There and Back Again



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Afro-Eurasian Exchange in the Neolithic and Bronze Age Periods

Edited by Marie N. Pareja and Robert Arnott†

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Front cover: Red calcite figurine of a squatting monkey, possibly a rhesus macaque, Susa, Iran, c. 2400-2100 BCE, Musée du Louvre, Paris. Photograph by Marie N. Pareja with the permission of the Agence photographique de la Réunion des Musées Nationaux et du Grand Palais.

Back cover: Indus-style Bead Morphology: Royal Cemetery at Ur. Photo by Mark Kenoyer.

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Professor Robert 'Bob' Arnott 1951-2024

Bob sadly passed away only a few days before this volume was published, and it is dedicated to him.

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Contributor Biographies

Professor Robert Arnott[†] was a Fellow of Green Templeton College in the University of Oxford. An archaeologist and disease and medical historian, he specialised on disease and medicine in the Aegean and Anatolian Bronze Age civilisations, 2000-1100 BCE. In recent years, his interest turned to South Asia, where he frequently travelled for his work in modern global health and some of his publications have centred on health, disease and medicine in the Indus Civilisation, 2600-1900 BCE. His latest book, *Disease and Healing in the Indus Civilisation*, was published in 2024. He also developed a close interest in the distant and tenuous relationship between South Asia and the Aegean in the Bronze Age and is author of *Crossing Continents: between India and the Aegean from prehistory to Alexander the Great.* He was a Fellow of the Royal Asiatic Society. He sadly passed away only a few days before publication of this volume.

Philip P. Betancourt is Laura Carnell Professor Emeritus of Prehistoric Aegean Art and Archaeology, Tyler School of Art and Architecture, Temple University, Philadelphia, PA, USA. He specializes in the Minoan culture of Bronze Age Crete. He has authored over 20 books and numerous articles on the art of the prehistoric periods of Greece. Philip is a consultant on the Minoan collection in the Mediterranean Section of the Penn Museum in Philadelphia. He has received many awards including an honorary PhD from the University of Athens and the Archaeological Institute of America's gold medal for lifetime achievement in archaeology.

Dr Tim Clayden completed his DPhil at Wolfson College Oxford (where he is still a member) in 1989 under the supervision of Dr Roger Moorey. Since then he has a had a diplomatic career before returning to Oxford University where he is Bursar at Green Templeton College and Governing Body Fellow. Throughout Tim has worked on various aspects of Kassite Babylonia. In addition to his own work, Tim has collaborated with other scholars including colleagues from Iraq. His publications are all available on Academia.

Stephen Durnford is an independent researcher who is interested in all aspects of information, gaining a BA with honours in Sanskrit and Pali from SOAS in 1967. He has no academic affiliations and retired from a commercial career as management consultant and builder of computer systems. Since first publishing on Hittite in 1971, he speaks and writes on language, mainly from ancient Anatolia, and on the use of IT within organisations. (https://stephendurnford.academia.edu).

Susan C. Ferrence specializes in the burial customs of the Minoan culture of Bronze Age Crete. She has published numerous articles including scientific analyses of ceramic and metal artifacts. Susan is field director of the excavations in the Pelekita Cave in eastern Crete, and she has worked for several other excavation projects in Crete including Chrysokamino, Pseira, Chryssi Island, Petras, and Pacheia Ammos. She is Vice President of the Board of Trustees of the Institute for Aegean Prehistory. Susan is also a consultant on the Minoan collection in the Mediterranean Section of the Penn Museum in Philadelphia, PA, USA.

Alessandra R. G. Giumlia-Mair is a specialist in archaeometallurgy and materials science of ancient artifacts. She is director of the Research Laboratory at the Institute of Archaeology of the Russian Academy of Sciences in Moscow and the founder of AGM-Archeoanalisi in Merano, Italy. She is the President of the Standing Committee of the International Conference Archaeometallurgy in Europe and Vice President of the Standing Committee of the International Bronze Congress among other distinguished international leadership positions. Alessandra is author of over 250 scientific publications including articles, books, and conference proceedings.

Asterios-Evangelos Kechagias is currently a postdoctoral research associate of the School of Ancient Language and Text Studies of the North-West University of Potchefstroom, in South Africa. He studied Theology (B.A. 2012), Biblical Studies (M.A. 2014) and modern German philosophy (M.A. 2016) at the Aristotle University of Thessaloniki, Greece, and received his Ph.D. in Biblical Studies and Ancient Near East in 2021 from the same University. During and after his undergraduate and doctoral studies, he delved into the study of many ancient languages (ancient Greek, Latin, Biblical Hebrew, Biblical Aramaic, Sumerian, Akkadian, Egyptian hieroglyphs, and Sanskrit) in Greek and Israeli institutions. His main areas of research are biblical studies; ancient Near Eastern, Indian, Nubian, and Mediterranean history, geography, and religion; ancient astronomy; methodology of historical research; and crosscultural contacts during the third and second millennia BCE with an emphasis on ancient India and the Indus Valley civilisation. **Jonathan Mark Kenoyer** (Ph D. 1983, U. C. Berkeley) is the George F. Dales Jr. and Barbara A. Dales Professor, Department of Anthropology, at the University of Wisconsin, Madison. He has served as Field Director and Co-Director of the Harappa Archaeological Research Project since 1986. He has worked on excavations and ethnoarchaeological studies in both Pakistan and India, and more recently in Oman. He has a special interest in ancient technologies and crafts, including textiles and textile production, socio-economic and political organization as well as religion. These interests have led him to study a broad range of cultural periods in South Asia as well as other regions of the world, including China, Japan, Korea, Oman and West Asia in general. His work has been featured in the National Geographic Magazine and Scientific American and on the website www.harappa.com.

Geoffrey E. Ludvik (Ph D. 2018, University of Wisconsin-Madison) is an Honorary Research Fellow in Anthropology (Archaeology) at the University of Wisconsin-Madison and a Research Associate at the Cobb Institute of Archaeology at Mississippi State University. He is the co-director of the Renewed Excavations at Tell el-Hesi, Israel, and a staff member of the Tell el-Hesi Regional Project. He specializes in the examination of carnelian beads in the Bronze Age Eastern Mediterranean, with research focusing on craft technology and interactions between Near Eastern, Aegean, and South Asian societies, especially during the 3rd millennium. He is also interested in social complexity and religion in the Bronze and Iron Age Southern Levant. He, his wife, and his son live in Madison, WI, where he teaches ancient and Medieval history and Classical Latin at St. Ambrose Academy.

Sureshkumar Muthukumaran is a historian of the ancient world. He is a Lecturer in History at the National University of Singapore and has previously taught at University College London and Yale-NUS College. He is the author of 'The Tropical Turn: Agricultural Innovation in the Ancient Middle East and the Mediterranean' (University of California Press, 2023).

Marie Nicole Pareja (PhD 2015, Temple University) is an Assistant Professor of Art and Archaeology at Salisbury University. Specializing in Bronze Age iconography, technologies, and exchange, she serves as materials specialist for several archaeological projects, including Sissi, Mochlos, and Gournia on Crete, and Stelida on Naxos. She is the founder and executive director of the Aegean Bronze Age Study Initiative (ABASI) and its Anne P. Chapin Archive, and the Plasters Analysis Project (PLAN), hosted by the University of Pennsylvania Museum's Center for the Analysis of Ancient Materials (CAAM). Together with Robert Arnott, she is also co-founder and co-director of the University of Oxford's Indus-Aegean Bronze Age Research Network (IA-BARN). Her work has been featured by Smithsonian, New Scientist, NPR, and other news outlets from around the globe. It has been less than a decade since she earned her PhD, and she is only getting started.

Amanda N. Porter is an MPhil student in Classical Archaeology at Exeter College, University of Oxford. She received her Bachelor of Arts degree in Archaeology and Classical Studies from Dickinson College in 2023. Her research focuses on comparative animal iconography and religion in the Bronze Age Mediterranean through an interdisciplinary lens.

Metaxia Tsipopoulou is an archaeologist and emeritus director of the National Archive of Monuments of the Hellenic Ministry of Culture. She is a specialist of the Bronze Age and Early Iron Age in the Aegean region and Crete in particular. She has directed systematic surveys and excavations in Crete, including Petras, Siteia (Minoan urban settlement, palace, and cemetery), Chalasmenos, Ierapetra (settlement of the end of the Bronze Age), and Late Minoan III cemeteries at Kritsa, Mirabello, and Achladia, Siteia. Her publications include more than 100 articles and several monographs.

Professor Shereen Ratnagar is an Indian archaeologist whose work has focused on the Indus Civilisation. She is the author of several books, some concentrating on Indus-West Asian relations and factors contributing to the end of the civilisation. Educated at Deccan College, University of Pune, she studied Mesopotamian archaeology at the Institute of Archaeology, University College London. Before retirement in 2000, she was a Professor of Archaeology and Ancient History at the Centre for Historical Studies at the Jawaharlal Nehru University, Delhi. She is now retired and is currently an independent researcher living in Mumbai.

Foreword

Old Assumptions Die Hard

Shereen Ratnagar

Abstract

This paper challenges assumptions about the origins of many of the commodities used within the Indus Civilisation and exported overseas. The paper believes that is possible to dismiss long held beliefs, for example, that that Gujarat was the source of carnelian and to point out that Randall Law has proven that Chagai is not a source of lapis lazuli. The paper stresses that assumptions handed down from one scholar to another over time must now be challenged.

Keywords

Indus Civilisation, commodities, resources, trade, wrong assumptions

There are many gaps is our knowledge of Mesopotamian-South Asian trade. On the whole it is a full picture, but we use inference to a large extent (Frenez 2023). After decades of field observations and museum study, how certain are we of the generalisations that have been made?

We do have contexts of the beads of Harappan type in the graves of Ur, Bahrain, and Oman, but I wonder if these graves have the same meaning or symbolism in Ur as they have in Oman. As for Indus sealings in Mesopotamia, these were found decades ago and the exact find contexts are not known. As for the actual sealing discovered at Jokha/Umma, like the single weight found in the habitation of Ur, it was not a traded item but used in the business of trade; these would have been among the trader's personal belongings and perhaps indicated a position of authority. One of these could have been a Mesopotamian trader's lost property after he had perhaps been to the land of Mohenjo-daro and safely returned.

Then there is also the matter of sourcing. The sources of carnelian or pottery clay as claimed are doubtful. The Harappan-occupied area and regions on its fringes and frontiers are vast. No one knows the landscape so well as to be able to pinpoint each outcrop of carnelian, or where ivory carving was first attempted, or where the main sources of steatite were located for seals and statues. As for metal, it can be melted down and recast more than once, combining scrap from different workshops and regions.

In studies of the origins of pottery or stone not all the prerequisites of possible sources are taken into account, as all sources cannot possibly be covered. The sources have not been sampled adequately. Intra-source variability and inter-source differences are not tested; and so on. If stone outcrops are small and scattered in a landscape, difficulties arise. There is also the question of which part of an artefact is to be analysed. Sufficient samples, 15 to 30, of geological source material must be available to establish the variability within a single source. We rarely work like this.

On the other hand, we have precise information that a seal-bearer in Mesopotamia, unfortunately from an uncertain site, owned a seal now in the Louvre in Paris (coll. De Clerq, no. 637). It has the usual Sumerian scene depicting a seated god in a fleece with a worshipper. It also had an inscription saying this was the seal of *Shu-ilu-shu*, a 'dragoman (official interpreter) of the land of *Meluhha*,' (I have written a brief note on this for Phillippe Beaujard's Festschrift, which will soon be published).

The credentials of this date are impeccable; it was identified and translated by the late Rainer Michael Boehmer and dated to the later Akkadian period, *c.* 2300 BCE. Occurring in various Akkadian and or Sumerian (Ur III) texts, *eme.bal*, the term for dragoman or 'official interpreter' means the same as *targumannu*, the interpreter for the people of, for example, Amurru and Gutium and according to Gelb, occasionally they draw rations on their behalf. So, from this precise data, we draw certain inferences; a translator with a permanent appointment was necessary. The trade must therefore have been both voluminous and important. The translator was probably a much-needed a local man. More than a single or few Harappan sailors would have whiled away their time at Mesopotamian ports

like Ur because monsoon winds east of Gwadar forced them to remain on land.

There is another possible explanation which I advance here with trepidation. I suggest a connexion between the buffalo seals of the Akkad period on the one hand and the official translator of the dynasty, on the other. In the Akkad period there was not only a dragoman of Meluhha, but right through that period to the fall of the dynasty, there were fine carvings on state seals of the Indian buffalo, the first being a fragmentary one of "Kikkudu the scribe of Enheduanna" who was the daughter of Sargon and a priestess-poet in her own right. Presumably, the Indian buffalo-importing experiment did not continue once the rule of Akkad came to an end. One wonders how many animals had been sent by boat to Ur and how many keepers or tamers sailed with them? Was the dragoman really one who looked after the buffalo herd? In India, the herder knows each animal by name, being not only their keeper (they recognise his or her voice and words) but taking them to the water several times a day and to eat and to be milked. But how did the animals sit in one place in a westward sailing ship for more than a day? One has no answers.

I now move to an old paper (Kohl, Harbottle and Sayre 1979), which points to science not having all the answers, even with approximately three hundred chlorite bowls intact or in part, from twenty-eight different sites, with a shared repertoire of designs and a limited number of shape. The Intercultural Style as they were called, belonging to the third millennium BC, were subjected to varied scientific tests with little result. The matching of source to artefacts did not work, although the excavated site of Tepe Yahya yielded a large number of vessels and fragments and unfinished vessels. The Geological Survey of India backed the study, for mapping and studying the profuse number of chlorite/steatite remains around the site. Samples were exposed to Neutron Activation, Xray Diffraction, Emission Spectrography, and other techniques, but the geological finds were so heterogeneous that the matching to sources could not be done. Simply put, the sources did not have any fingerprint.

In spite of such a negative result, Randall Law (Law 2005) took several field trips, studying rocks and rock formations, collecting samples of steatite, serpentine, chlorite and metal ores. He chose two hundred materials found at Harappa, but none of his findings about sources were really conclusive and the source of stone for grinding was even more varied than others. Law was honest enough to state that the work was in the initial stages.

It is also possible to shoot down the long-held belief that Ratanpur on the lower Narbada in Gujarat was a source of fine carnelian. In a paper (Ratnagar, 2008), I noted that it had become routine to write about the carnelian of Ratanpur-Rajpipla. It was believed that it was exported from Barygaza according to the *Periplus* of Scylax of Caryanda and the American Team under Mark Kenoyer, named Ratanpurandn in the Rann of Kutch a source until the industry moved to Khambhat. They all imply that Ratanpur is particularly significant. It is mentioned by medieval travelogues as well.

To be brief, the area south of the Narbada in Gujarat is a thickly forested one. There are agate quarries in about three different locations. Here pebbles of the material are dug out from a layer 1 to 1.5m below the surface. Contractors buy the pebbles after washing them and chipping the cortex. It is not the unskilled tribal people of the area who choose the pebbles. In the medieval period too, it was an Ethiopian who was in charge. So, this was not primordial industry. No skills were required to dig pebbles out of the red soil and in a tribal area labour is cheap. Besides, no prehistoric sites were found here. It is five or more travellers from 1515 to 1814 who seem to have given authority to this tale with eminent historian Irfan Habib, in his Atlas, giving it credence.

I move to a superb historiography of an idea on location, that of lapis lazuli. To get another impression, read Law's paper published in 2014 (Law 2014). Again, we are faced with a situation when a statement is accepted and repeated by several others even though the original observation was made by J. F. Jarrige and Usman Hassan in 1989, who never actually visited the alleged Chagai source of lapis lazuli but say there is one at Chagai. Thus, no description of a quarry or mine is available.

Law went there, and no lapis lazuli was found, because it is a location of volcanic rock; in other words, the geology is not suited for lapis lazuli. But Hassan had obtained a stone in Chagai that was lapis lazuli for sure, near the border, therefore was it smuggled in? In Chagai people find plenty of lazhward, a blue stone, the hydrated carbonate of copper. Copper mineralisation occurs all over the Chagai hills and there is blue azurite aplenty. I leave you to read the intricacies of the conclusion, in that Badakhshan is the source, for yourself. I think Law's excellent paper should be compulsory reading for researchers to learn how and why opinions change. But one could not think why Jarrige was holding to his theory with such confidence. Several old beliefs in archaeology need to be revisited.

Bibliography

- Frenez, D. 2023. Indus Valley: Early Commercial Connections with Central and Western Asia, in D.E. Ludden (ed.) Oxford Research Encyclopaedia of Asian History: 1–41. Oxford: Oxford University Press.
- Kohl. P.L., G. Harbottle and E.V. Sayre 1979. Physical and chemical analyses of soft stone vessels from Southwest Asia. *Archaeometry* 21: 131–159.

- Law, R.W. 2005. Regional Interaction in the Prehistoric Indus Valley: Initial Results of Rock and Mineral Sourcing Studies at Harappa, in C. Jarrige and V. Lefévre (eds) *South Asian Archaeology 2001*: 179–190. Paris: Éditions Recherche sur les Civilisations.
- Law, R.W. 2014. Evaluating Potential Lapis Lazuli Sources for Ancient South Asia Using Sulphur Isotope Analysis, in C.C. Lamberg-Karlovsky, B. Genito and B. Cerasetti (eds) '*My Life is like the*

Summer Rose' Maurizio Tosi e l'Archeologia come modo di vivere. Papers in honour of Maurizio Tosi for his 70th birthday: 419–430. Oxford: British Archaeological Reports (International Series).

Ratnagar, S. 2008. Materials Used in the Bronze Age, in E. Olijdam and R.H. Spoor (eds) Intercultural Relations Between South and Southwest Asia. Studies in commemoration of E. C. L. During Caspers (1934–1996): 56–60. Oxford: British Archaeological Reports.

Introduction

Marie Nicole Pareja, Robert Arnott

Before the lockdown that was a central feature of the COVID-19 pandemic, the editors of this volume realised but they had an interest in common: examining the contacts between the Indus River Valley of South Asia and the Aegean in the Bronze Age. This led to a very successful partnership, and when the pandemic was over, the organisation of the First International Workshop on Relations Between the Indus and The Aegean in The Bronze Age, which was held at the University of Oxford from 3-4 December 2022. This volume is the result of that meeting. The evidence brought forward in the various papers that resulted from this workshop open a new dimension to understanding the place of the Aegean, the Indus River Valley in South Asia, and the areas between within a world system. This opens up the possibility of not only further discoveries but a reinterpretation of existing finds and traditional conclusions.

The first contacts between the Indus River Valley and the Aegean were thought to have occurred at the beginning of the sixth century BC. There is now, however, growing evidence of much earlier but indirect exchange, reaching back through prehistory. Such connections grew from ties between the Indus and the Near East, and then expanded to the societies of the Early and Middle Bronze Age Aegean, including the shores of Western Anatolia, with their slowly emerging palace-based economies and complex social structures. Starting in the early third millennium BC but diminishing after approximately 1800 BC, these connections point to a form of indirect or 'trickle down' contact. Objects and commodities that formed this contact were likely transported overland through Northern Iran, but after some time, the Indus took control, at which point one can see a structured trade using the sea route through the Gulf, by way of Magan and Dilmun.

This workshop evaluated the evidence for such contacts, particularly for commodities such as tin and lapis lazuli, recently discovered objects and current research on iconography. It is emphasized that this does not testify to direct cultural and trade links and geographical knowledge between the Indus and the prehistoric Aegean, but rathe it was the natural extension of trade with various Near Eastern entities. No goods or commodities arrived in the Aegean directly from India; they accumulated added value as they first established a distinguished pedigree of ownership in the Near East, Syria, and Anatolia. In the Early to Late Bronze Age, the Indus region and lands hundreds of miles to the north were an important resource for valuable and indispensable commodities destined for the elites and developing technologies of the Mediterranean and beyond.

Whilst much has been published about Indus relations with the Near East, the idea of connections farther westward and involvement in a pre-industrial world system, part of an interregional pattern of third millennium BC proto-urbanisation is something that has largely been ignored by scholars working in the Aegean, Near East, India, and Pakistan. This workshop and the resulting publication are aimed at changing that perspective.

This workshop served as the first in a series that examines South Asian-Aegean relations. As such, the current state of the field is a bit difficult to review. Independent papers certainly started to piece together this larger picture, such as the work of Kristian Kristiansen, or Toby Wilkinson. Some scholars, such as Philipp Stockhammer, Christoph Schwall, Moritz Numrich, and Ernst Pernicka requested the opportunity to present their already-published research at the workshop, which we permitted, in exchange for their valuable contributions to the collaborative discourse surrounding their earlier work and others' new discoveries.

In the following pages, readers are led through a series of explorations grouped by theme: Shereen Ratnagar and Robert Arnott each speak to the current state of the field. **Shereen Ratnagar** interrogates elements of the study of Indus-Aegean exchange that are currently considered fundamental, particularly the various roles and paths of lapis lazuli from its origins at Sari-sokta in northeast Afghanistan to its down-the-line destinations, in Egypt, the Aegean, and beyond. **Robert Arnott** highlights the recent publication of his volume *Crossing Continents: Between the Indus and the Aegean from Prehistory to Alexander the Great*, and he reviews the foundation of scholarship on which the topics discussed at the workshop are built.

Geoffrey Ludvik and **Jonathan Mark Kenoyer** closely examine several red and orange beads from the Aegean and Levant, and they determine which are crafted in the Indus-style, via production technologies specific to carnelian bead workshops from the Indus River Valley's southern region. Susan Ferrence, Alessandra Giumlia-Mair, Philip P. Betancourt, and Metaxia Tsipopoulou consider evidence for transitions in modes of transport (from maritime networks to overland routes) via junction points across the island of Crete, ultimately suggesting that like Mochlos, Poros, and Phaistos, Petras constituted one of these sites, as well, as evidenced by gold and silver objects that may herald from as far as the Indus Valley. The next two papers focus on iconographic parallels. Marie Pareja considers the paradoxical duality evident in several Near Eastern, Mesopotamian, and Ancient Egyptian deities before discussing possible similarities from the Aegean and the Indus River Valley. Amanda Porter takes a similar approach, studying spotted game animal imagery that appears to spread concurrently with leprosy from the Indus, through Mesopotamia, the Near East, Ancient Egypt, and perhaps into the Aegean. The following two papers focus on the relationships between the written word and the archaeological record. Asterios-Evangelos Kechagias examines the ancient views of India and Ethiopia while reconsidering the extant evidence for intercultural contacts between these areas and the broader Mediterranean. Sureshkumar Muthukumaran re-examines the Epic of Gilgamesh for references to people, objects, animals, and plants

from the Indus River Valley, not only shedding light on the ancient Near Eastern familiarity with the regions beyond the Zagros Mountains but also illuminating the ways in which the objects of these references must have been familiar enough to be identifiable to those in the audience, listening to the recitation of the epic poem. **Timothy Clayden** reviews the evidence for Kassite Babylonian contacts abroad during the Late Bronze Age, a subject which has hitherto remained unexplored. **Stephen Durnford** examines key characteristics of the linguistic evidence that survives from the Indus River Valley against those of the Aegean in order to discover, isolate, and identify patterns that may illuminate the various relationships between each area and those between them.

The editors wish to thank the authors for their contributions and to acknowledge the help and support that the workshop received from Green Templeton College and St Anne's College in the University of Oxford. We would also like to thank the team at Archaeopress for their hard work on this volume. Finally, we would like to express our deep gratitude to the Aegean Bronze Age Study Initiative for their generous sponsorship and the University's India-Oxford Initiative for their support.

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	HARAPPAN CIVILISATION	LISATION	MINOAN CRETE	GREEK MAINLAND	EGYPT	MESOPOTAMIA
DATE (BC)	PHASE	SITES AND EVENTS	PER	PERIOD	DYNASTY	PERIOD
	Early Harappan Phase (End)					
2600	Transition Period Harappa 3A (2600-2450 BC)	Some settlements destroyed and abandoned New Settlements established Mohenjo-daro founded Expansion of Craft specialisation Emergence of Writing	Early Minoan IIA	Early Helladic II	old Kingdom IV-VI Dynasties	Early Dynastic IIIA
	Mature Harappan Phase					
2500	Urban Phase Harappa 3B (2450-2200 BC) Harappa 3C (2200-1900 BC)	Harappa Mohenjo-daro Mehgarh VIII Lothal (Period A) Kalibangan II External overseas trade expanded	Early Minoan IIB Early Minoan III	Earlu Helladic II Early Helladic III	First Intermediate Period VII-XI Dvnasties	Early Dynastic IIIB Dynasty of Akkad
		Cultural Unity in Indus Region Internal distribution network Towns and Cities and Industrial villages	Middle Minoan IA Middle Minoan IB	Middle Helladic	Middle Kingdom XII-XIV Dynasties	Ur III Dynasty of Isin
1900	Late Mature/Transitional Phase Harappa 4	Lothal (Period B, Phase V) Decline of many towns and cities Flow of River Saraswati reducing Transition to Post-Urban Phase	Middle Minoan II	Middle Helladic		
	Late Harappan Phase					
1800	Post-Urban Phase Harappa 5	Destruction levels at Harappa and Mohenjo-daro Disintegration of Harappan Polity Final end of overseas trade	Middle Minoan III	Middle Helladic		First Dynasty of Babylon
1700	Harappa Cemetery H Culture in The Punjab (1700-1300 BC) Late Harappan in Gujarat	Development of strong regional centres in Gujarat and The Punjab	Late Minoan IA	Late Helladic IA		

This chart is adapted from Robert Arnott, Crossing Continent: between India and the Aegean from prehistory to Alexander the Great, Oxford, 2023