



CHAPTER I

ARCHAEOLOGY IN SOUTH ASIA

This book is the lineal descendant of the *Birth of Indian Civilization* which came out in 1968. Since then so much new material has come to light, and ideas and approaches have so greatly changed, that a completely new framework is called for. It is now possible to write a more integrated and dynamic account of the rise of civilization in India and Pakistan: this is what we have attempted to do. The overall pattern of South Asian subcontinental cultural development has come much more clearly into focus. In some areas a great deal of work has been done, but in others there has been comparatively little or no advance during the past fourteen years. The reasons for this are various, but whatever they may be, as a result, certain passages from the *Birth of Indian Civilization* stand with only slight modification. Some of these have been carried over into the new book. Similarly, some of the illustrations still make their point better or as well as other available material could do. Here too we have not hesitated to re-use material from the earlier book. In spite of these borrowings the *Rise of Civilization in India and Pakistan* is to all intents and purposes a new book, and has been completely reorganized and almost entirely rewritten.

During the past fifteen years the increasing volume of fieldwork and research in all parts of South Asia has led to a growing spate of publications. Among these one notes with particular satisfaction the appearance of several new periodicals or serials. From India, where the official publication *Indian Archaeology – A Review* has recently seen the publication of its twenty-fifth number (1977–8), two important new arrivals on the scene are the journals *Puratattva*, the bulletin of the Indian Archaeological Society, of which eight numbers have so far appeared, and *Man and Environment*, the journal of the Indian Society for Prehistoric and Quaternary Studies, with five numbers to date. *Pakistan Archaeology* has continued to appear, though irregularly, and from Sri Lanka comes the welcome addition of a new journal *Ancient Ceylon*, of which we have so far received only two numbers. Outside South Asia a welcome innovation of the 1970s has been the appearance of *South Asian Archaeology*, the proceedings of the biennial conference of South Asian Archaeologists in Western Europe, of which five volumes have so far been published. These publications together provide useful sources of information regarding primary research and fieldwork in the several countries involved. In addition there are numerous volumes carrying the proceedings of seminars and conferences in various countries, both within South Asia and outside. Notable among these is Agrawal and Ghosh,

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1.1 Map of South Asia showing principal political frontiers and cultural regions

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Radiocarbon and Indian Archaeology (Bombay, 1973). There has also been a welcome growth in the number of monographs devoted to specific problems or periods of South Asian archaeology. Many are referred to in the Bibliography. These works have provided additional data, and with so much new data the need has become increasingly felt for synthetic works, offering more comprehensive accounts of the whole or significant parts of the subject. Among these are W. A. Fairservis's *Roots of Ancient India*, appearing in 1971; the second edition of Sankalia's monumental *Prehistory and Protohistory of India and Pakistan* was published in 1974, to be followed by the same author's shorter and more digested *Prehistory of India* (1977), perhaps the finest book of its kind so far.

During the 1970s the pace of archaeological research has been maintained, even if the number of excavations has not been as great as it was during the 1950s and 1960s. This is due in part to changing economic circumstances and in part to changing methods and approaches. Before discussing these innovations it is worth noting that a number of excavations, even major excavations from the earlier period, are as yet unpublished, or only partly published. Outstanding among these are the excavations at Lothal (now partly published) and Kalibangan, and the two seasons' work at Mohenjo-daro, first by Sir Mortimer Wheeler in 1950 and second by Dales in 1965 (both now in course of publication by Professor Dales). Many smaller excavations, some of crucial interest from one point of view or another, remain unpublished, and some – one fears – may never see the light of day.

Changing approaches

During the last two decades South Asian prehistory has moved into a new phase. Previously the majority of prehistorians working in the subcontinent were concerned with artefact typology and technology, its development through time, and the sequential and regional relationships of assemblages of stone and ceramic artefacts. Recently, owing both to new approaches beginning to be adopted by prehistorians working in the subcontinent and to advances in related fields, particularly geomorphology, palaeontology, palaeobotany and palaeoclimatology, throughout the world, there has been an increasing swing towards considering past cultures in their totality. This means finding out as much as possible about the ecological relationship between a human community or group and its environmental context. As a result artefacts are seen as only one aspect, although an important one, of any culture. This approach necessitates taking into consideration many other categories of evidence including the study of all animal, plant and other organic remains in associated cultural or geological deposits, thus giving an insight into the character of the immediate physical environment, and the way in which it was utilized. Complementary to this is the relationship of objects including both artefacts and organic remains to one another at living sites and factory areas. The distribution of sites in relation to

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the topography of an area or region, is another important line of enquiry, and allied to it is the evidence for widespread change in the environment that such topographic or geomorphologic studies provide. This in turn leads to the even more fundamental question of major climatic and environmental change which gave many regions of the world a totally different character in the past from that we see today.

Advances in earth sciences generally, and in the geomorphology of arid and tropical zones of the world, in particular, are two of the main factors that have made possible the change of emphasis in South Asian prehistoric studies. Palaeobotany, which has played such an important role in understanding past climatic conditions in northern temperate regions, has proved less rewarding in South Asia for a number of reasons. Geomorphology, the analysis of topographic features has, however, been more helpful. Examination of the present landscape shows many features, such as abandoned river courses, glacial moraines, buried soils, fossil desert dunes, and dead drainage systems, that are residual from earlier periods, having been formed under conditions different from those prevailing today. Analysis of such features can often indicate what these conditions were. Cultural remains found related to them, as for example when a working or living site is associated with a buried soil, can then be given an environmental context.

There is an increasing awareness of the need to study sites of all kinds, including open air factory floors, living sites and larger settlements in relation to environmental factors, and this is beginning to lead to a more careful and systematic approach. Coupled with this is a more realistic understanding on the part of prehistorians of the nature of the South Asian environment, present and past; and of the ways in which it differs, often radically, from the environment of temperate regions where methods and approaches to prehistory were initially developed. For example, in much of Europe or North America soil tends to form fairly rapidly on all but the steepest slopes, engulfing objects and remains of buildings, etc., and obscuring them from view without necessarily burying them deeply. In most parts of South Asia, where erosion is predominant, objects tend to remain exposed indefinitely in any rocky or hilly situation, with the result that in considerable areas of India and Pakistan structures and artefacts are to be found on the surface, unless disturbed by subsequent human activity. The corollary of erosion, aggradation or the deposition of silt, gravel, etc., produces the opposite effect, and in valleys and plains structures and objects become buried in a relatively short space of time. For example, a single flood may lay down five or ten centimetres of silt over many square kilometres in the valley of the lower Narbada and other major rivers. This does not happen every year but may take place several times in a decade.

Other aspects of the changing approach to the study of human cultures relate more specifically to the problems posed by later archaeological periods and contexts. Here too there has been a general shift away from the older approach to

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artefacts or categories of artefacts viewed in isolation, towards a more integrated view of cultures as functioning wholes, viewing cultural change as far as possible in much the same way as its modern counterpart in terms of dynamic processes, rather than as mere sequences of artefacts, traits or assemblages. These changes have been relatively slow in reaching South Asia, where it is still not uncommon to come across the either explicit or implicit view that changes in style of pottery or some other artefacts necessarily reflect more profound changes, such as the arrival of immigrants, rather than mere changes in style or fashion, occurring in much the same way as they still do today.

There has been considerable use (or abuse?) of the availability of language-historical, literary or quasi-historical data to augment archaeological evidence; but here – one feels – there is still a great need for consideration of the most suitable methodology for interrelating the data supplied by these subjects.

Above all, there appears to be a need for a clearer consensus of the main requirements of planned research for all periods. This, we believe, must be linked to a more problem-oriented approach. There are still some glaring lacunae in South Asian prehistory and later archaeology. For instance, there is still an almost complete absence of fossil hominids to compare with the many examples known from other parts of the world; our knowledge of the development of cities in North India and Pakistan during the first millennium B.C. is as yet rudimentary; and many regions of the subcontinent still lack clear and structured evidence for whole periods. Not the least of the advantages of a problem-oriented approach lies in the relative ease of publication, if only in the form of preliminary reports, as research progresses. All too often in the past it appears to have been the increasingly daunting and insoluble problem of total publication of the proceeds of large scale excavations which has proved the stumbling-block to final publication of any significant account of some of these costly operations. New methods of data processing, storage and presentation must be looked for as the older methods become impracticable.

It is interesting to consider the contrast presented by the progress of research in the several countries of South Asia. In India the Government's policy, pursued since the 1950s, of including at least some teaching of archaeology at every university, with full departments at several, and now of Advanced Centres at two, is beginning to pay dividends both in terms of the level of training and number of qualified students being produced, and of the volume and quality of research of all kinds. This development probably lies behind the appearance of learned societies such as those we noticed above, as well as contributing to the growing awareness among educated people of the urgent need for conservation of both the natural and cultural heritage in India. In Pakistan the development of university archaeology has been slower to emerge, but there are now several universities teaching the subject.

A feature of special interest is the encouragement by the Government of Pakistan of foreign archaeological missions: over the past years this has

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contributed markedly to the progress of research. There are currently French, Italian, British and West German missions operating, as well as several independent American and other expeditions. These serve an important role in providing a forum for the exchange of ideas and practical experience between local and visiting scholars. In India by contrast there have been surprisingly few foreign expeditions, and little fieldwork by individual foreign scholars. This has perhaps helped to contribute to the relative isolation of Indian archaeological thinking. There have been a small number of significant examples of collaboration between Indian and foreign teams (the Cambridge–Baroda Universities project in the 1970s was one, and the more recent collaboration between Berkeley and the new Centre of Advanced Study at Allahabad is another).

In Sri Lanka prehistoric and protohistoric archaeology have made little progress, with the result that in many of the chapters of this book it has been necessary to point to the complete, or almost complete, absence of firm data relating to some of the main prehistoric periods. Perhaps the most outstanding example is the apparent absence of any cultural remains prior to the Mesolithic with the exception of a single hand axe. The lack of information regarding early agricultural settlements comparable to those now known in almost every other part of the subcontinent, and the paucity of knowledge concerning the archaeological remains of the people of Sri Lanka in the centuries prior to the arrival of North Indian colonizers in the middle of the first millennium B.C., are equally glaring lacunae.

About the book

One or two features call for comment. Throughout the text we have quoted simple B.C. dates wherever possible. These are in all cases derived from available radiocarbon dates, calculated according to the MASCA calibration (wherever applicable), and giving a single medial date, discounting the plus or minus factor. In some cases the date is an approximation based on the various dates available, and markedly eccentric dates have generally been neglected (unless occasionally they are specially commented on). After much thought we have not included a table of actual radiocarbon dates with their laboratory and sample numbers. We are aware that these dates are essential for any serious study of problems and chronology, but they are, after all, all published or in process of publication in the annual volumes of *Radiocarbon*, and the Indian dates (from the Tata Institute of Fundamental Research, Bombay, and latterly the National Physical Research Laboratory, Ahmedabad) are also published in *Current Science*. Therefore in the interests of brevity we have not repeated here what must be now a long catalogue. Many relevant dates are included in Agrawal and Kusumgar's *Prehistoric Chronology and Radiocarbon Dating in India*, 1974. This invaluable little book certainly deserves a new and enlarged edition, bringing it up to date and correcting occasional misprints.

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The text does not include references, but there is a select general bibliography at the end, with a series of suggestions for further reading for each chapter or group of chapters. In preparing these we have tried as far as possible to give references to other synthetic works, as these in many cases include their own often extensive bibliographies.

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052128550X - The Rise of Civilization in India and Pakistan - Bridget and Raymond Allchin

Excerpt

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PART I
CONSTITUENT ELEMENTS



CHAPTER 2

PREHISTORIC ENVIRONMENTS

The second chapter of the *Birth of Indian Civilization*, 'The Geographical and Human Background', gave a fairly comprehensive outline of the basic physical and human geography of South Asia as it appeared at that time. As a statement of facts and an overall summary of the relationship between environmental and cultural distinctions this still stands. It emphasizes the role played by the cultural and linguistic regions of the subcontinent throughout historic and later prehistoric times, and the way in which the roots of regional character extend back into the early Stone Age. The close relationship of the environmental potential of any region and its developing regional character from the Palaeolithic right through to modern times was already apparent. Since 1967 this has become even clearer, as the following chapters aim to show.

Our approach to many questions of South Asian prehistory is still, as it was in the 1950s and 1960s, basically a geographical one. This is something which new methods and approaches have altered but have not changed fundamentally for it plays an essential part in understanding the regional character of South Asian culture and its fundamental quality of diversity within overall unity. The character of South Asian culture as a whole is as distinct as that of Europe, for example, or China. Like Europe or China it comprises a number of cultural and linguistic entities. One of the distinctive features of South Asian culture in historic and recent times is the way in which it has encapsulated communities at many different cultural and technological levels, allowing them, to a large extent, to retain their identity and establish intercommunity relationships. Early Indian literature makes it clear that this was a feature of north-west Indian society during the first millennium B.C. It seems highly probable that its roots, like those of the cultural regions, extend back much further. Both these characteristics help to give South Asian culture a peculiar flexibility and adaptability of its own. They ensure that in changing circumstances it has within itself the means, and the intellectual and practical reserves, to deal with the often catastrophic problems that arise in the rich and varied but unpredictable environment of the subcontinent. When one means of survival becomes impossible there is always another.

Floods, droughts, earthquakes and changes in the courses of major rivers are and have been part of the South Asian environment. References to them occur throughout history, from the Rigveda to eyewitness accounts in the publications of the Geological Survey of India of the late nineteenth and early twentieth

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centuries. That the Himalayas are geologically relatively young mountains, and that the Siwaliks and the Salt range are even younger, consisting as they do of folded Pliocene and early Pleistocene sediments, are generally accepted. The dramatically distorted folding of strata revealed by torrents cutting through the Salt range, and the curious phenomenon of walls of residual hardened Siwalik sediments, lifted from the horizontal to the perpendicular by intense folding, and now protruding from the surface of the Potwar plateau – both bear eloquent witness to the force of recent tectonic activity.

The general recognition during the last fifteen years of the important part played by plate tectonics (Continental Drift) in the formation of the major mountain ranges of the world has brought home the direct relationship between such observation and the earthquakes and unstable shifting river channels of modern times. One of the fundamental causes of these events is the active thrusting of the plate of ancient rock of Peninsular India into the main Asian land mass. The opinion was recently expressed in a letter to *Nature* by a group of earth scientists visiting China that within the last twenty thousand years the rains of the South-west Monsoon were reaching the now desert region of Chinese Turkestan. This means that the Himalayas must have been significantly lower than they are today in order to allow the rain-bearing Monsoon winds to cross them. The implications of this suggestion in terms of the Indian subcontinent are many and various, and require much careful consideration, intelligent observation and research in the field and in the laboratory before they can begin to be fully appreciated. But one thing is clear from the outset: the environment of Palaeolithic man in South Asia and the landscape of his world must have been fundamentally different from that we see today. Indeed, a number of fairly radical changes in the morphology of the landscape and drainage patterns of North and North-west India, Pakistan and Bangladesh may well have taken place since the beginning of settled agriculture, now considered to have taken place some seven millennia before the present time in the north-western tributary valleys of the lower Indus.

One further aspect of South Asian prehistory that has come more sharply into focus since 1967 is its north-west/south-east axis. The predominant direction of outside influences appears to have been to the north-west. At times, however, the east and south-east have also played a significant role, and this has probably been predominant at certain times, as for example in the late Pleistocene, during periods of low sea level and greatly increased aridity. Again, at later periods when physical conditions or periods of military and political turmoil in Western and Central Asia made trade and other peaceful contacts in that direction virtually impossible, land and sea connections with South-east Asia and the Far East must have taken on increased importance. Many aspects of the art, culture and life-style of eastern Peninsular India and Sri Lanka bear witness to this process. At the level of village life and agricultural practice there are many culture traits that show a continuum from Eastern India and Bangladesh into