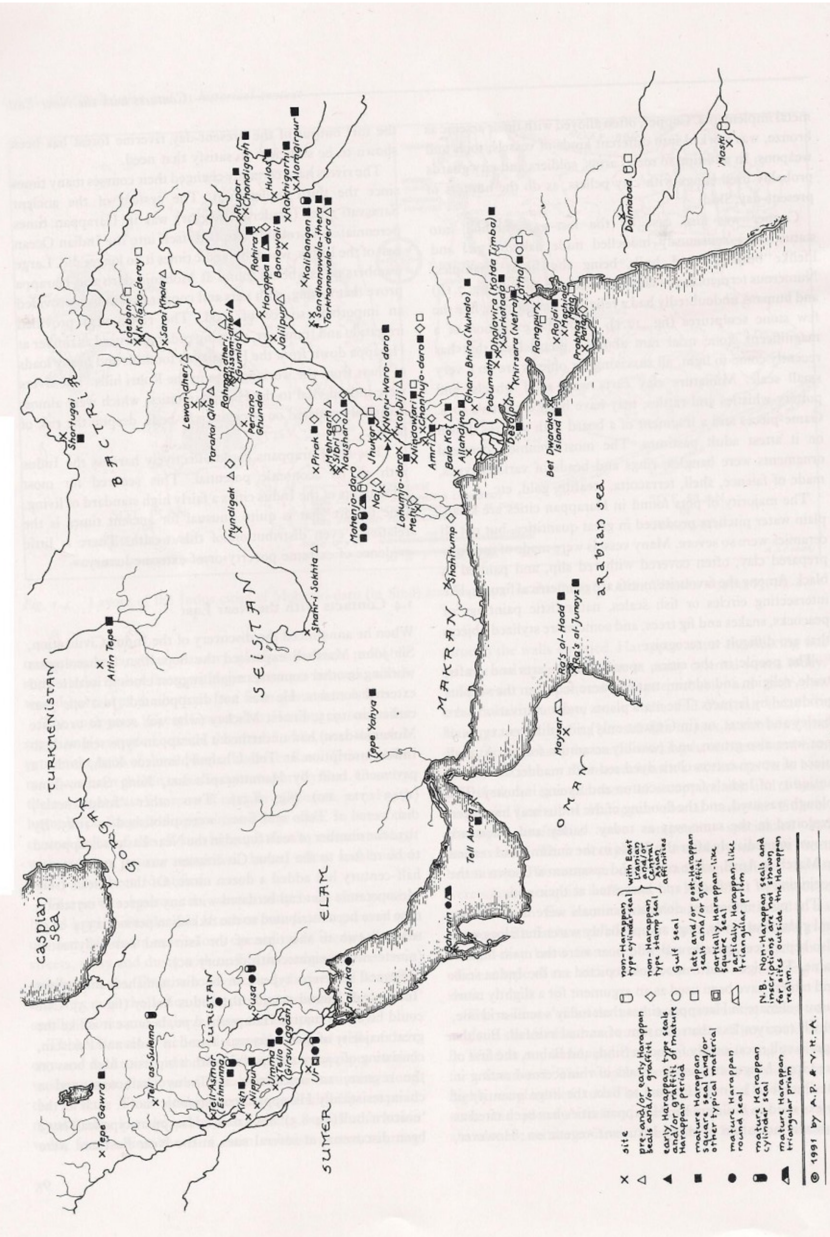


Fig. 1.5. Sites where Indus seals and inscriptions have been discovered.

Fig. 2.8: Ancient Egypt's main imports from the Near East in Predynastic Times (late 4th millennium)

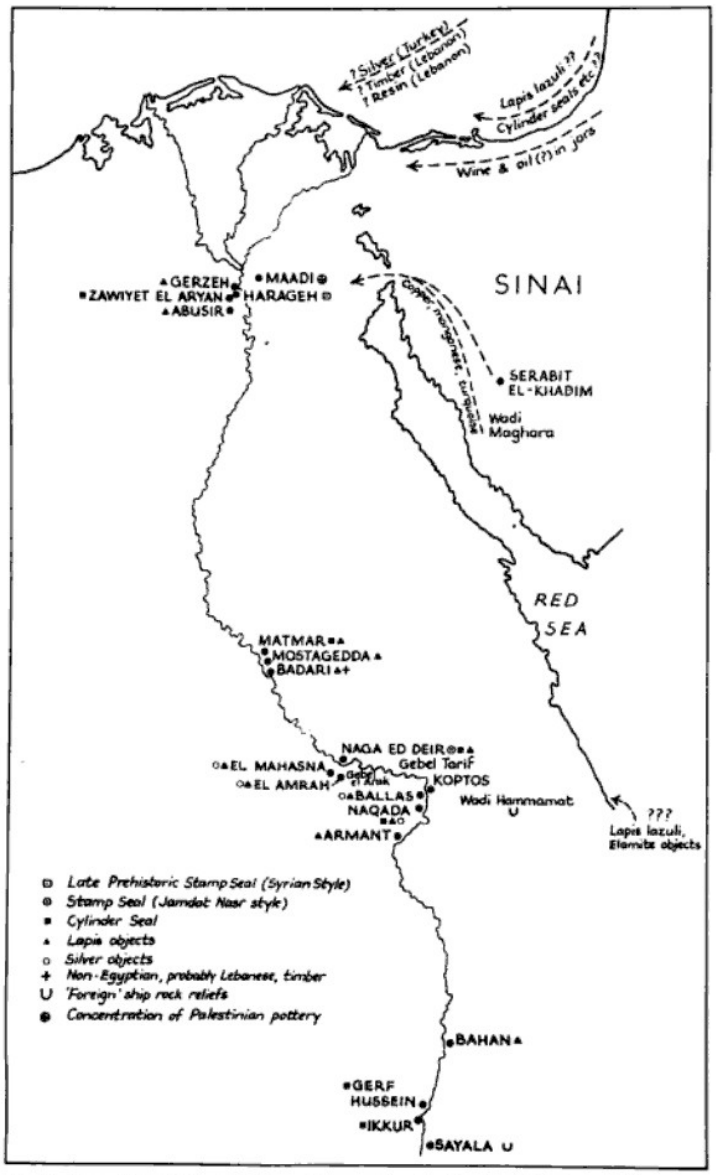


Fig. 4.1. Map of Egypt to illustrate the main imports from the Near East in Predynastic Times.

Figure 2.9: "Development of the alphabet", by Parpola (1994: 37, Fig. 2.7).

EGYPTIAN			WEST SEMITIC						GREEK				BRAHMI (India)	
hieroglyphic			Sinai	Canaan and Phoenicia					c. 800–500 B.C.			c. 250 B.C.	c. AD 150
c. 1600 B.C.	sound value & meaning	sound value	name & meaning	c. 1600–1300 B.C.	c. 1300–900	c. 900–600	c. 600–300		sound value	name	sound value		
	k3 'bull'	ʾ,A	ʾālep 'ox'						A	alpha	A	A	
	pr 'house'	B	bēt 'house'						B	bēta			
		G	gīmel 'camel' ('throw-stick')						G	gamma	GA		
	c3 'door'	D	dāleṯ 'door'						D	delta	DHA		
	k3 Hꜥ 'be high' 'rejoice'	H	hē 'lo!' (?)						E	e psilon	GHA		
	shnt 'supporting pole'	W	wāw 'peg' 'hook'						F	digamma			
		Z	zayin 'weapon'						Z	zēta			
		Ḥ	ḥēṯ						H, Ē	(h)ēta			
		Ṭ	ṭēṯ						TH	thēta	THA		
	c 'forearm'	Y	yōḏ 'arm'						I	iōta	YA		
	d 'hand'	K	kāp 'palm of hand'						K	kappa	KA		
		L	lāmeḏ						L	lambda	LA		
	n 'water'	M	mēm 'water'						M	mū			
	d 'snake'	N	nūn nāḥāš 'fish' 'snake'						N	nū			
		S	sāmeḵ 'fish'						X	xī			
	ỉr 'eye'	ʿ	ʿayin 'eye'						O	o mikron	E		
	r 'mouth'	P	pē 'mouth'						P	pī	PA		
		Ṣ	ṣādē						S	san			
		Q	qāw qōp						Q	qoppa			
	tp 'head'	R	rēš 'head'						R	rhō			
		Š	šīn 'tooth'						S	sigma	ŚA		
		T	tāw 'sign' 'mark'						T	tau	TA		

Fig. 2.7. Correspondences between Egyptian, West Semitic, Greek and Indian (Brāhmī) alphabets.

Fig.3.3: A map showing the major sites of the 4th millennium BC Uruk expansion, which brought the Sumerian culture into the Iranian plateau

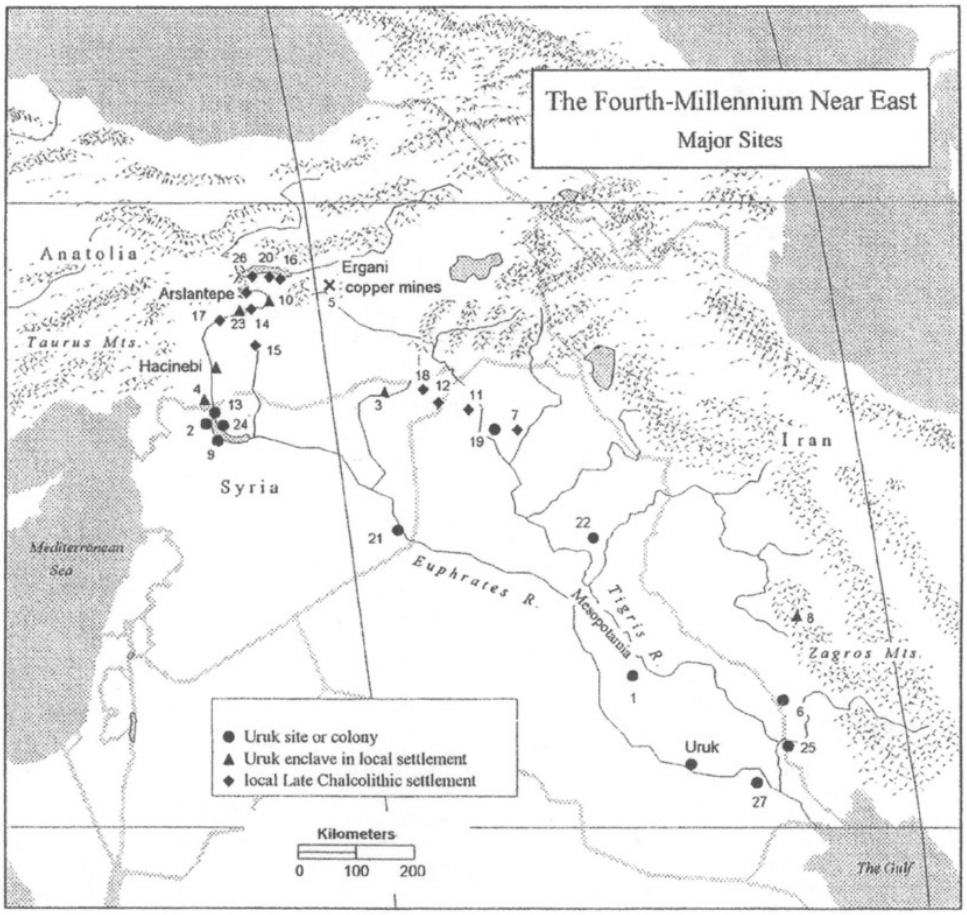


FIGURE 1. Map of the fourth millennium B.C. Near East showing the site of Hacınebi in relation to Uruk sites in southern Mesopotamia, Uruk colonies/outposts, and sites of indigenous Late Chalcolithic cultures in Iran, Syria, and Turkey. [KEY: 1. Abu Salabikh; 2. Aruda; 3. Brak; 4. Carchemish; 5. Ergani Copper mines; 6. Farukhabad; 7. Gawra; 8. Godin; 9. Habuba Kabira; 10. Hassek; 11. Hawa; 12. Hamoukar; 13. Jerablus Tahtani; 14. Karatut Mevkii; 15. Kazane; 16. Korucutepe; 17. Kurban; 18. Leilan; 19. Nineveh; 20. Norsuntepe; 21. Qraya; 22. Rubeidheh; 23. Samsat; 24. Sheikh Hassan; 25. Susa; 26. Tepecik; 27. Ur]

Figure 3.4: "Schematic map of major Bronze Age translocations between South Asia, Arabia and Africa (after Fuller & Boivin 2009)" by Fuller et al. (2011: 546, Fig. 1).

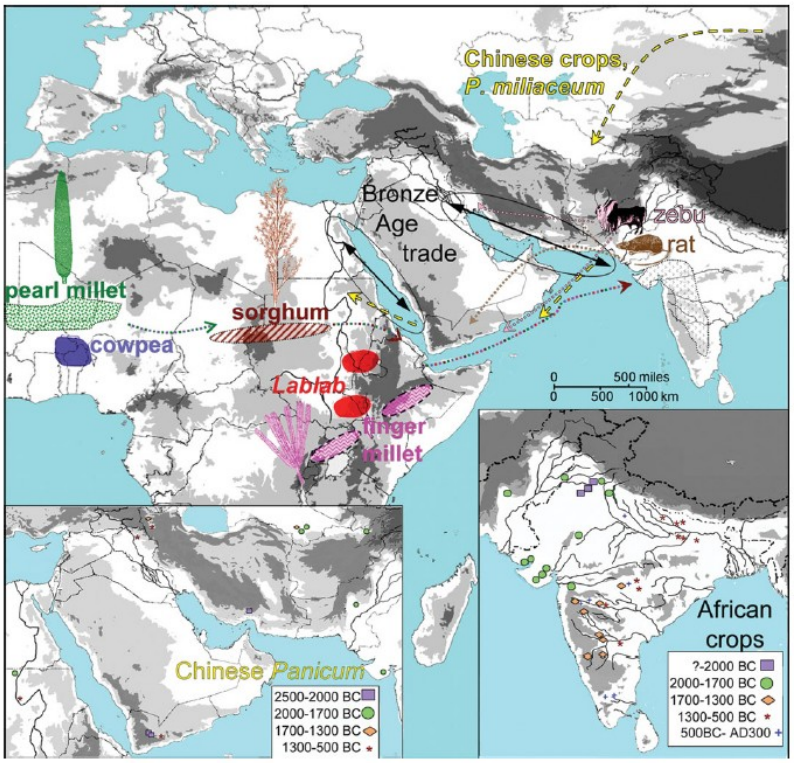


Figure 1. Schematic map of major Bronze Age translocations between South Asia, Arabia and Africa (after Fuller & Boivin 2009). Inset lower left: map of the distribution of archaeobotanical evidence of broomcorn millet (Panicum miliaceum) *of Chinese origin, suggesting dispersal from South Asia to Arabia and Nubia via the sea. Inset lower right: map of the distribution of sites in South Asia with archaeobotanical evidence for one or more crops of African origin.*

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