


Reviewed by Peter Francis Jr. (1945–2003), former Director of the Center for Bead Research, Lake Placid, New York

India is one of the world’s largest countries with one of its most ancient civilizations. Blessed with immense natural and human resources. It is no surprise that it is a leading source of beads in both ancient and modern times. Only China is larger and as ancient, but the Chinese have never been as interested in beads as have the Indians. The Indian subcontinent has been unparalleled in terms of bead making, bead trading, and the use of beads since early in the third millennium B.C.

Thus, it is something of an event that in the same year three books were published on Indian beads. The first was released posthumously. S. B. Deo, professor and director of Deccan College, Pune, had written many “bead chapters” in the excavation reports of the Deccan College archaeological teams. He was introduced to the subject by M. G. Dikshit (1949, 1952a, 1952b, 1969), then regarded as India’s leading bead authority, and was to collaborate with him on a book. That project never happened, as Dikshit passed away in 1969, just before his own History of Indian Glass was published.

Deo received a fellowship from the Indian Council of Historical Research to study and prepare a manuscript on Indian beads during the years 1985 to 1988. He worked on the project for many years, long after the period of the fellowship. Deo passed away in 1999, and as a tribute to his many years devoted to the subject, a team of Deccan College affiliates, led by V. N. Misra, edited and published the volume.

M. Jyotsna, the author of the other two books reviewed here, was privileged that Deo came out of retirement to act as her guide for her M. Phil. at Deccan College. Deo might be said to represent the “old school” of Indian bead research. Jyotsna is in the generation producing a “new school,” involving several young archaeologists and doctoral candidates, notably

In the interest of full disclosure, the reader should know that I have been involved in the study of Indian beads for a quarter of a century (e.g., Francis 1981, 1982a, 1982b, 1984, 1985, 1987, 1990, 1991, 2001). A significant amount of my work was done at Deccan College, the institute with which both Deo and Jyotsna were associated. I know both of the authors personally, and despite a few disagreements with each of them, I think kindly of both of them. Unfortunately, I cannot say the same for these three books under review. This conflict makes this the most difficult book review I have ever been asked to write.

Deo’s book, Indian Beads: A Cultural and Technological Study, purports to be a cultural and technological study of beads. On the whole, it is neither. Some useful features illuminate the use of beads from perspectives that had hitherto been adequately studied. One is an appendix to the first chapter on Vedic amulets (pp. 39–42). It discusses amulets prescribed in the Arthasastra and a gloss to that ancient book of magic, the Kanśikā Sūtra. The list is instructive, although only about half of the 55 magical objects listed were amulets (the others were made into ointments or used internally). The final paragraph informs us that, “quite a good number of instances are recorded in other branches of Vedic literature which indicate the use of amulets . . .” (p. 42). Unfortunately, none of these are elaborated upon.

The most important contribution is Chapter 5 “Beads in Indian Sculpture.” While other writers have commented on this theme, no one has covered it so thoroughly. This is done so historically and presents important data on the subject. Regrettably, as with most of the book, the section can only be easily read by someone who already knows quite a bit about ancient Indian history and architecture. Rarely are details, such as dates of various periods or locations of sculptures, given.

Chapter 1 deals with the “Cultural Significance of the Study of Indian Beads” and Chapter 2 with “Indian Beads: Antiquity, Techniques of Making and Materials Used.” Both leave much to be desired for anyone who is trying to learn about the social significance of beads (or even the study of beads) or their technical aspects. For example, the second sentence in Chapter 1 reads, “Since the Old Stone Age, man has been in the habit of decorating himself either by the use of simple ornaments or by cosmetics” (p. 1). This is a bold assertion. Is there any truth to it? There are no references given, nor are there any details. All we are told in the following sentences is, “It is well known that in ancient times a kind of red pigment was used for decorative patterns on the body. Along with the use of crude cosmetics various types of ornamentation such as beads and bangles, formed part of decorations [sic]” (p. 1). Pieces of ocher, presumably used as body paint, are known from the Lower Paleolithic (Edwards 1978: 135), but this is not true of beads or bangles.

Deo returns to the theme at the beginning of the second chapter. “So far as archaeological data is concerned, it is well known that no evidence of beads has so far been reported from any prehistoric sites in India save from the Mesolithic sites of Langhnaj in North Gujarat . . . and the site of Mahadaha in Uttar Pradesh . . .” (p. 5).

This is not “well known.” In 1981, I published “Early Human Adornment in India: Part One, The Upper Paleolithic,” and the next year “Early Human Adornment in India: Part Two, The Mesolithic” (Francis 1981, 1982). The first discussed several beads (along with some grooved human teeth) from the sites of Patne, Maharashtra, in central India and the Kurnool Cave complex in the southern Indian state of Andhra Pradesh. The second reported on beads from northern sites: Langhnaj, ornaments (they are not beads) from Mahadaha, beads from Bogor, Rajasthan, and the evidence of contemporary rock paintings.

This information would have greatly expanded Deo’s statement. Both papers
were published in the *Bulletin of the Deccan College Research Institute* at the time Deo was the director of Deccan College. I am not so much miffed that he did not cite my work as appalled by the lack of scholarship this shows. Deo’s book is concerned mostly with stone beads, and by far the most important stone bead industry in India (and perhaps even in the world) for millennia is now concentrated at Cambay, Gujarat. The section on this industry begins:

The industry flourished there [at Cambay] from remote times and continues now in a dwindling form. The antiquity and the various materials used in the industry will be dealt with at a later stage.

The raw material is mainly exported to Cambay from the neighboring Baba Ghori mines at Ratanpur in the erstwhile Rajpipla State. The mines are dug deep into the natural soil to a depth of about 30–35 feet till [sic] the carnelian or agate seam is reached. The blocks of stone weighing over 1 to 2 pounds are brought to the surface and are chipped on the spot to select the promising stones. The Bhils in the neighboring area also collect agate for being taken to the lapidaries at Cambay. (pp. 11-12; insertions mine).

Most of this is quite erroneous. Cambay only began making stone beads in the sixteenth century (Francis 1982a:28, 2001:108). There is no evidence that the industry has “diminished.” Baba Ghor Hill is referred to in the literature; it is not a “neighbor” of Cambay, nor are the mines called “Baba Ghori.” Rajpilpa was absorbed into Gujarat State in 1949. Why is it being cited in the 1980s as the center of mining? Rajpipla was probably not a major supplier of onyx, despite what the *Periplus* said. Tagara (Ter) supplied cloth, not carnelians (Casson 1989:81, 83).

The technical information in Chapter 2 is also full of errors. His discussions on “tinting” stone beads (pp. 17, 31) does not take into account the making of onyx from banded agate. Despite years of working on the “Megalithic problem,” Deo never makes the connection between a certain class (Dikshit’s 1949 “southern group”) of etched carnelians and these people, who made, used, and traded them (pp. 18–19).

The rest of the description of stone beadmaking is fairly accurate, but clearly based on reading other people’s accounts. Referring again to the antiquity of this industry, Deo tells us, “That Cambay was a great centre for this industry is further evidenced by the *Periplus*, which states that carnelian also came to Cambay from *Paithana* (Paithan) and *Tagara* (Ter) in the Deccan (Maharashtra)” (p. 33, insertions his). There is no citation for this information.

What the anonymous Greek sailor wrote in the first-century *Periplus* was, “There is in this region [sc. of Barygaza] towards the east a city called Ozéné, the former seat of the royal court, from which everything that contributes to the region’s prosperity, including what contributes to trade with us, is brought down to Barygaza: onyx, agate . . .” (Casson 1989:81, insertions his); and, “there is brought to Barygaza, by conveyance in wagons over very great roadless stretches, from Paithana large quantities of onyx, and from Tagara large quantities of cloth of ordinary quality” (Casson 1989:83).

There is no mention of Cambay in the *Periplus*, as the city did not then exist. Ozéné (Ujjain) was the beadmaking center. Barygaza (modern Broach) was the port. Paithana (Paithan) was probably not a major supplier of onyx, despite what the *Periplus* said. Tagara (Ter) supplied cloth, not carnelians (Casson 1989:81, 83).

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The first material listed under “Non-Stone Materials” is steatite, a stone (p. 20). Carnelian (p. 33) and turquoise (p. 37) were first worked at Mergarth, Pakistan. Turquoise was worked as early as 6000 B.C., more than three millennia and carnelian more than a millennium before the date.
he first ascribes them to during the Harappan civilization (Jarrige and Meadow 1980: 124, 131). Garnet is not adequately described as, “the purple-tinted stone” (p. 35), nor is onyx, “virtually an agate which is layered” (p. 36). Lapis lazuli does not come from Persia (p. 36), which has been called Iran since 1935.

His discussion of glass beads (pp. 26–30) is even weaker than that of stone beads. He does not inform us how they were made, except to erroneously explain that canes for cutting into smaller beads (seed beads, Indo-Pacific beads) were made by bundling cold canes together and fusing them at a “light temperature” (p. 29). Most glass beads discussed (stratified eye beads, gold-glass beads, mosaic beads, segmented beads) were imports and have nothing to do with an Indian bead industry. Arikamedu did not have beads of, “deep cobalt blue and occasionally of pale purple shades” (p. 29).

Three of the other chapters (3: Typological Classification, 4: Amulets and Pendants, and 6: Foreign Parallels) are little more than catalogues of where various beads have been excavated. The “typological classification” is not what the title suggests, but simply a listing of geometric bead shapes. It is even unclear what some of these are (there are no corresponding illustrations). For example, how does Deo separate a “globular” bead from a “spherical” one?

The amulet and pendant section offers a little information on particular items, but more often leaves the reader wondering what is being discussed, as in, “The Vajra is a well-known symbol, sacred to the Buddhists” (p. 93). Nor is it clear why amulets and pendants are grouped together; one has cultural meanings, while the other is a subclass of beads defined by the placement of the perforation.

The foreign parallels chapter (Chapter 6) is not informative. There is no attempt to discover why there are parallels. Are they mere coincidence, the result of the trade of beads, technology transfers, or the borrowing of styles? The second paragraph discussing gold-foil (gold-glass) beads (p. 113) concerns stone beads, which don’t belong in this category at all. Under “Other Shapes” are grouped “coral” and “shell” (p. 115), neither of which are “shapes.” The entire extent of foreign parallels for shell is explained in this way: “The use of shells is quite universal, in primitive communities as well as amongst the elite.” The discussion on charm cases (p. 116) includes only Indian ones. No mention is made that these were used in dynastic Egypt and are common throughout the Islamic world. It would be a valuable exercise to work out the evolution of this important bead type.

Because they are small and highly variable, it is important to illustrate beads well. The plates here are not nearly as useful as they might be. The first four color plates are from a mineralogy book with several minerals that have little to do with Indian beads. The other color plates are of mixed quality shot in various museums, mostly the Allahabad Museum, which owns no archaeologically recovered beads. The 32 black-and-white plates are reproduced from other publications. Many were of low quality in the original and are just as bad here. Figures 1 through 24 are line drawings made by Deo after (or traced from) various publications.

One would think that if a scholar had handled 500,000 (p. vii) or 1,000,000 (p. 121) beads, he might have made original drawings or photographs that could be used to supplement the text he was writing. This would eliminate beads not discussed in the text and emphasize those that are.

Map A (Mineral Resources for Bead Industry [sic]) ignores the principal bead materials (agate and carnelian) and their locations (the lower reaches of the Narmada, the Godavari, and the Krishna), as well as the principal historical source of garnet (the Godavari-Krishna doab). On the other hand, it shows sources for calcite, baryte, and magnesite, minerals hardly ever used for beads in India. Map C (Bead Making Sites) covers only stone beadmaking sites, eliminating several important ones (Inamgaon and Limudra, for example) and crediting others that probably do not deserve to be there (e.g., Fer, Paithan). No sites that made beads in other media are considered.
Jyotsna’s *Distinctive Beads* suffers from many of the same problems as Deo’s book. To its credit, it is more updated than Deo’s. It is divided into twelve chapters. The first, “Distinctive Beads in Ancient India,” is an introduction. This is followed by chapters on the obsolescence of beads, beads in literature, beads in sculptures, sites mentioned in the text, chapters covering bead types (amulets, pendants, eye beads, etched beads), a chapter on gemology in ancient India, one on the prophylactic and therapeutic qualities of stones, and a conclusion.

On page 1 we are told, “This book attempts to observe them [beads] primarily from cultural [rather] than the decorative angle” (insertions mine). We are never told why the book discusses only “distinctive beads” rather than all beads or even what constitutes a “distinctive bead.” The book gives us very little cultural information. While there is some attempt to reveal what certain amulets were used for, and the beginning of the eye bead chapter discusses the concept of the “Evil Eye,” discussions of decorations or shapes dominate the chapters on amulets, pendants, eye beads, and etched beads. These chapters are just catalogues.

Chapter 2 is entitled “Obsolescence of Beads,” but does not discuss that topic, being an abbreviated history of the bead trade. The chapters on beads in literature and sculpture are merely adequate.

Awkwardly placed in the middle of the book is a chapter that lists the sites mentioned in the text and a map to locate them. This could be useful to the non-specialist. Unfortunately, many entries have no dates, and the reader is expected to know when the Satavahana, Maratha, or microlithic periods were, as well as what OCP, PGW, and NPBW cultures refer to (they are ceramic types). Equally distressing is the old habit in India to include uninformative summaries such as: “A good number of beads of various materials and shaped [sic] from Jyotsna to Pala period [sic] were uncovered. The materials used are terra cotta, carnelian, chalcedony, quartz, marble, agate, and jade. The common shapes are globular barrel, flat round, flat barrel, oblong and diamond cut form [sic]” (p. 23).

Chapter 10 on the gemology of ancient India is perhaps the most interesting one in the book. However, it discusses precious gems, such as rubies, diamonds, topazes, and sapphires, which were rarely worn as beads.

The chapter on the prophylactic and therapeutic uses of stones holds out some promise. Yet, virtually all uses ascribed in this chapter are without references. Occasionally, the name of a writer or a book might be mentioned, but it is often doubtful that the source was even consulted. For example, Jyotsna (p. 105) writes, “Pliny says amethysts protect man [sic] against sorcery.” Well, not quite. What Pliny the Elder (a Roman, not an Indian) said was: “The Magi falsely claim that the amethyst prevents drunkenness, and that it is this property that has given it its name. Moreover, they say that, if amethysts are inscribed with the names of the sun and moon and are worn hanging from the neck along with baboons’ hairs and swallows’ feathers, they are a protection against spells” (Eichholz 1962: 265, emphasis mine).

The illustrations at least have the advantage of being placed in the text where they are relevant. However, they all appear to have been copied or traced from other publications, to which no credit is given. The fanciful and incorrect methods for making glass beads (A and B, Fig. 7, p. 85) are thinly disguised versions of van der Sleen (1973: 20, 24). Most bead illustrations are copied (or traced) from other publications, many from Beck (1941) or from Deo’s version of the same drawings. Compare Jyotsna’s Fig. 1: 2, 3, 4, 10, and 11 with Deo Fig. 16: 126, 125, 127, 123, and 122 and Beck Pl. VII: 14, 15, 16, 12, and 11.

The index is useless. Unless an entry is repeated twice, which happens only a few times, there is only one page listed for each entry. Thus, agate and carnelian, major bead materials throughout the book, have only single page references. Moreover, who would go to an index to look up “Spherical Beads With Elongated Eyes In
Quadrants” or “Etched Eye Beads With figure ‘8,’ Circle And Guilloche, Treble Eye Patterns” (all capitals as in the original)? The latter entry appears twice with page 99 above page 82.

The reference section could have used some editing. While a bibliography can be constructed in different ways, it should at least be consistent. Sometimes a publisher is listed with no place, most often a place is listed without a publisher, sometimes neither is included, and at least one case, a country is listed as a place of publication. Multiple authors are sometimes denoted by an ampersand (&), sometimes by a slash (/), sometimes by a comma, sometimes by “and,” and at other times with no punctuation at all. Most page numbers are absent for papers in a journal or volume with multiple authors. First names are also omitted at times.

Jyotsna’s other book, Amulets and Pendants, is much smaller than Distinctive Beads, being 14.5 by 22 cm vs. 21.5 by 28 cm. It contains 75 pages of text and is set in larger type. Of course, the subject is much more restricted. We are again left with the odd combination of pendants and amulets.

This book appears to have been a rush job. For example, there are four fold-out maps at the beginning of the volume. One wonders why Map 3, “Maharashtra Geology” was even included. The only reference to it is on page 29, referring to the Deccan Trap. No one remotely familiar with the state needs a map to show them that this enormous geological formation covers almost all of Maharashtra. The only mineral marked on the map is quartz, and by no means are all occurrences noted. Map 2 is even more puzzling. It is simply a duplicate of Map 4. It is supposed to show us trade routes, passes, and ports in addition to the places shown on Map 4, but none of these features are included.

In the second paragraph of the first chapter (Cultural and Historical Importance of Amulets and Pendants) we are left wondering again why these two classes are joined. As Jyotsna says (p. 1), “Pendants are of simple and conventional shapes generally without any special importance. On the contrary, amulets have been found to possess definite shapes, so designed for some magico-religious or superstitious reasons” (p. 1). The same dichotomy is reflected in the first page of Chapter 5 (Amulets and Pendants: A Typological Study) in which she quotes definitions of the two items from Encyclopaedia Americana and The Concise Oxford Dictionary.

Quoting definitions from encyclopedias and dictionaries is at least a step better than is done in most of the volume, where references are casually ignored. On page 2 she declares, “The use of amulets and pendants was not confined to any one place or period. They are traced in ornaments, almost all over the world, from a very early age. The great mass of the evidence about these now available justifies the statement that the use of amulets was, and still is, universal.” What evidence is that? Is the statement justified? Can “universal” be reconciled with “almost all over the world”?

Chapter 2 is entitled “The Technological Importance of Amulets and Pendants,” but is nothing of the sort. Half of the three pages of text merely describe perforations. Type 5 (p. 9) is called “‘Y and ‘V’ shape perforation or Miscellaneous.” On the next page, it is described as a ‘V’ perforation; on the plate on the facing plate, it is a ‘Y’ perforation. The last page covers “Polish,” “Mould,” and “Drills” most perfunctorily. No technological importance is advanced.

Chapter 3 (Excavations in Maharashtra: A Summary) is intended to parallel the chapter with the same theme in Distinctive Beads and has all the same weaknesses, as well as others. When considering Bahl (p. 15) we are told that, “Details about material typology of beads are lacking, as a full report has not been published” (p. 15). So, unless the author visited the depository and studied the assemblage (which she clearly did not do), why is it even mentioned? As we saw in Distinctive Beads, references, particularly to Classical Western literature, are being parroted from some secondary source. We are told that Paithan was mentioned in both the Periplus (we saw above that it was) and in Ptolemy (appar-
ently Geographia), which it is not (Stevenson 1991: 149–155).

The very short Chapter 4 (Probable Sources of Raw Materials) simply quotes mineral locations from a few standard mineralogy texts. It is neither exhaustive nor informative. No attempt has been made to determine where ancient sources of stones might have been located. The list is hardly exhaustive and includes several minerals rarely, or perhaps never, used for beads.

Chapter 5 (Amulets and Pendants: A Typological Study) is a listing of amulets and pendants found in the state, and is not a typological study at all. Chapter 6 (Parallel and Interpretations) revisits some of the types found in Chapter 5. Unless statements such as “So, outside Maharashtra drop pendants are dated between c. 500 B.C. and CE [sic] 300. In Maharashtra these are attributed to 200 BC–CE 300 bracket,” (p. 64) or (the last sentence of the volume), “In other words, a study of amulets and pendants from Maharashtra reveal enough material for cross-cultural impact to various religious forces dominating the ancient Indian society during the early historic period” (p. 90) are considered “interpretations.” None are offered.

The twelve figures (except maybe the one on perforations) are in most or all cases copied or traced from other sources (mostly from Beck or from Beck via Deo) with no credit given. The index is disorganized, the first entry being “steatite” [sic; steatite is meant] and the last being Tarhala. One sequence (p. 101) runs: Vaṣālī, Ramgannaḥal, Sirkap, Konḍāpur, Timbarvā, Dwārkā, Tri- puri, Amreli, and so on. Pendants (with various subentries) appears before Amulets (and subentries) on page 99 and again on page 100. The reference section is plagued with the same faults as that in Distinctive Beads, with the addition of many citations not being alphabetized correctly, and dates and places (not to mention publishers and page numbers) often eliminated.

Despite the faults that I have enumerated above in the two books by Jyotsna, one is even more important. They both plagiarize from Deo’s book (then still a manuscript). This is not the first time Jyotsna has done this. She copied from Deo’s manuscript in her paper for the M. Phil. degree. Somehow, that paper was accepted, but she was chastised for the practice by the Deccan College authorities and Dr. Deo himself. Apparently under the assumption that Deo’s manuscript would never be published after his death, she has now done it publicly.

I realize that this is a serious charge. Copies of the pages involved have been sent to the editor of this journal and to Jyotsna’s two publishing houses. D. K. Printworld sent a copy of my letter to Jyotsna. Her reply said “As mentioned in the acknowledge [sic] of the book Amulets and Pendants in Ancient Maharashtra, I have worked under the guidance of Prof. S. B. Deo, and also have a certified copy with his signature. So, the question of plagiarism does not arise.” I have no idea what a certified copy of a manuscript may be, but the question of plagiarism does arise.

Documenting plagiarism is not easy. It requires reading two books simultaneously. I initially read the first twenty pages of Distinctive Beads and compared them to Deo’s book. In these, I found twenty-two whole or partial paragraphs copied. I have found others while working on this review. Amulets and Pendants is not as heavily affected, largely because the subject matter does not overlap as much. Nonetheless, there are incidences, especially the last two chapters.

Plagiarism can take several forms. In some cases slight changes are made, sentences moved around, paragraphs joined or split, words substituted, or minor information added:

Deo, p. 84, column 1, whole paragraphs 3 and 4:

... Even a late work like Līkācarita (13th century A.D.), mentions “Vāghnakha” as an ornament.

Though the literary tradition is at present limited to 7th century A.D. onwards, the ornament seems to have gained a very wide popularity during the Gupta period. The ornament is distinctly carved on many Gupta sculptures as well as in bronze images. It would be sufficient to mention that the ornament is a peculiar feature on images of Kārti-
keya, Krishṇa, Balarāma etc., amongst Brahmanical images and those of Manjusri and others in the Buddhist pantheon.

103See Coomaraswamy. *op. cit.*, pl. XLVI, 175. (Kartikeya)

Jayotsna, *Amulets and Pendants*, p. 68, first paragraph:

Even a late work like Lilācarita dated to the thirteenth century CE mentions tiger claws as an ornament. Through [sic] the literary tradition is at present limited to seventh century CE onwards, the ornament seems to have gained popularity during the Gupta period. The ornament is distinctively carved on many a Gupta sculptures [sic] as well as in bronze images (Coomaraswamy 1980, Pl. XLVI, 175).—Gaṇa from Khoh in the Prince of Wales Museum, Bombay bears a tiger’s tooth pendant around his neck (fig. 10.2). This ornament is a peculiar feature on images of Karttikeya, Kniṣṇa, Balarāma, etc., amongst Brahmanical images and those of Manjusri and others in the Buddhist pantheon.

The new information added here is about a statue of Gaṇa. Figure 10.2 shows a tiger-claw pendant, not a tiger-tooth pendant. Additionally, Jayotsna commits an error in copying Deo. Deo’s reference to Coomaraswamy (1965) was his *History of Indian and Indonesian Art*. Jayotsna’s reference is to Coomaraswamy (1980), his book *Yakṣas*, yet she cites the precise page and plate number as Deo, even though two different works were involved.

Deo, p. 5, column 2, last paragraph:

Towards the beginning of the 1st millennium BCE and in subsequent centuries a full-fledged maturity is seen in the urban revolution. It culminated in an exuberance of contemporary material assemblage including the beads, which are no exception to the general richness of the cultural pattern of the times. This is evident from the beads found at Hastinapura, Ujjain, Pataliputra, Rajghat, Ranagira, Vasali, Kausambi and Paithan. The specimens from several of these sites throw light on the artistic patterns of beads and of the materials out of which they were made (see pl. XXIV ff. and figs. 8 ff.).

Jayotsna, *Distinctive Beads*, p. 7, column 2, first full paragraph:

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This review has not only been long; it has also been harsh. That is unfortunate, but I believe it is necessary. Beads hold tremendous potential for enlightening us about many aspects of past human behavior. They have long been ignored, and this has allowed far too many writers on the subject to avoid scrutiny and publish substandard works on this once arcane topic. This can no longer be tolerated, neither in the Indian context, nor in any other.

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STEVENSON, E. L.


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The fanciful title of this book should be a clue to the reader that this is actually a “story” rather than a serious scholarly text about the Indus Valley civilization. If read

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as a story it is quite well written and engaging, with lots of excellent illustrations taken primarily from the website www.harappa.com. However, if used as a source for accurate information on the Indus civilization, the reader should be forewarned that the presentation is seriously flawed. The author does not appear to have had any first-hand experience working on the Indus Valley civilization and her information has been taken primarily from articles and recently published books by leading authorities in the field. The bibliography indicates that she has done a considerable amount of background research, but since there are almost no references cited throughout this text it is often difficult to differentiate her ideas from those derived from other scholars.

The text is organized in thirteen chapters that cover a wide range of topics, focusing on specific aspects of the Indus Valley civilization and comparisons with contemporaneous civilizations in West Asia and China. In the first introductory chapter the author sets the tone of the book with statements that serve to reinforce stereotypes of the Indus that scholars have been trying to erase for the past fifty years. She states that, “... within less than a thousand years the Indus Civilization—like a candle—had flared up, burned brightly, and gone out” (p. 8). She also argues that, “... the clues from the Indus Civilization seem to be showing us a state without violence or conflict. Who were these peace-loving people?” (p. 12). While these statements are clearly problematic, she does emphasize the point made by many Indus scholars, that the legacy of the Indus cities can be seen in “many aspects of modern South Asian life” (p. 12).

In her introduction she also provides a very detailed timeline that compares major events in the history of the Indus, Egypt, Mesopotamia, and China. Here again we see a pattern of inaccurate information that comes up again and again throughout the text. While the entries are generally significant, the dating of the events is very inaccurate, especially for the Indus. In the Indus Valley region, the earliest development of farming communities is actually around 7000 B.C. and not 4300 B.C. The beginning of the Harappan phase of the Indus Valley civilization is around 2600 B.C. (Kenoyer 1991, 1998) and not 3000 B.C. Finally, the decline of the Indus cities begins around 1900 B.C. and not 2100 B.C. Similar inaccuracies are found in her dating of writing in Egypt and China, as well as the beginnings of agriculture and copper metallurgy in Mesopotamia. It is not clear if the errors are due to bad editing or mistakes by the author herself, since the dates for some events are restated incorrectly in the body of the text, while others are accurately stated. Anyone who is not familiar with the correct dates would be very confused in comparing the text with the time line, and they would be seriously mistaken if they used her timeline for teaching or comparative study.

In the first chapter “Lost Civilizations,” she continues with more outdated interpretations that no serious scholars would support. For example, she says that, “The historical Ganges Civilization was built on foundations laid by the Indo–Aryans, a nomadic people who had invaded the subcontinent at some time before 1000 BC ...” The idea of “invading Indo–Aryans” has been beaten to death by numerous scholars (Lal 1998; Shaffer 1984) and at present, no one supports this idea. She makes some general comparisons between the Indus and early urban societies in Mesopotamia and Egypt that are generally accurate, but do not add anything new to the discussion.

The second chapter looks at the evidence for pre-Indus communities, beginning with early Palaeolithic communities and continuing through Neolithic and early Chalcolithic settlements. Overall, the discussions presented in this section are very close to the original reports by the primary scholars. However, one serious error is seen in her discussion of an early stone tool from a gravel bed in Kashmir. Contrary to her statement on pages 32–33, the early stone tool found at the site of Riwat, dating to before 2 million years ago, was actually found in situ (Rendell et al. 1989) and therefore in a primary context,
even if this position was secondary to its original use. Other early stone tools found in the Himalayas are dated to around 2.8 million years ago (Korisettar 2002; Sharma 1995), so the dating of the Riwat stone tool to before 2 million years ago is not really that surprising.

Each of the subsequent chapters deals with one or more aspects of Indus subsistence, crafts politics, trade, or religion. Most of the themes and the examples used in these chapters are taken directly from the works of scholars listed in the bibliography, but in many cases the paraphrasing has only preserved part of the original argument. For example, in discussing the emergence of Indus urban centers (pp. 49–51) she says, “Many of these highland and lowland towns were destroyed by fire or razed around 2700–2600 B.C.” In the previous section she mentions the sites of Jalilpur, Balakot, Amri, Kot Diji, Sothi, and Rehmandheri, all of which are located on the Indus-Saraswati Plain or adjacent valleys, and except for the site of Kot Diji, none has evidence of extensive burning. She later qualifies her statement by saying that, “Not all of the sites were destroyed…” and that, “the timescale of change now seems longer than previously supposed. As a result, one may no longer argue for a sudden transformation” (p. 50). She then says that the crucial period of change was between 2700 and 2600 B.C. “instead of a few years.” No serious scholars have ever considered that the Indus urbanism emerged in a few years and most of those who argue for a short period of change point to the period 2600–2500 B.C. (Possehl 1993). Work at Harappa has shown that the main period of change was between 2800 and 2600 B.C. and that this in itself was only the culmination of a much longer process that began as early as 3500 B.C. (Kenoyer 1998; Meadow and Kenoyer 1994, 1997).

Without citations it is impossible for the reader to go to the original work and discover what the specialist scholars really intended. As illustrated above, McIntosh often juxtaposes interpretations by authors who have very different theoretical and methodological approaches and this results in contradictory statements. For the discerning scholar who is familiar with the original sources, this free association of different viewpoints is quite obvious and at the same time disturbing, because the supporting arguments for the interpretations are missing. For the uninitiated reader, who is using this book to learn more about the Indus civilization, the presentation of interpretations without their supporting arguments or of unqualified statements as “facts” is very misleading.

In Chapter 10 “A Peaceful Realm?” the author comes to the important theme anticipated in her title. I am one of a handful of scholars who have argued for the lack of specific evidence for conflict and warfare during the emergence and expansion of the Indus cities. However I qualify this by stating that,

The absence of images depicting human conflict, however, cannot be taken to indicate a utopian society in which everyone worked together without warfare. We have to assume that there were periodic struggles for control and conflicts within a city as well as between cities. These battles and political confrontations may have been illustrated in other ways that are not preserved in the archaeological record. (Kenoyer 1998: 82)

It is also important to note that large cities such as Mohenjo-daro and Harappa may have been too large to attack directly and that any conflict may have happened in the hinterland, a pattern that is well documented throughout history. McIntosh does not present a convincing argument for a “peaceful” society and her attempt to explain how the Indus society was governed through religious hegemony based on later historical comparisons with the Hindu ideology and the caste system do not make any historical sense. The warfare and conflict of the Vedic and Classical period of Indian history is well known not only from the literature, but also from the archaeological record of burned cities and weaponry. When the caste system arose in the warring early historic cities of the Ganga-
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to Indo-Aryan tribes. Her dis-

cussion weaves back and forth between the peaceful Indus people, nonviolence, and respect for life in Indian religions and occasional references to “Indo-Aryan inva-
ders” (p. 202). She concludes,

One key aspect of Indus society, as I have reconstructed it, is its absence of violence or military activity. It may be carrying the thesis too far to credit
the Indus Civilization with Indian pacifism and nonviolence and place all the blame for violence and warfare
upon the waves of later invaders, but there is surely a grain of truth in this suggestion. (p. 203)

Fortunately, archaeologists who are actively studying the Indus civilization have been able to get more than a grain of truth out of their research and the reader is advised to look to the bibliography for more reliable sources of information.

In summary, this book has nice pictures and is a good read if you are not interested in an accurate discussion of the archaeology of the Indus Valley civilization or of later South Asian culture, religion, and history. I would not recommend this book to high school or college students, or teachers who are trying to improve their understanding of the earliest urban civilizations in South Asia.

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Reviewed by Heidi J. Miller, Department of Anthropology, Harvard University

Dilip K. Chakrabarti’s ambitious goal for his book India, An Archaeological History is to create a continuous archaeological history from the Palaeolithic period up to and including Early Historic India. The study region is described as including the modern states of India, Pakistan, Nepal, Bhutan, and Bangladesh, although the book focuses on the archaeological remains uncovered in India and Pakistan. In order to connect the many time periods and ancient cultures in this vast geographic expanse, Chakrabarti proposes to examine the relationships between human societies and the land. This is a fascinating idea, to use the history of how human societies lived in the diverse environments of South Asia to create an encompassing view of the past. The in situ landscape seldom changes, and the ways that cultures exploit their environments tend to be limited by persistent factors such as geography, climate, soil type, and water resources. Thus, focusing on how environments were used will give coherence to a long chronological sequence and to a widely varied geographic region. Interestingly, Chakrabarti’s goal has a political motivation.

What we want to emphasize in the context of the ancient history of such a vast landmass as the subcontinent of India is that it is only through the reconstruction of the historical development of man-land interaction in different parts of the subcontinent that the framework of a past accept-
able to all segments of its population can emerge. (p. 3)

However, political discussion does not play a major role in the book and Chakrabarti hones in on the archaeological remains.

In order to meet his goal of creating a continuous history, he reviews the accumulated archaeological data per period and per region. Beginning with the Palaeolithic through the Mesolithic periods and early village communities, to the Early Historic period of India, Chakrabarti fills the chapters with archaeological data. Unfortunately, there is little overarching narrative to help the reader contextualize the details, and the short introductions and conclusions to each chapter are overwhelmed by the amount of detailed information in between. Another major drawback of the book is the inadequate use of citations and references. Other scholars’ research is generally noted at the beginning of sections, but when it is described in the text there are no citations. Also, there are some uncited quotations and some studies are noted in the text without references.

Following an introductory chapter wherein the goals of the book are discussed and the region is introduced, Chapter 2 reviews the evidence of early humans in the subcontinent beginning with the history of Palaeolithic research. Sites are briefly described, chronology is discussed, and some controversies are noted, such as whether the cranial fragment found in the Narmada River valley belongs to *Homo erectus* or archaic *Homo sapiens*. In Chapter 3, Chakrabarti discusses only the Mesolithic data that falls into chronological position between the Palaeolithic remains and the early farming communities in the region. Hunting-gathering-foraging cultures of the subcontinent have existed from the Palaeolithic period until modern times, and Chakrabarti’s chronological focus does not fully appreciate the adaptability of this human environmental strategy.

The focus of Chapter 4 is on the early villages of Baluchistan, the Indus Valley, and northwest India, the areas where the Harappan civilization emerged or at least had great influence in the third millennium B.C. Sites and topics that are well published in the specialist literature, such as the Mehrgarh excavations and evidence at this site for animal and plant domestication, are described in detail.

The Harappan or Indus civilization (Chakrabarti uses both terms) is the topic of Chapter 5 and the sites, chronology, materials, and trade of this cultural phenomenon are discussed, however some of the details in this chapter are confusing and misleading. For example, Chakrabarti describes his view of the political and social framework of the Harappan civilization as, “multiple kingdoms centred around the major settlements of a region” (p. 199) without offering any convincing evidence. In contrast to his stated view, he notes the, “prevalence of a common ideology over a wide region, which one may deduce from the many common symbols, the standardization of different Harappan artifacts and the general distinction between ‘citadel’ and ordinary residential area need not necessarily mean political unity under one empire” (pp. 199–200). This issue is not completely discussed and, thus, such ambiguity, without any data-based reasoning, leaves the reader lost.

An additional example of misleading information in this chapter is the data that Chakrabarti cites in his description of the role of a priesthood in the cities and towns of the Harappan civilization. He writes that the data he cites, “unmistakably imply the services of priests—priests of a type that a practicing Hindu would engage for performing his household rituals even today . . .” (Chakrabarti 1995, 200). This evidence includes a limestone head as well as a few other pieces of stone sculpture from the site of Mohenjo-daro and supposed fire altars from the site of Kalibangan, which Chakrabarti states were found on top of platforms. These data and his interpretation are problematic for a number of reasons.

First, only the site of Mohenjo-daro has yielded sculptured stone figures, and a study of this corpus (11 pieces in total) by Ardeleanu-Jansen (1984), along with a re-
lating study by Dales (1987), strongly suggests parallels with other civilizations to the northwest (e.g., the Helmand region). Ardeleanu-Jansen describes the sculptures in a squatting or submissive pose while Kenoyer has recently noted that the partly kneeling position of many of these figures, “can be interpreted as supplication or subservience, but this is also a standard position for sitting in readiness for action” (Kenoyer 1998:102). In contrast, Chakrabarti sees these figures in meditation. Ardeleanu-Jansen and Kenoyer agree that these stone sculptures were ritualistic, yet how they might point to a practicing priesthood, functioning similar to such a practice in Hinduism today, is not discussed by Chakrabarti.

The supposed fire altars found at the site of Kalibangan (Rajasthan), were found in rooms in both the citadel and lower town, and they were sunken into floors. One of the excavators of that site, B. B. Lal, notes that, while such structures were also found at Banawali (Haryana), they were not uncovered at Mohenjo-daro, Harappa or any other Indus Valley site. Hence, he suggests that these features may be evidence of a regional cult (Lal 1997).

Second, when considered in their context, the importance of these few stone figures and pit features is diminished by the thousands of other motifs, architectural details, and artifacts found at dozens of sites, data that Chakrabarti chooses to overlook. Some of this material does suggest ritual practices, however (and the third problem), it remains to be demonstrated whether the religious beliefs prevalent in the Indus Valley five thousand years ago are Hindu or are reminiscent of Hindu practice. In a detailed iconographic study of the often-cited proto-Shiva seal from Mohenjo-daro, Srinivasan clearly demonstrates that when the imagery of the seal is compared to its contemporary materials, from its own cultural context, there is significant support for reading the image as a divine bull-man (Srinivasan 1975–1976). There is little supporting evidence for interpreting the figure as an early form of Shiva. This study demonstrates the importance of examining Harappan artifacts within their own cultural context.

The evidence cited in support of a practicing priesthood are a few small fragments of the Harappan cultural record and from only two sites. In all, Chakrabarti's point that these remains have ritual significance is understood. However, it does not seem plausible to interpret them as evidence of a priesthood, functioning similar to one in Hinduism today.

Chapter 6 describes the archaeological remains found beyond the limits of the Harappan civilization. Similar in structure to the early chapters of the book, a compendium of sites is presented from a variety of regions in the subcontinent, from the Northwest Frontier Province to southern India. The varied subsistence practices and habitations across this vast area are described by region, however, there is very little narrative linking all this data together.

In Chapter 7, Chakrabarti addresses the Early Historic period of India: how it is defined, what it includes, and how it is dated. In addition to the archaeological remains, he includes the textual evidence for the political structure of India during this period.

What is striking about the archaeological record apparent in this book’s detailed descriptions, is the regionalism of the cultural remains. Although Chakrabarti would like us to see an “essential character” of the Early Historic period, rooted in an archaeological continuum from the Palaeolithic, it seems very clear that there is a distinct amount of regional expression in the material remains from these time periods and across the varied landscape. Even Chakrabarti notes this, although he prefers to emphasize “broad uniformity” (p. 318).

Instead of trying to shoehorn the data into a sequential continuum, perhaps it is better looked at in all its variations and permutations. Its varied nature could be the link connecting the Palaeolithic to early farming communities and further to various third millennium adaptations across the landscape. Chakrabarti’s original goal of examining the human-land relations could be used to create a continuum of human-
environmental adaptations through time. Unfortunately, the book loses this focus after the introduction.

This book raises another thought-provoking topic: why do we envision the archaeological history of South Asia in the Old World sequence of Palaeolithic, Mesolithic, Neolithic, to Iron Age? With the evidence of the so-called Mesolithic (hunting-gathering-foraging) societies existing for an expansive period of time, not limited to a particular cultural phase, it is clear that such a neat, evolutionary classification of human cultural development does not correctly appreciate the archaeological record of South Asia. How can we envision a continuum of archaeological history, one that utilizes the regionalism we see in the cultural remains with the long-lasting human adaptations? Chakrabarti’s original thesis may be the answer: societies’ relationships with the environment as the key to creating an interconnected, long-term archaeological history of such a vast region.

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Reviewed by HEIDI J. MILLER, Department of Anthropology, Harvard University

Graham Chandler’s book presents a systematic and significant research project wherein the methods are clearly discussed and the data are published unambiguously. His analysis of the mineralogical composition and technology of Early Harappan (3500–2650 B.C.) ceramics from four sites in Pakistan is a welcome addition to the corpus of analytic studies of South Asian pottery. Moreover, Chandler has made a noteworthy contribution by devising a portable petrography kit for producing and analyzing ceramic thin sections in the field. He shares the process by which he assessed

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the equipment choices and their sources, and thus ensures the reproducibility of such a kit. This research was Chandler's Ph.D. dissertation and thus the methodology and results are well discussed, however, the study is limited in sample size and extent. The book is divided into two sections: the first describes the creation of the portable petrography kit while the second discusses the analysis of 165 sherds from Early Harappan contexts.

The creation of thin sections of sherds for petrographic analysis has relied on cumbersome equipment and export permits, and one of Chandler’s goals was to devise a system that would produce and analyze thin sections under difficult working conditions on an archaeological site. The kit had to be physically small and lightweight (and thus easy to travel with) and yet powerful enough to cut and polish a significant number of sections with the least amount of supporting materials (e.g., blades and abrasives). He condenses a complicated sequence of production steps into four stages, each with distinct equipment requirements: consolidating, cutting and grinding, polishing, and analysis. The equipment possibilities for each stage are discussed and the price ranges, availability, weight, and performance of the various possibilities are explored. Chandler makes his decisions and field-tests the kit in Pakistan and Turkey where it performs well with some fine-tuning. The second and longer portion of the book reports the results of his analysis of seven common ceramic forms found at four sites with Early Harappan occupations in Pakistan.

Chandler explored one aspect of possible socioeconomic interaction during the Early Harappan period: was pottery moved between sites or was technical information shared? Three of the sites sampled (Rehman Dheri, Tarakai Qila, and Lewan) are located in close proximity to each other in northwestern Pakistan, while the fourth (the site of Harappa) is a discrete distance away in the Punjab. A total of 165 thin sections were made and analyzed, and the results are presented graphically and in spreadsheet format, per sample, in the appendices. The vast majority of the samples were from the Early Harappan levels of the sites, along with some wasters collected from the surfaces of three of the sites and some Harappan period material from Rehman Dheri (included for comparative purposes). Geographically the sites form an interesting group. Rehman Dheri is a large settlement in the Gomal Plain with characteristic Harappan cultural features of a complex society, while Tarakai Qila and Lewan are much smaller sites to the north, in the Bannu Basin. It has been suggested by the excavator (Durrani 1986) that Rehman Dheri may have been a ceramic distribution center for the region, a hypothesis Chandler tests. The site of Harappa, one of the type-sites of the Harappan civilization, is geographically and geologically distinct from the other three sites, and thus proves to be an interesting counterpoint.

In the background chapters, Chandler covers all the bases, albeit briefly in some instances. The site descriptions are uneven and the discussions regarding theoretical issues (e.g., reasons for the widespread occurrence of a particular style) are very short and not always critical; however, the review of methods is thoughtful.

In contrast, the descriptions of the samples are detailed and well presented. The analysis of each sample involved identifying the mineralogical composition, assessing the size, shape, and number of inclusions, and a close examination of the quartz minerals. Chandler used the results to explore whether the vessels were manufactured at the sites (did their composition reflect the site’s geological environment?) in addition to a number of technological issues such as firing temperatures and observations of surface treatments. The results show that the sherds from all the sites reflect their respective geological environments, and thus there is no petrographic evidence that vessels were traded or exchanged. Chandler also suggests that technology may have migrated from Rehman Dheri to the smaller neighboring sites, but this is not convincing.
Rehman Dheri is the primary sample source for the study (67 out of 165 samples) and thus this site receives the most thorough analysis. The compositions of these samples were used to create baseline definitions for six fabric types. Chandler emphasizes that his definition and use of these fabrics is an exploratory research tool and the types do not necessarily represent distinct fabrics intended by the potters. The distribution of his fabric types varies through time but not by vessel form solely at Rehman Dheri. Chandler documents coarser fabrics dominating in the later Harappan culture levels and suggests that there may have been fewer potters producing vessels and thus less variation in the raw material. In comparison, Tarakai Qila and Lewan, as well as the site of Harappa, showed fewer fabric types but the samples from these latter sites were limited to the Early Harappan period and there were fewer sherds sampled per site.

Chandler’s analyses are thorough and convincing. However, the primary weakness to the book is the theoretical framework in which he tries to fit the analyses. There is a debate regarding whether the emergence of the urban culture (the Mature Harappan) from the Early Harappan period involved abrupt or gradual changes (Mughal 1990; Possehl 1990). The debate focuses on a number of characteristics that are seen in the Mature Harappan period throughout the Indus River valley and adjacent areas, and whether the precursors to these characteristics are present in the Early Harappan period. These include settlement patterns, different aspects of technologies and crafts in a variety of materials, and sociopolitical issues. Chandler’s study of a single aspect of Early Harappan material culture is not adequate to address the myriad issues in this debate: the study’s sample size is too small and geographically limited, and it examines very little Mature Harappan pottery (only a few sherds from a single excavation trench at Rehman Dheri).

However, this book is significant because it reports the results of a well done petrographic analysis, as well as the documentation regarding the creation of a portable petrographic kit for use on-site. Taken in conjunction with additional evidence from recent analytic work in Gujarat, India (for overview see Krishnan 1997, 2002), this research has serious implications for how archaeological ceramics in South Asia are classified, by throwing doubt on the reliance of ware or fabric as a classifying principle. Chandler’s systematic and well-presented study demonstrates that fabric or ware is closely associated with the location of production (at least for the Early Harappan period in the Northwest Frontier Province, Pakistan). It is hoped that the portable petrography kit will be reproduced and used by other scholars, and that this analytic work will continue to explore the composition and technology of South Asian ceramics.

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Reviewed by Bérénice Bellina, School of Archaeology, Oxford University

Tripati aims to present a maritime history of the Kalingas from the earliest historical times, that is to say from the very last centuries B.C. (Mauryan period), until the thirteenth century A.D. The Kalingas, whose frontiers fluctuated according to historical events, mainly corresponds to contemporary Orissa, which formerly included the northern part of Andhra Pradesh. This book is the first attempt to present a historical account of the maritime activities of the Kalinga. Indeed, though deeply involved in trade, until now this region has mainly inspired studies on its general or economic history and on art history, which provides limited references to its maritime and trade activities. Given my interest in early exchange between South and Southeast Asia, I was pleased that Tripati had drawn sparse data together, contributing to a clearer picture of the involvement of one eastern region of India in maritime trade. Nonetheless, this book failed in several ways in its attempt because of the author’s eagerness to make Kalinga the pioneer of Indianization in Southeast Asia, which he considers a civilizing process and, as a result, distorts the data for this purpose. Indeed, it appeared to me that the real interest of the author (I believe a native of Orissa) is to promote his nationalist-regionalist ideas. While presenting the main content of this book, I will point out some of his more characteristic positions and the severe deficiencies or distortions his ideas led him to produce.

The preface anticipates the position of the author when he defines Kalinga as the area between the rivers Ganges and Godavari, extending it to include large parts of Bengal, where there existed important ports of trade. In the first chapter, Tripati introduces the main argument of this book: the "greatness of Kalinga" and its contribution to civilization through large-scale colonization. This chapter presents the general historical background and the literary, epigraphic, numismatic, archaeological, and artistic sources available. His a priori views lead him to interpret the sources in such a way that he concludes that by the time Asoka conquered Kalinga, the region was already wealthy and powerful because of, "maritime trade and colonial expansion" (p. 2). As evidence of Kalinga’s leading role in this civilizing adventure, Tripati uses the fifth-century A.D. Javanese inscriptions, which, “use scripts similar to those from Orissa, indicating that Kalinga was the carrier of civilisation to Indonesia” (p. 5). Although some of the earliest Indian scripts of Southeast Asia appear to be derived from southern India, and more precisely from the Pallava script (De Casparis 1975:13), as far as I know, none of them has specifically been identified as scripts from Kalinga. In the matter of the earliest inscriptions of the Indonesian archipelago, De Casparis wrote that since 1918, Vogel had concluded: that the origin of this early Southeast Asian script was the Pallava script used in numerous inscriptions of the Kings of the dynasty of this name. These inscriptions are dated from the middle of the fourth century A.D. and have been found in different parts of southern India from the Guntur District of Andhra Pradesh in the north to the Bellary District of Mysore in the west, and south of Kanci (Conjevaran) in the south. Although this script was also used in some inscriptions of Ceylon and in inscriptions of the Kadambas of Kuntala (northern Mysore), there can be no doubt that it was most closely associated with

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the Pallava kingdom should be attributed to strong Pallava influence in such areas. (De Casparis 1975: 13)

Tripati ends the historical background section concluding that Kalinga people, “were the pioneers of Indian colonisation in furthering India and the Indian Archipelago” (p. 7).

The second chapter is divided into two sections. The first one presents the ancient ports of Kalinga, both those known archaeologically as well as those known from texts where locality is not securely identified. It is a useful section; available evidence and sources are presented for each port. The archaeological evidence comprise Chinese coins and porcelains, Middle Eastern ceramics, Roman coins, Western amphorae, and Western-influenced ceramics, such as Rouletted Ware. The textual sources are passages found in early Western texts such as Ptolemy’s Geography, in the Indian Jataka, in Pali texts, and in the Sinhalese chronicles, as well as in Chinese accounts. The second section, entitled “expansion of culture,” is probably the most reactionary because it consists of a massive attempt to convince the reader of the supremacy of the Kalingan culture, which spread into Southeast Asia due to its numerous colonies. Those Kalingan settlements in Southeast Asia generated such effective cultural contacts there that, “the local population assimilated a superior culture to their best advantage with some variations” (p. 44). As far as I know, there is no evidence for such Indian colonies in Southeast Asia and even less for Kalingan colonies. Tripati takes it as axiomatic and makes it his main argument to account for Indian-inspired features in Southeast Asia. In the following pages, the author lists the regions that might have had close or indirect exchange with South Asia and what he considers evidence of those colonies. For instance, in the Borneo section, more than one reader would be astonished to read of, “the Sanskrit inscriptions found at Muara Kamann . . .” that record the, “Hindu colo-

nisation in eastern Borneo” (p. 47). Just as surprisingly, one can discover that, “the maritime contacts between Kalinga and Burma and the steady flow of immigrants” account for the “Brahmanical features in Burma” (p. 47). Proposing new readings of the Chinese sources, Tripati writes that “Bali was one of the important Indian settlements in ancient times. The Chinese accounts mention that Bali was a rich and civilised kingdom ruled by Indians who professed Buddhism” (p. 46). The entire section is full of distorted sources and data, arguments lacking bibliographic references, or out-of-date studies from the early twentieth century. Here, one of the oldest concepts of cultural exchange between India and Southeast Asia, dating back to the hyperdiffusionist Greater India movement, whose most famous figure was R. C. Majumdar, is found. Indians, or more specifically for Tripati, “the pioneer sailors from Kalinga and South India penetrated into Southeast Asia and started the process of Indianisation” (p. 45), by establishing colonies, brought civilization to the underdeveloped populations of Southeast Asia, the latter being considered as passive agents in the process.

Another typical diffusionist view, found in early studies, namely that Southeast Asian cultures are some kind of pale copies of the Indian cultures, is also presented. Tripati writes that, “Buddhist images of Java simulate those from Ratnagiri” (p. 51).

The third chapter contains descriptions of ancient trade routes known from literary sources and archaeological evidence in South Asia and between South and Southeast Asia. Here again, to promote the prominent position of Kalinga and its ports in overseas maritime exchange, the author has gone too far beyond the evidence, for instance, when he states that, “Voyages to Southeast Asian countries were regular” because, “Kalinga had her colonies in Burma, Sumatra, Thailand, Champa, Malay peninsula and beyond” (p. 72). This chapter also discusses items of trade as well as the currency used in South Asia. Unfortunately, although it includes interesting
information, the last section dealing with foreign trade provides the author a further opportunity to promote his diffusionist and regionalist ideas.

Chapter 4 provides interesting information on ship-building and navigation in South Asia. Little archaeological evidence is available. Most data are found in texts, artistic representations, such as in the caves of Ajanta, Kanheri, Aurangabad, on sacred buildings in Sanchi and the Bharhut stupa, on Kornark and Jaganath temples, as well as on some coins. Texts provide classifications of boats according to their use and users, and several details on the type of materials and decorations suited for these. The last part of the chapter deals with navigation and describes the monsoon phenomenon in the Indian Ocean governing the rhythm of maritime activities.

In the last chapter, Tripati, in a clear and convincing way, argues for a decline of Kalinga’s ancient ports due to natural causes, such as the rising sea level, the silt-ing of rivers, and the shifting of sandbanks.

Finally, given Tripati’s overriding desire to emphasize the important contribution of Kalinga in Indian overseas trade and cultural expansion, he attributes to the Kalingan colonies some of the greatest artistic achievements in Southeast Asia. For instance, some art historians might find it surprising that, “The Borobudur stupa and the Khemer [sic] temples of Cambodia are the outstanding examples of the Kalinga influence on Southeast Asian countries” (p. 118). Basa recently wrote that, “Most of the Indian writings on Southeast Asia may be considered under nationalistic historiography” (1998:397). Surprisingly, Tripati’s book, although published in 2000, corresponds perfectly to the nationalistic writings produced by the Greater India Movement at the beginning of the twentieth century.

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Despite the many years of research on the early historic archaeology of South Asia, few reports of systematic excavations exist, and this deficiency has affected theoretical and material interpretations of South Asian urbanism. It is therefore with great anticipation that South Asian archaeologists and historians receive this first of two volumes of the long-awaited report of six seasons of excavations at the site of Anuradhapura in Sri Lanka, a joint Sri Lankan–British project carried out between 1989 and 1994. As one of the most significant sites in South Asia, systematic fieldwork at Anuradhapura represents an opportunity to address several key concerns: a refinement of the chronological and artifactual sequences for the southern portion of South Asia; a reevaluation of early historic urbanization processes in South Asia; and a better understanding of Anuradhapura’s position as a pivotal player in Indian Ocean trade. This first volume focuses on the excavation results of a single trench—Anuradhapura Salgaha Watta 2 (ASW2); the second volume will examine the artifacts from the excavations.

Chapter 1 briefly introduces the reader to the site of Anuradhapura in Sri Lanka’s north-central province and presents the project’s aim to investigate the ancient urban core of the complex. Chapter 2, co-written by Coningham and Paul Haggerty, describes the physical environment of the site, including a presentation of the geology, climate, drainage and relief, flora, fauna, and soils of the greater Anuradhapura region. Chapter 3 presents a detailed description of the entire city of Anuradhapura. Coningham adopts Senexiratna’s fourfold division of the complex, which depicts the site as a series of concentric circles: at the center is the fortified citadel or inner city, which is surrounded by a zone of monastic establishments. A village/tank zone in turn surrounds the monastic zone, and the outermost zone is that of forest and hermitages. The chapter begins with a history of archaeological research of the site and then describes each zone in detail. Chapter 4, co-written by Coningham and Paul Cheetham, presents further background information on the excavations in the form of a detailed description of the fortifications of the citadel. Again, a brief history of previous archaeological work on the citadel’s defenses is presented, followed by a description of the British–Sri Lankan team’s two field seasons of survey on the fortifications.

Chapters 5 and 6 present and evaluate the core data from the excavations. Chapter 5 describes Trench ASW2, its location, excavation techniques, and the subsequent structural sequence that was developed. The trench covered an area of 100 sq m, designed to be large enough to recover both a structural sequence for the site and a large enough corpus of artifacts for the development of a periodized catalogue. Its location was determined by previous sonde work by Deraniyagala at the highest point of the site, which suggested a possible 10-m sequence going back to the initial Iron Age occupation of the site. In all, the excavations resulted in the development of a sequence of 30 structural phases, occurring within 11 structural periods. Chapter 6, co-written by Coningham and Kathy Batt, focuses on the chronological evaluation of the results of Trench ASW2. Through the use of a combination of relative and absolute dating techniques, the researchers attempt to construct a periodized sequence of the excavated structural units. Structural phases were evaluated...
based on the presence or absence of chronological diagnostic artifacts, and on 29 radiocarbon measurements that were carried out on charcoal samples from 11 structural phases.

Both chapters begin with Structural Period K, the earliest context within the trench, and end with Structural Period A, the most recent context. Detailed diagrams of key structural phases and other relevant elements accompany the descriptions. Structural Period K was characterized by several phases of possible temporary round or circular shelters, and yielded radiocarbon dates suggesting an occupation between c. 840 and 460 cal. B.C. Artifacts associated with this period—including black and red ware pottery, graffiti-bearing sherds, iron objects, and remains of cattle, hare, and deer—seem to identify this period with Deraniyagala's Period HI, the protohistoric Iron Age.

Structural Period J also included several phases of round shelter construction, but the evidence pointed to a more permanent occupation in this subsequent period. This period has been dated to c. 510–340 cal. B.C., and the artifact corpus is essentially the same as the earlier period, with the addition of a small number of medium-fine gray ware sherds. Also present were paste beads, iron slag, iron, copper, shell, amethyst and quartz objects, and debitage, as well as the first examples of horse bones in the excavation's faunal record. With the recovery of four sherds bearing portions of Brahmi inscriptions, Coningham identifies Structural Period K with Deraniyagala's Period IV, the basal Early Historic.

A major shift occurs with Structural Period I, which is dated between c. 360 and 190 cal B.C. In this period, the round or circular structures of Periods K and J are replaced by cardinally oriented square or oblong structures. Walls were constructed of posts covered in wattle and daub and probably roofed originally with grass and palm and later with kiln-fired tiles. This is the first evidence from the excavation of the use of tile, and it predates the use of brick in the ASW2 sequence. The evidence also suggested a 60 percent increase in settlement size to an overall extent of 60 ha, as well as the construction of a rampart and ditch around the settlement. Particularly noteworthy is the presence of possibly imported fine gray ware, the fabric and shapes of which appear ancestral to Rouletted Ware. Rouletted Ware was also found in this period, as were a possible sherd of Northern Black Polished Ware and more sherds with Brahmi inscriptions. The faunal record indicates an increase in shell finds and the earliest evidence for coconut fiber. In addition, several punch-marked coins were recovered. This period has been correlated with Deraniyagala's Period V, the lower Early Historic.

Structural Period G and H take the excavation to a date from 200 B.C. and A.D. 130, straddling the period of the rule of Emperor Asoka when his son, Mahinda, is traditionally thought to have converted Sri Lanka to Buddhism. Structurally, the fourth occupational Period H is described as a comparative anomaly. Its main features are shallow linear troughs cut into old land surfaces and filled with wood, which had been burned. The troughs were then refilled. These pits may represent a cremation ground, although no human skeletal remains were recovered from within. Another proffered explanation is that they represent a craft-working locality. A high concentration of finds was recovered from the troughs, including Rouletted Ware, Gray Ware, one sherd of Hellenistic pottery, a clay sealing, and five sherds with Brahmi inscriptions. The inscription on the clay sealing is of particular interest, because it mentions the name and title of a person who also donated a cave to the Buddhist Sangha at a nearby monastic complex. Structural Period G indicates a resumption of occupation at the site with five phases of construction that include the first evidence within the trench of the use of limestone slabs and brick. Notable structures include buildings with clay platforms, pavements of limestone slabs and brick, but an important aspect of Period G construction is evidence concerning the use of pillars (gneiss or granite pillars being a key feature of later Anuradhapura period...
architecture), which, rather than being an imported technology, as generally claimed, may instead have developed out of wood prototypes from the late centuries B.C. and early centuries A.D. This period also provides clear evidence of Indian Ocean trade in the form of sherds of Arikamedu pottery type 10, first identified at Arikamedu and already found at three Sri Lankan sites, as well as in Southeast Asia. Other evidence of trade include a selection of Hellenistic-type pottery, an ivory mirror-stand, sherds of Eastern Mediterranean glass, and western Asian sherds with turquoise glazes that possibly represent Parthian wares.

A pillared hall, one of the most typical forms of the classic Anuradhapura period architecture, represents Structural Period F. The hall consists of gneiss or granite pillars that presumably supported floors, walls, and roofs built of wood, tile, brick, and mud. Artifactual evidence in the form of Lakshmi plaques, punch-marked coins, late Roman brasses, and pottery suggest a date for this period of A.D. 300 to 600, which was corroborated by radiocarbon samples calibrated between A.D. cal 340 and 540.

Because of their disturbed nature, Structural Periods E, D, C, and B were amalgamated into a single macroperiod. Period D and E were represented mainly by a series of intrusive robber pits rather than actual building construction. The principal remnants of Period C are a lime-mortared wall made of an alignment of six ashlar blocks. Period B represents reoccupation of the area as a residential quarter. Artifacts include western Asian and eastern Asian glazed ceramics and a wide range of coins; this period has been dated between the seventh and twelfth centuries A.D. Finally, Period A is represented by the disturbed upper levels of the citadel, with Rouletted Ware occurring in mixed deposits with western Asian and eastern Asian pottery.

In the concluding Chapter 7, Coningham contextualizes the results of the excavation of Trench ASW2 with a discussion of the development of urban formations in Sri Lanka. He considers the existing evidence for hunter-gatherer groups, Iron Age settlement sites, megalithic cemeteries, and literary-documentary traditions, as well as the ongoing debate concerning the extent and influence of external elements on Early Historic Sri Lanka.

Given the severe lack of systematically organized and published excavations in the region, this volume and the forthcoming Volume 2, represent a welcome contribution to the study of Early Historic South Asian archaeology. The clear and careful descriptions—in conjunction with a plethora of detailed maps, diagrams, illustrations, photographs, and tables—make it an invaluable addition to the literature. And, unlike many South Asian site and excavation reports, Coningham is careful to distinguish between his presentation of data and the corresponding evaluation of the evidence, allowing the reader to consider, independently and critically, the proffered evidence. There can be little doubt that the South Asian archaeological community looks forward to the publication of the second volume of this report.


Reviewed by Dilip K. Chakrabarti, Oxford University

The total number of articles in this volume is fifteen, out of which ten are devoted to what is known as protohistory in the Indian context—roughly the period between the
beginning of food production in the subcontinent around 7000 B.C. and the beginning of its historical period in c. 700–600 B.C. In Indian archaeology the term prehistory is used generally for the Paleolithic and the Mesolithic. This working definition has been in use at least since 1962 when H. D. Sankalia published his Prehistory and Protohistory in India and Pakistan (Sankalia 1962). Some authors in this volume even deal with historical material (cf. R. K. Mohanty, K. K. Basa). Under the circumstances, an explanation of why the volume is entitled “South Asian Prehistory” was necessary. A similar explanation was also necessary for the use of the term South Asia. With the exception of a few desultory references to the lithic situation in Pakistan and Nepal, the volume deals only with the modern nation state of India. The editorial introduction to the volume is written by an art historian and textual scholar of ancient Karnataka (S. Settar) and a Stone Age specialist with focus on the same region (R. Korisettar). One may not see eye-to-eye with them over a large number of issues discussed in their introduction. To give only one example, the work at Mehrgarh indicates, according to them, the transition from food-gathering to food-production in the subcontinent, “under the impact of an external stimulus.” To most of us Mehrgarh shows that Baluchistan (and thus, the subcontinent) was within the nuclear area of certainly barley cultivation and possibly wheat cultivation as well.

Korisettar’s opening article on the history of Paleolithic research in India and its current status fails to mention that the basic distribution of Indian Stone Age material was understood by the end of the nineteenth century and the discoveries made in post-independence years were simply a stratigraphic and typological elaboration of what was discovered in the second half of that century. Panchanan Mitra’s book Prehistoric India (Mitra 1922), the first book of its kind, ought to have been cited. Korisettar’s history is basically a checklist of Deccan College dissertations. Even the survey of nineteenth-century research is desultory. For instance, the contribution of Valentine Ball (cf. 1865) to East Indian prehistory and Carleyle’s discovery of a Mesolithic horizon in the Ganga Plain (Carleyle 1885:97–105) are forgotten. Korisettar’s notion of current status is equally Deccan College–centered and in many cases uncritical. Nowhere is it mentioned that the reports of paleoliths in areas such as the Alakananda Valley in Garhwal, Arunachal Pradesh, Meghalaya, and Manipur may be unrealistic claims. The Paisra work by P. C. Pant and Vidula Jayaswal is mentioned but its significance as one of the very few subcontinent sites to have possessed traces of lean-tos and deliberate arrangements of rock pieces is ignored. A monograph on the archaeology of the Chhotanagpur plateau, which discussed the Paleolithic stratigraphy of the entire region (Chakrabarti 1993), and a report on the prehistory of Bangladesh in a monograph on the archaeology of this country (Chakrabarti 1992), are equally ignored. Basudev Narayan’s monographs on prehistoric Bihar (now Jharkhand) (Narayan 1996, 1999) have met with the same fate along with a report on the Stone Age of the Union Territory of Delhi and Haryana (Chakrabarti and Lahiri 1987). It is also not realized that the flake industry from Jammu reported by H. M. Saroj from Jammu, which he cites and was subsequently reported from Kangra, is identical to the stone industry from the Hisar Neolithic context of central Asia (Ranov 1982). It is not Lower Paleolithic at all.

On a more serious level, this article does not highlight the emergent issue of early Pleistocene antiquity of stone tools in the subcontinent or assess the possible role of India in human evolution in that context. Although all the right notions have been expressed—environment, adaptive strategies, radiometric datings, new perspectives, and so on—it is not mentioned that Paleolithic research in India is still mostly limited to the establishment of stratigraphy and typology, because Paleolithic archaeologists of the country, by virtue of their educational background in history and training only in field techniques, can safely deal only with these aspects. The only area
where innovativeness has been shown is in the settlement-subsistence approach (for detailed comments, see Chakrabarti 2003). The work led by D. P. Agrawal on the environmental history of Kashmir from c. 4 mya onwards (for a summary, see Agrawal 1992) was not even mentioned in passing, although this remains the most important piece of environmental research in post-1947 India.

J. N. Pal’s summary of Middle Paleolithic contexts in the subcontinent refers to parts of Madhya Pradesh and Uttar Pradesh, the areas he knows thoroughly. The radiocarbon dates for the Sanghao Cave of Pakistan ought to have been cited (cf. Chakrabarti 1999:74). The Upper Paleolithic data, as reviewed by D. R. Raju and P. C. Venkatasubbaiah, are biased in favor of Andhra, the area they know best, but they fail to mention that the Upper Paleolithic assemblages in India are not always straight-jacketed affairs of blades and burins; the earlier tool types also occur along with blades and burins in various areas. The dated Upper Paleolithic industry of Kashmir has been ignored. V. N. Misra’s treatment of the Mesolithic ignores the problem of the late Pleistocene occurrence of microliths in the context of the South Indian teri industry and the probability of sites like Bagor in the Aravallis being food-producing. The occurrence of copper objects in Bagor II need not necessarily imply that its Mesolithic inhabitants got them as the result of contacts; they may also reflect a situation in which the microlith-using, food-producing communities of the Aravallis began to use the plentiful copper sources of the region. The most important evidence in this regard comes from Ganeswar in northeast Aravallis: phase 1 is exclusively microlithic, but finished copper tools appear in a limited quantity in phase 2 and increase rapidly in number throughout the successive phases, indicating a local or regional development of metallurgy. One may strongly suspect that phase 1 is food-producing. Further, the fact that the first period at Balathal, also in the Aravallis, dates from the late fourth millennium B.C. and implies, among other things, that Aravallis was a center of both early agriculture and metallurgy (for detailed discussion, see Chakrabarti 1999:219–220).

The most significant omission in P. Singh’s analysis of the Neolithic cultures of northern and eastern India is the result of excavations at Golbai Sasan in the Puri District of Orissa (Sinha 2000), substantively carrying forward the result of a small excavation trench at Kuchai in the same region. The next article, “Brahmagiri and beyond: The archaeology of the southern Neolithic” by Ravi Korisetty, P. C. Venkatasubbaiah, and D. Fuller is a detailed summary of Fuller’s Ph.D. dissertation from Cambridge. The basic importance of this paper lies in the fact that it envisages the early South Indian Neolithic situation as an amalgam of both indigenously domesticated and externally introduced crop items. Perhaps the most crucial horizon regarding our understanding of the emergence of the South Indian Neolithic lies in the flake industry immediately underlying the Neolithic level at a number of sites.

The most important aid to our understanding of the post-urban Harappan, or plainly speaking, the Late Harappan situation in Panjab, Haryana, and Uttar Pradesh, is the set of distribution maps published by Joshi, Bala, and Ram (1984), but discussion along that line or even a reference to this publication is missing from Sonawane and Majumdar’s article. Dhavalikar’s understanding of the central Indian Chalcolithic culture remains unchanged from what he wrote on the topic in 1979 (Dhavalikar 1979). The later excavated site of Dangwada, on which a report is available (Chakravarty et al. 1989), is neglected by him. Sheena Panja offers a critical review of research on the Deccan Chalcolithic. The most important corpus of Indian copper hoard finds was published by Paul Yule (1985), and in the context of subcontinental metallurgy as a whole, copper hoards were analyzed by Chakrabarti and Lahiri (1996). V. D. Misra does not refer to these publications in his analysis of the Gangetic Valley copper hoards. The copper hoards of Jharkhand, Orissa, and Bengal
are not at all protohistoric and cannot be lumped together, as he does with the upper Ganga Valley specimens, which are associated with Ochre Coloured Pottery and related to an extensive copper-rich region of Rajasthan and the Narnaul section of Haryana. Further, the hoards that we find outside this region as far west as Mehsana in Gujarat and as far south as Kerala and the southern tip of Tamil Nadu were traded items, falling neatly along some well-known arterial routes of Indian history.

Much of Vibha Tripathi’s reappraisal of early Indian iron has been overtaken by a spate of recent discoveries, the last of which takes the beginnings of full-fledged iron use at Dadupur near Lucknow in central Ganga Valley to c. 1700 B.C. All these discoveries make sense in light of an earlier indisputable find of iron implements in the Black-and-Red Ware context at Jakhera (Aligarh District, upper Ganga–Yamuna Plain), a site published by M.D.N. Sahi (1994) but ignored by Tripati. The data on the iron-bearing megaliths have been provided by R. K. Mohanty and V. Selvakumar, although the possibility of a pre-iron stratum of Indian megaliths cannot be denied. A clear historiographical look at rock art studies has been taken by R. G. Bednarik, fully taking into consideration the contribution made by V. S. Wakankar to this field. K. S. Krishnan provides an overview of what has been achieved in the field of ceramic thin-section studies. Kishore Basa discusses the importance of beads as an artifactual category, with primary emphasis on the analysis of glass beads, in which he has played a major role.

Finally, the volume has a few appendices: late Pleistocene fauna from caves in Kurnool District, Andhra; a statewide list of Upper Paleolithic sites in India; a gazetteer of southern Neolithic sites and list of excavated megalithic sites. In the list of Upper Paleolithic sites, the sense of geography is very confusing because many sites in Bihar, now in Jharkhand, have been treated as falling in West Bengal. A problem with government-financed publications of this kind in India (the Indian Council of Historical Research is a wing of the Government of India) is that the authors have already published their material and opinions elsewhere. Old foot soldiers of the subject usually do not find anything new, refreshing, or exciting in such volumes. Regrettably, the present volume is not an exception.

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Reviewed by William R. Belcher, U.S. Army Central Identification Laboratory, Hawai‘i

This volume of the series presents a timely synthesis of current topics and research strategies related to the Harappan or Indus Valley civilization. Indian and Western scholars present a variety of topics related to the development, rise, and senescence of this civilization. During the last thirty years, “Harappan” research has moved away from speculation to well-formulated research strategies. Some of the most important contributions have been the influence of geoarchaeological/landscape, human biological, and faunal/paleoethnobotanical studies. Of course, the basis of any research is solid archaeological fieldwork and a reanalysis of past data and paradigms. Although the title of the book refers to Indian Archaeology in Retrospect, readers must understand that the Harappan civilization overlaps the borders between Pakistan and India. More than half of the contributions deal specifically with research or sites in Pakistan; however, these papers are presented by German, American, and British researchers. It is unfortunate, for whatever reason, that any contributions by Pakistani scholars could not be included.

Possehl sets the stage with an overview of “Harappan archaeology” since Indian independence with a chronology of work done by Indian as well as foreign scholars (also see Possehl’s appendix). He includes a brief examination of the changing paradigms of research, which allows the reader to put the subsequent chapters in a theoretical and historical context. Two papers (Schuldenrein, Jansen) discuss “landscape archaeology” in a geological/paleoclimatological sense as well as in terms of settlement systems. Schuldenrein’s research is ground-breaking and represents one of the first detailed regional, geoarchaeological studies intimately tied to an ongoing archaeological project. By using a variety of landscape records, Schuldenrein ties the paleoclimatic and geomorphological settings of the “Indus Heartland” together and examines the morphology and site formation processes of site occupation. Jansen examines settlement networks of the Indus...
civilization. Considering that the Indus civilization occupies over 1 million sq km, one of the key questions is how the settlements were distributed and interconnected over the landscape. This article focuses on Mohenjo-daro, but examines the importance of the city’s placement in order to utilize water transport. From this specific model, Jansen expands to a discussion of transportation and trade corridors that developed between Indus and non-Indus civilizations and examines core and periphery relationships between urban and rural areas.

One of the most enigmatic aspects of Harappan studies is the origin and decipherment of the Indus script. It seems that more ink, paper, and frustration has been produced dealing with this particular topic than any other in reference to this civilization. Coningham’s cogent article presents a useful overview on this difficult and volatile topic. His call to use multiple approaches and place writing and inscriptions in an archaeological and cultural context is necessary to begin to understand the role of writing in the Harappan civilization.

Harappan social organization and religion are examined by Dhavalikar and Atre, respectively. These aspects of society are often inextricably combined, particularly in urban settings. In examining Harappan social organization, Dhavalikar tackles an exceptionally difficult topic and offers a unique overview that provides insights into modern as well as ancient social and political systems. By using a more anthropological approach and reviewing previous research and ideas, Dhavalikar has provided a very thorough review of this subject. Likewise, Atre reviews the extremely controversial topic of Harappan religion. Through the examination of the dichotomies that have been presented in terms of Vedic/non-Vedic, Aryan/Dravidian, etc., Atre moves beyond these and presents Harappan religion as a more organic entity. Atre offers a model that is tied into artifact and spatial analyses, architectural studies, and ethnoarchaeological comparison. As with Dhavalikar’s contribution, Atre’s discussion of religion suggests that religion, social and political organization, as well as architecture, are interconnected and cannot be readily disarticulated.

Three papers (Ajithprasad, Sonawane, and Choksi) present an excellent overview and current state of affairs for the pre- and post-Harappan archaeology of the Gujarat region. This region has been the central focus for Harappan research in India. Ajithprasad examines the pre-Harappan cultures of Gujarat and places them in an archaeological context similar to other regions in South Asia. The article is detailed and deserves more than a cursory read by the reader. The examination of the antecedent cultures enables one to understand the role of these early societies in the emergence and development of the urban economy of the Harappan civilization in Gujarat. One of the important threads in Harappan studies has been the examination and persistence of earlier cultures as they were incorporated into the “Harappan sphere of influence” and urban expansion. Sonawane discusses the post-urban cultures that developed in the wake of the Harappan civilization; however, emphasis is placed on the fact that this end of the civilization is a process of localization and does not mark the end of a cultural tradition. Although the focus is on post-Harappan cultures, a review of the Gujarati expression of the Harappan civilization is included, which makes this paper, along with Ajithprasad’s, an excellent overview of Harappan civilization in the Gujarat region.

Underlying any archaeological study of the Harappan civilization is an understanding of the chronology and various cultural relationships. This is particularly important in ceramic analysis, which provides a temporal and cultural link between sites in an analytical sense. As Choksi states, “An understanding of the relationship between material culture and society provides a framework through which the ancient record can be interpreted” (p. 273). Through the study of Gujarati ceramics, Choksi attempts to move beyond chronologies and intersite relationships and examine the social significance of ceramics. Essential in this framework is the use of ethnoarchaeology as an analytical tool.
Craft technologies and specialization (Ardeleanu-Jansen and Bhan et al.) are two of the defining characteristics of complex societies. Jansen presents an overview of archaeological research, while Bhan et al. examined the studies of Harappan technologies through detailed ethnoarchaeological studies, an important strategy for understanding traditional technologies and applying models to past behavior. Bhan et al. present an extensive overview of craft production and its relationship to past political-social systems in the Indus Valley civilization. This paper should be read by any scholar interested in the social and religious aspects of this ancient culture. Ardeleanu-Jansen examines a common, yet enigmatic, artifact form found in many Harappan sites: the terracotta figurine. Although Ardeleanu-Jansen focuses on those from Mohenjo-daro, she provides an overview of these materials that place them in a temporal and spatial context. However, little understanding of the figurine’s meanings are offered, perhaps as “…we still have to penetrate deeper into their iconographical and distributional patterns…” (p. 218).

Examining humans and their use of the landscape encompasses almost a third of this volume, which speaks to the importance of bioanthropology (Kennedy), paleoethnobotany (Fuller and Madella), faunal studies (Meadow and Patel, Thomas), and landscape archaeology (Schuldenrein, Jansen; discussed above). Kennedy’s paper provides a history and overview of univariate, bivariate, and multivariate analyses of prehistoric human skeletal materials in South Asia, focusing on those recovered from the mid- to late-1980s excavations at Cemetery R-37 at Harappa. Interestingly, multivariate analyses suggest that heterogeneity characterizes the Harappan populations, suggesting a great variety of ethnic groups. This situation is similar to what we would expect from the archaeological record of diverse burial customs and unique features of widely scattered urban centers.

Fuller and Madella’s review of Harappan archeobotany is extensive and touches on a variety of issues. The detail includes presentation and summary of data from various sources. This allows the reader to evaluate the claims and conclusions of the authors as well as those of earlier scholars. The authors have conducted a huge service to the archaeological community by placing archeobotany into a larger sociocultural realm that addresses such issues as seasonality, cropping, irrigation, the use of non-food plants, and the effect of a changing environment on the society. This article will serve as an important resource and summary for years to come.

Meadow and Patel have discussed pastoralism in several other venues (see bibliography in volume), but this article provides a useful overview within a South Asian context. The focus of this paper is on the zooarchaeological and iconographic evidence for pastoralism in northwestern South Asia. Additionally, an historical overview of zooarchaeology in South Asia is offered. Pastoralism is a difficult strategy to document, except when regional evidence is available. Through the use of new research as well as published reports, Meadow and Patel examine this difficult subject, which they readily admit is only just beginning.

Thomas presents an overview of faunal remains from Harappan sites in western India and touches upon nonfood uses of animals, such as pets. Additionally, his overview discusses the use of wild animal resources, including non-mammalian species, in the Harappan economy. Unlike some of the other papers, the data is only presented as presence/absence of particular species (although percentages are mentioned within the text).

Both Thomas and Meadow and Patel discuss the controversial issue of domesticated horses and camels in a Harappan context. Meadow and Patel have stated categorically that these animals are not present in the faunal collections prior to the middle of the second millennium. Confusion has arisen primarily due to “…the absence of proper osteological, contextual, and temporal documentation” (p. 401).
In most cases the presentation of the material is impeccable; nevertheless, the quality of some photographs, including two maps (Figs. 12 and 13), are dark and cloudy, making them difficult to read. However, this is inconsequential when compared to the importance and usefulness of these syntheses. The standards of research, new approaches and models presented should be of interest to those scholars interested in South Asian and Southeast Asian archaeology as well as those interested in the rise of complex societies on a global scale. One artifact of research history that should not cloud the reader’s understanding in this volume is the plethora of terms that describe this early civilization. Harappan civilization, Harappan culture, Indus civilization, Indus culture, and Indus Valley civilization (and others) are used throughout the text and refer to the same urban phenomenon that appeared in northwestern South Asia between approximately 2500 and 1800 B.C. Although the situation will continue to improve, the Harappan or Indus Valley civilization still ranks as one of the least known civilizations in archaeological circles today. This volume will lead to a greater understanding of this civilization on a global scale and will serve well a dedicated scholar as well as a beginning student. The bibliographies will serve any scholar who wishes to examine these topics in more detail.


Reviewed by Seetha N. Reddy, ASM Affiliates, Inc., Encinitas, California

*Indian Archaeology in Retrospect* is a four-volume publication of 60 papers authored by 76 scholars. The primary objective of this impressive undertaking was to review the progress made in South Asian archaeology during the later half of the twentieth century, and to summarize and evaluate changes in research trends. This book review is focused on the third volume: *Archaeology and Interactive Disciplines. Volume 1 (Prehistory: Archaeology of South Asia)* is a compilation of 15 articles, four appendixes (lists of sites from various cultural periods) and an index. *Volume 2 (Protohistory: Archaeology of the Harappan Civilization)* also has 15 chapters, one appendix (annotated list of excavations and survey), and an index. *Volume 4 (Archaeology and Historiography: History, Theory and Method)* has 15 chapters, one appendix (a survey of archaeological investigations by the Archaeological Survey of India), and an index.

*Volume 3* is comprised of 15 chapters authored by 18 scholars including 15 Indian and 3 Western archaeologists. The volume has a helpful introduction, which presents a short synopsis of each chapter. The 505-page volume is arranged topically, covering such subjects as soils (Chapter 1), climate and paleoenvironment (Chapters 2 and 3), bioanthropology (Chapters 4, 5, and 6), ethnography (Chapters 7 and 8), ethnoarchaeology (Chapter 9), paleontology (Chapter 10), subsistence studies (Chapters 11 and 12), and technical studies (Chapters 13, 14, and 15).

The first three chapters, on soils, climate, and paleoenvironment set the stage for the volume by presenting the ecological background critical for reconstructing prehistoric natural and cultural landscapes. Chapter 1 by G. S. Dasog, is a concise review of the very unique “black” soils in central and western India, and their importance to prehistoric agriculture. Information on their morphology, physical and chemical
properties, and formation is presented with reference to archaeological implications. Chapter 2 by R. Korisettar and R. Ramesh is a synthetic review of paleoclimatic studies on monsoonal rain patterns during the last 2.5 million years. Although their discussion has strong environmentally deterministic underpinnings (for example, equating development of intensive subsistence economies to monsoonal patterns, pp. 48–49), this chapter offers informative details on long-term climatic fluctuations and the resulting ecocline segmentation. Chapter 3 is focused on the contribution of Quaternary paleoclimatic (bioclimate and palynology) studies to archaeological research. Succinct discussions are presented on bioclimatic zones across India, and the Quaternary history of flora in salient regions within India. In this synthesis of Indian paleoclimatic research, Meher-Homji provides examples of how the natural environment has been altered both by natural and cultural changes throughout the Quaternary.

Chapters 4, 5, and 6 examine the status of bioanthropological research in India. Chapter 4 by K.A.R. Kennedy provides insight into the emerging evidence for Pleistocene human occupation in Sri Lanka, and in doing so addresses the recent debate on the identification of fossil cranium in the Narmada Valley, central India, discovered in 1982. The affiliation of 'Narmada Man' has been highly controversial; scholars are divided on whether it should be classified as Homo erectus or archaic H. sapiens. Kennedy concentrates discussion on Pleistocene Sri Lankan fossil hominids and their muscular-skeletal robusticity and reduced tooth size. In Chapter 5, J. Lukas presents the theoretical and methodological frameworks of bioarchaeological research in India. He discusses the delineation of economic systems, diet, sexual dimorphism, and climate using biological and cultural data from the prehistoric urban center of Harappa in Pakistan, and the Chalcolithic early farming village of Inamgaon in India. Bioanthropology of living populations in India is the topic of Chapter 6 by R. Singh. The discussion provides an important synthesis on the history of the field in India since independence, with particular emphasis on anthropometric studies, growth studies, dental anthropology, and human biology (genetics). Although the author stresses the lack of genetic morphology studies in India, he has not referred to the extensive work done by Pingle (1983) and Pingle and Haimendorf (1987, 1998) on this topic.

The status of ethnographic research on the rapidly disappearing hunter-gatherer populations of India is evaluated in Chapter 7 by A. Tavares. The author makes a very valid observation that ethnographic studies on hunter-gatherers during the last 50 years in India have not adequately defined the adaptive strategies, instead, there is a "tribal-caste continuum" (p. 143). The author calls for a reassessment of ethnographic methods, classifications, and approaches. In particular, reclassification of these groups based on their current economic strategies is recommended. Although the author is very careful to emphasize the importance of all hunter-gatherer ethnographic studies done to date in India, he does demonstrate their lack of relevance to broader questions concerning hunter-gatherer theory, given the high degree of culture change. The chapter on agropastoralism studies by D. K. Bhattacharya and D. Bhattacharya is a synthesis of modern pastoral adaptations in marginal environments in India, and subsequent interpretation of Mesolithic through Chalcolithic adaptations based on ethnographic expectations, and relies heavily on direct analogy.

Chapter 9 is a synthetic review of ethnoarchaeological research in India during the last 50 years. This review is focused heavily on work done by particular individuals associated with select universities in India. Nonetheless, it provides an impressive account of this rapidly growing approach to Indian archaeology. The discussion follows both temporal and topical frameworks, and certain ethnoarchaeological research topics are discussed in more detail, including ceramics, bead studies, metal crafts, shell studies, and maritime adaptations. No doubt the discussion
would have been more comprehensive if some of the work done and being done on fishing industries by William Belcher, hearths by Jonathan Meyer, crop production by Seetha Reddy, and brass casters by Lee Horne would have been included.

Chapter 10 by G. L. Badam is a synthesis of Quaternary vertebrate paleontological research. In addition to reviewing research trends in the field, the author makes note of the importance of vertebrate paleontology to Paleolithic archaeology, and bridges the gap between geological and archaeological time sequences.

Recent research issues and studies in archeobotany and archeozoology related to subsistence studies are presented in Chapters 11 and 12. D. Fuller should be commended for providing a detailed synthesis of archeobotanical research in India in Chapter 11. Her synthetic review is by far the most comprehensive and detailed in the volume. The chapter has a background to terms and the history of the discipline in India (divided into pre-flotation, flotation, and a subsequent self-critical phase). The latter section is on important but rarely addressed (and only recently acknowledged) issues, particularly with respect to the variation in recovery methods and theoretical frameworks in Indian archeobotanical studies. One issue that the author tackles is that of consistency in identification (particularly of pulses, castor, wheats, and millets such as *Eleusine, Setaria, Sorghum*), which is slowly, but steadily, becoming an issue of considerable concern among paleoethnobotanists throughout the world. Plant domestication and crop diffusion is examined by region of origin including Southwest Asia, Africa, South Asia, and China. The lengthy but well-written chapter also has sections on the potential of phytoliths, pollen, and future directions for research in the discipline.

Archeozoological research issues, trends, and the status of the field is presented by U. C. Chattopadhyaya in Chapter 12. Sections of the chapter include the history of discipline in the Indian subcontinent, and Holocene fauna with specific focus on the Mesolithic, Neolithic, the Harappan tradition, and the Chalcolithic. Several theoretical issues are discussed including cattle domestication, Mesolithic origins of animal husbandry, social dimension of animal husbandry, and the continuity of faunal exploitation traditions in the Indian subcontinent.

The last three chapters of the volume (Chapters 13, 14, and 15) are technical studies of metallurgy, chemistry, and dating methods. Chapter 13, a review of archeometallurgical studies, is authored by D. P. Agarwal, one of the leading Indian experts in this field. In addition to a comprehensive review, the article illustrates the research potential of approaches that explore technological aspects of craft specialization that are not easily decipherable through traditional methods. Chapter 14, by A. Kshirsagar and B. C. Deotare on archeological chemistry, is primarily focused on conservation of archaeological objects of varying materials, sediment, and organic materials. Use of soil chemistry to decipher habitation residue, and bone chemistry for dietary reconstruction are also briefly discussed. The last chapter in the volume, Chapter 15 by D. P. Agarwal, is a review of the dating methods used for Quaternary deposits and Palaeolithic sites.

An important theme emphasized by the editors in the Introduction was the need for holistic and interdisciplinary approaches to Indian archaeology. All of the chapters in this volume are essentially in-depth reviews of particular specialties, and none are truly interdisciplinary. However, this volume does lay the foundation for new interdisciplinary research in the future. It should be noted that, although reference is made throughout the volume to “South Asia,” the data and research being discussed is from India only, with the exception of Chapters 4, 5, and 11. In hindsight, since the second volume of the set was focused on Harappan research (most of which falls in Pakistan), this volume might have been more explicitly stated as focused on research in India. At the same time, all the articles would have been much stronger and comprehensive (much like Chapters 4, 5, and 11) if the studies discussed were not
geopolitically limited. Such regional segmenting of archaeological research along national borders, although to be expected and a widespread phenomenon in modern archaeology globally, does not benefit the discipline. Instead, it often creates an artificial boundary within the scholarly community that over time has the potential of becoming impermeable. It would also have been useful to provide a short summary of the contents of the other three volumes in the series. Finally, one visual distraction of the volume is the numerous typographical and spelling errors, which could have very easily been eliminated through careful copyediting.

Overall, *Archaeology in Retrospect*, volume 3, *Archaeology and Interactive Disciplines*, is a fine collection of articles that will prove highly valuable to scholars of Indian and South Asian archaeology, and also to a wider audience interested in issues related to ethnography, paleoenvironmental reconstruction, archeobotany, archeozoology, conservation, and dating. Furthermore, the volume would be ideal for classroom seminars, and in general is a worthy addition to the growing body of literature on archaeology of the subcontinent. The editors should be applauded for all their hard work in compiling these volumes.

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**PINGLE, U.**


**PINGLE, U., AND C. VON FURER-HAIMENDORF**


Reviewed by Jonathan Mark Kenoyer, Department of Anthropology, University of Wisconsin, Madison

This edited volume is undoubtedly the most important of four volumes compiled by Settar and Korisettar, as it addresses critical methodological and theoretical issues that form the heart of archaeology, not only in India, but also in the whole world. There are fifteen substantive articles that provide critical summaries of the state of different research methods and the quality of theoretical frameworks used by scholars working in South Asia. An appendix provides a useful list of sites reported by the Archaeological Survey of India (ASI) in its annual reports between 1953 and 1993. Overall, I feel that this is one of the most important new edited volumes to come out of India in recent years and recommend it as essential reading for anyone interested in current and future developments in archaeological method and theory.

The first article by R. S. Pappu is an excellent summary of the recent projects in India that have been investigating the Plio-Pleistocene to early Holocene record of climate fluctuations, geological events, and evidence for early human presence in this changing landscape. His main conclusion is that we have a fairly comprehensive understanding of secondary sites that demonstrate the presence of human populations in the subcontinent, beginning as early as 2 million years ago, but that future investigations...
need to focus on the discovery and excavation of primary occupation and activity sites. The article by M. D. Petraglia, appearing later in the volume, directly complements Pappu’s article, since it focuses on specific methods of analysis and the various theoretical frameworks used in Paleolithic studies. While both articles are excellent summaries, they do not emphasize the major contributions to the field that have resulted from work in India and South Asia in general. Perhaps this is out of a sense of modesty by the two authors, but I can say without hesitation that the Paleolithic settlement analysis done by Petraglia with K. K. Paddayya in Karnataka is one of the most thorough and well documented for any region of the world, even though they did not find evidence for any primary undisturbed sites. Furthermore, the comprehensive geoarchaeological reconstructions and site catchment analysis done by Pappu and his colleagues is also an excellent example of well-organized multidisciplinary research. Although they do mention it in passing, I feel that they should have given more time to a discussion of the extremely significant work done by Pakistani geologists and the British Archaeological Mission in the Potwar region of Pakistan (though this work is discussed in other articles). The modern political borders and current political tensions between India and Pakistan should not compromise the credit due to outstanding scholarship.

In the article by Lahiri et al., we are provided with a scathing critique of the Archaeological Survey of India. In their analysis of the annual reports of the ASI, they find serious gaps in terms of survey coverage by the ASI and argue that an overall map of archaeological settlements in India is needed to understand changing settlement patterns. The main thrust of the article is that the ASI does not employ people who have a strong theoretical or methodological foundation in modern archaeological approaches, that there is a lack of planning and carrying out of high-quality scientific research, and that it has not fulfilled its responsibility to publish excavation reports.

A series of three articles are devoted to the discussion of the history of theoretical developments in “Indian” archaeology and South Asian archaeology in general. K. K. Paddayya’s review of theoretical perspectives is an expanded version of an earlier work and begins with a discussion of “indigenous epistemological traditions” and concludes that there is no evidence for the existence of an Indian tradition of archaeological research. He seems to be unaware of the fact that pre-colonial Europe also had no archaeological tradition and that even during the early colonial period “archaeology” was merely an elite pastime or a form of treasure hunting. Both approaches have been going on in South Asia since the abandonment of the Indus cities left large mounds that could be looted of bricks or scoured for eroding beads and gold. I would argue that the emergence of archaeology was not the result of an enlightenment among European scholars, but that it was a result of a colonial period, global reorientation of human perceptions of the past. South Asia and for that matter all regions of the world contributed to the development of archaeological theory in ways that none of the articles in this volume acknowledge.

Historical geography would not have developed as a formal field of study without the work of Brahmin and Jain, pundits who taught European scholars how to read and write their languages and who them-
selves set the stage for indigenous interpretations of the past through the establishment of the Brahmó Saḿaj and Arya Saḿaj. Local villagers had long been aware of ruined mounds and it was their local oral traditions that had passed down the names of important places such as Ayodhya, Kaúsambi, and Takshasila. Bráhmi would not have been deciphered and the development of comparative linguistics would not have been possible without the considerable input from native Indian and British-Indian linguists and grammarians. To suggest that archaeologists working in India were taking handouts of theory and methodology from Western scholars is to discount generations of archaeologists who used the archaeological record of the subcontinent as a testing ground for survey techniques, stratigraphic excavation methods, chronological studies, and for contesting diffusion models for the origins of everything from domestic plants and animals to civilization itself. Although I agree with Paddayya that “Indian Archaeology” did contribute to global archaeological method and theory through Wheeler’s emphasis on strategic planning, stratigraphic excavation, and detailed recording, but it is important to emphasize that Wheeler never taught his students how to think critically, to question his interpretations or propose new theoretical models to address complex issues arising from their research. There never was and never will be a monolithic entity called “Indian Archaeology” that can, in and of itself, produce or maintain theoretical contributions. Innovations in method and theory are the result of individuals who are willing to tackle the enigmatic archaeological record and tease out new ways to study and interpret the past.

The two articles by Fuller and Bovin, and Bovin and Fuller provide ample evidence for the considerable contributions in both method and theory by scholars working in South Asia. In their comprehensive survey of how archaeology has been practiced in the subcontinent, they include both indigenous Indian and some Pakistani scholars as well as foreign scholars working in South Asia. This approach is commendable since it is not just national origin that defines one’s archaeology, but rather the academic training one has received and the academic environment in which one works. Archaeologists who have been exposed to critical thinking and allowed to develop their research along these lines have emerged from many different institutions in India, Pakistan, Europe, and America. However, the authors do fall into the trap of assuming that there is a distinctive “Indian” as opposed to “Western” archaeology. Many of the critical statements about the way archaeology is done in South Asia can just as easily be leveled at some European and American archaeologists who even today do not excavate stratigraphically, do not have a research strategy, perpetuate an uncritical use of the “cultural-historical” approach and who continue to uncritically use diffusion models to explain culture change.

Most of the remaining articles in the volume are summaries of the current state of research in their various fields of study with a heavy emphasis on South India. Korisettar and Rajaguru tackle the overarching issue of “man-land relationships” in the Deccan using what they term the “ecosystem concept.” The major emphasis is on the geographic setting and the total ecological system in which human communities have developed their adaptive strategies. The authors do an excellent job of summarizing the current state of research on human cultural adaptations in Karnataka from the Paleolithic through the Early Historical period. The detailed study of geology, fauna, flora, and settlement systems as well as technological advances is quite impressive. In their section on ethnography and in their conclusion they begin to address the complex issue of different adaptive strategies that coexisted side by side. However, they have not taken into account one of the main shortcomings of the ecosystem approach, which is the human ingredient itself. Hopefully, future studies will begin to sort out the impact of different communities on each other during the long history of Karnataka.

Murty’s article takes a very interesting
approach to the study of the origins of an exclusive sheep/goat pastoralism in the southern Deccan. Since there is little concrete evidence for sheep/goat pastoralism as distinct from the emergence of Neolithic-Chalcolithic village culture, he feels that it is possible to trace the origins of this adaptive strategy through the epistemological analysis of the oral traditions of modern pastoralists. His analysis concludes that sheep/goat pastoralism emerges from ancestral cattle pastoral-cum-agricultural traditions with periodic conflict relating to social domination. Unfortunately, he does not provide any suggestions on how this narrative model could be tested archaeologically.

Numismatic studies in India have long held a special place in the research on the past, and the article by Mangalam of research since Indian independence reveals that important advances have been made in the field. Although there continues to be a larger proportion of “coin-collector” types, some scholars are using modern scientific methods to go beyond the basic identification of the coin in its historical context, to address more diverse issues relating to sociocultural, religious, economic, and technological aspects of history.

The article by Gurukkal on socio-economic research in South India provides a historiographic perspective of empirical studies of state formation and caste structure. Although somewhat narrow in its focus, the overall conclusions on the need to develop more refined theoretical models are applicable to other regions of the sub-continent.

Ray presents a brief summary of recent excavations and issues in the archaeology of Early Historic maritime traditions in India and concludes that there has been an overemphasis on the importance of Mediterranean trade and connection between India and the Roman world. She also feels that there is an overemphasis on the role of North India and that cultural developments in the south are more than just extensions of north Indian processes. I feel that her critique is well founded, but would warn that it is not possible to disconnect the south from both linkages since they were definitely part of the overall cultural process.

Tripati et al. provide a discussion of the history of marine archaeology in India that is quite comprehensive. However, they neglect to credit the considerable input of Italian and other foreign scholars who helped with the initial training of the Indian underwater archaeologists. S. R. Rao is without doubt the individual who provided the legitimation of this field of research, but he is by no means a pioneer of underwater archaeology and based on the poor quality of the current array of excavation reports, there is considerable scope for methodological and theoretical improvement in the field.

Marathe’s discussion of low-altitude aerial reconnaissance methods is a welcome addition for site documentation in the archaeology of South Asia and his many positive results will certainly aid in better maps and surveys in the future. While the author may have been the moving force behind the implementation of this technique in India, it is odd that he does not mention the widespread use of this technique in the U.S. and Europe and he does not reference the published manuals that provide the same basic information that he has presented.

The article by Joglekar, on quantification in South Asian prehistoric studies, provides an analysis of the degree to which scholars have used quantification and sampling in their research and analysis. While the bibliography does have some lacunae, the author has made a relatively thorough survey of the published material and concludes that there appears to be very little evidence for the use of sampling strategies and quantitative research in South Asian archaeology. On a cautionary note however, it would be useful to compare these results with a similar survey of the same range of published materials from other regions.

Overall, I have found the publication to be extremely thought provoking and recommend it highly. I also want to thank the editors for their efforts to bring together such a comprehensive set of articles.
In South Asian archaeology, as elsewhere, the objective of surface survey and collection programs has moved beyond just discovering sites to addressing questions of wider social and cultural significance. Starting in the 1980s the number of publications that adopt this methodology has grown steadily, and Monica Smith’s monograph is a welcome addition to this list.

The principal focus of her survey project over two field seasons in 1994–1995 was the site of Kaundinyapura located on the banks of the river Wardha in the Vidarbha region of central India and a smaller contemporary settlement at Dhamantari. During the course of two seasons’ work she collected more than 35,000 ceramic sherds as well as objects of stone, metal, and shell. It is the results of this survey work that are discussed in Chapters 5, 6, and 7 and form the core of the study, while the five other chapters attempt to place this material within the wider perspective of trading activities and social organization.

According to the excavator of the site in the 1960s, M. G. Dikshit, settlement began at Kaundinyapura in the Iron Age Megalithic phase and continued until A.D. 250, after which the site was reoccupied between A.D. 1300 and 1600. Within this long time span of the site’s history, Smith focuses on the Early Historic period defined as extending from third century B.C. to the fourth century A.D. A caveat is necessary at this stage; because ceramic typologies for the later periods are not rigorously established, it may often be difficult to separate Early Historic pottery from that of the later period.

Site surface surveys are good for providing details of site function, habitation size, the location of elite and non-elite areas, and special purpose areas of site use. Based on an analysis of artifacts from her survey, Smith identifies types of goods that came into the area and lists them as iron, salt, sandstone, mica, rice, and sugarcane, while goods that moved out were cotton, wheat and other grains, beads, lac, dyes, and forest derivatives. At the same time, the study of ceramics shows a wider shared material culture in the greater Vidarbha region. Of the 1531 identifiable rims from Kaundinyapura, 71 percent of the collections matched Early Historic rim forms from other sites in the Vidarbha region. An analysis of archival data relating to the resources of the region led the author to suggest a household-level production of durable goods made from locally available materials, such as chert, coinciding with surplus production of agricultural and forest products.

Another issue on which the site surface survey provides interesting data is the intrasite distribution of artifacts. The high density of building material, such as bricks and tiles on the northernmost and southernmost mounds at Kaundinyapur, has been taken to indicate residential areas, whereas a high concentration of irregular basalt blocks at the very far south suggests a lookout post. The southern mound contained a higher density of tiles and was associated with elite residence as compared to the northern mound, a suggestion further supported by the presence of the lookout post. In contrast, building materials are scarce in the middle area of the site suggesting a nonresidential use of the site.

Based on the distribution of ceramics, several activity zones were demarcated at the site. Thus, the northern and southern residential mounds were associated with

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storage functions, while the density of fine ceramics from the central area was linked to marketing functions, which did not require a high level of architectural investment. Tables, illustrations, and maps further supplement the discussion and analysis of the site surface survey results and indicate a valid research design.

In contrast, Chapters 2, 3, and 4 strike a discordant note on several counts and clearly there is a mismatch between practice and theory. Chapter 2 presents an overview of available anthropological literature on “Material Culture and Social Organization,” but this survey of literature either contradicts or is at variance with the chapters that follow. Smith accepts that, “trade is not primarily political in origin; that is, political circumstances can affect, thwart or facilitate trade, but it is not the direct motivation for that trade.” Yet a major part of Chapter 3 is devoted to a discussion of the polities of the Early Historic period, without an explanation as to why this should then be necessary. While the author bemoans the fact that there are no texts that provide information about the bureaucracy, she does not attempt an archaeological analysis of the large number of inscriptions or land-grants dated to the Early Historic period.

Similarly, though the author accepts that, “objects are invested with symbolic value and are utilized to visually reinforce social categories and relationships,” this aspect of trade is not elaborated on. There is brief mention of the use of shell as a symbol, which grew after the Early Historic period (p. 28) and somewhat cursory references to beads and clay bullae made in imitation of Roman coins. The pioneering work of Peter Francis on beads finds no space in her discussion, which is instead reduced to a statement of origins of the stone used in beadmaking (p. 25). Sandstone and mica are referred to as social markers and though she mentions rice as an import into the region, makes no allusion of the complex archaeology of rice that no doubt influenced the use of rice in ritual and social interaction (compare for example, Kumar 1988).

In the section titled “Social Cohesion and Early Historic period,” Smith refers to religion (Buddhism and Jainism) and language (Sanskrit and Prakrit) as fostering shared identities and maintaining strong social ties. However, she does not explain why Hinduism as religion and Tamil as language are left out of reckoning, since there is adequate evidence for the presence of both in the period under discussion. Satavahana rulers refer to themselves as unique brahmanas, are compared in prowess to Epic heroes, perform Vedic sacrifices and invoke Hindu deities, even though the epigraphs are inscribed in Buddhist monastic sites. Clearly, no simple connections are possible. Similarly, Tamil was used both for inscriptions in South India as well as for bilingual portrait coins of the later Satavahana rulers.

Chapter 4 is a discussion of trade in the subcontinent in the Early Historic period, which is viewed at three levels: long distance, regional, and local. On the one hand, Smith accepts flexibility between these categories and states that, “the divisions between local, regional, and long-distance exchange are relative and can shift depending on the size and center of one’s frame of reference” (p. 15). On the other, however, she emphasizes the distinctive nature of oceanic long-distance trade almost exclusively devoted to high-value goods. What she does not discuss is the singular distribution pattern of each of the major category of “foreign” objects (viz. Roman coins, amphorae, gems, and ceramics in the subcontinent). Clearly, each of these “high-value goods” circulated within distinctive networks and this has larger implications for the nature of trade in this period.

The author rightly accepts that the transition from a megalithic to an Early Historic phase in the Vidarbha region may actually be linked by more continuities than discontinuities. Certainly, Early Historic sites are larger and were home to larger populations and participation and donation to religious establishments were a measure of social integration than megalithic construction. At the same time, a survey of
the published archaeological data indicate interesting shifts in core areas over time. In comparison to the 140 Paleolithic sites, 67 percent of which are clustered in Chandrapur District, few Neolithic or Chalcolithic sites have been reported from Vidarbha. There is an increase in the number of sites in the Iron Age and 77 megalithic sites are known. Of these, 64 percent or 50 sites are in Nagpur District alone. Almost 69 percent (40 of the 58 sites) of the Early Historic sites and major temple complexes also cluster in the Nagpur and Bhandara districts. How is this clustering to be explained?

What is far more important is the shift in the cultural orientation of the sites from Peninsular India in the megalithic period to the Ganga Plains in the Early Historic period. This is amply attested by the archaeological excavations at Mansar, which led to the recovery of not only Buddhist religious architecture, but also Shiva temples and altars for the performance of Vedic sacrificial rituals.

There is little congruence between theory proposed in the book and the results of the site surface survey. One also misses discussion and analysis of the published archaeological data from a large number of sites in Vidarbha that have been explored and excavated over the years. Early Historic trade has been a much discussed and debated theme among Indian scholars, but this is barely noticed either in Smith’s discussion or her bibliography. As a result, while at the micro-level of site surface survey, Smith’s survey methodology is good, the projection of her results at the macro-level remains unconvincing.

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