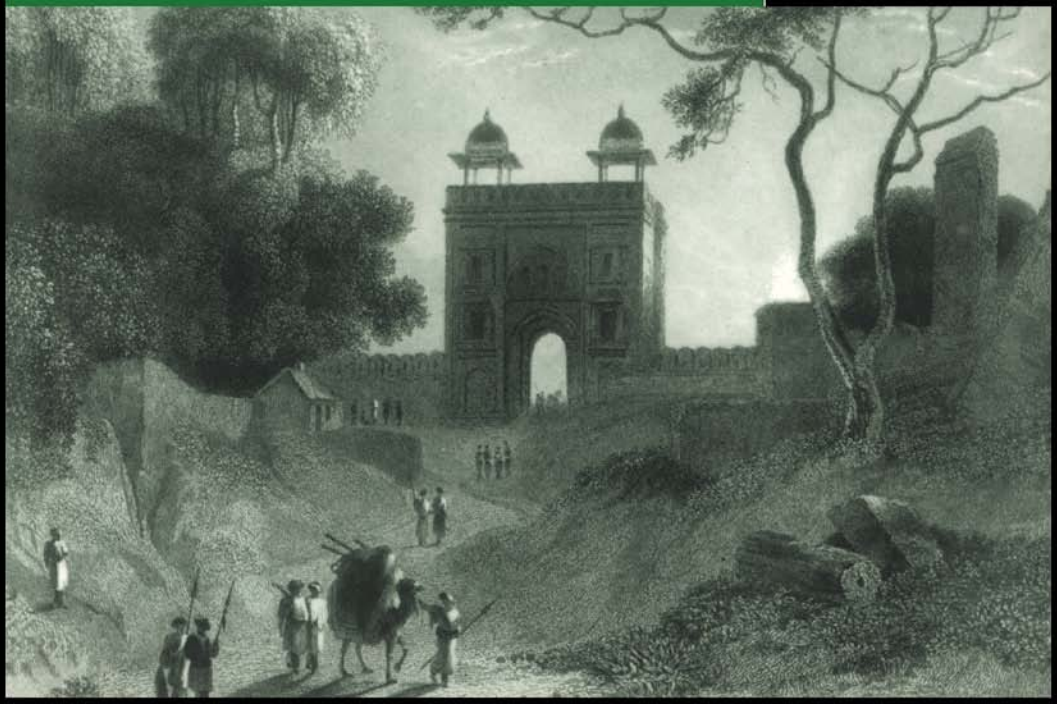
a history *of* **india**

Hermann Kulke and Dietmar Rothermund

3rd Edition



A HISTORY OF INDIA

A History of India presents the grand sweep of Indian history from antiquity to the present in a compact and readable survey. This new edition has been thoroughly revised, containing extensive new research and material, as well as an updated preface, bibliography, chronology and index.

The authors examine the major political, economic, social and cultural forces which have shaped the history of the Indian subcontinent. This classic text is an authoritative and detailed account which emphasises and analyses the structural pattern of Indian history.

Hermann Kulke holds the chair in Asian History at the University of Kiel. **Dietmar Rothermund** is Professor and Head of History at the South Asian Institute, University of Heidelberg.

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Third Edition

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Dietmar Rothermund

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PREFACE

India's history is the fascinating epic of a great civilisation. It is a history of amazing cultural continuity which has reasserted itself again and again. Today it is the history of one-fifth of mankind which is, therefore, of importance to all of us. Both Indian and foreign historians have been attracted by this great theme and each generation has produced its own histories of India. Several histories of India have been written in recent times, thus the authors of the present volume may be asked why they have dared to publish yet another account of Indian history. First of all research in Indian history to which both authors have contributed in their own way is progressing rapidly and an adequate synthesis is needed at more frequent intervals which reflects the current state of knowledge and stimulates further inquiries. This kind of up-to-date synthesis the authors hope to have provided here. Furthermore, Indian history from antiquity to the present is such an enormous subject that it requires more than one author to cope with it. Consequently many surveys of Indian history have been presented by teams of authors, but these authors rarely have had the benefit of working together in the same department discussing problems of Indian history for many years. This has been the good fortune of the present authors who have worked together at the South Asia Institute of Heidelberg University for nearly twenty years. In the late 1970s they first embarked on this joint venture at the request of a German publisher. The German edition of this volume was published in 1982. The first English edition was published by David Croom of Croom Helm, London, in 1986. Subsequently the rights were acquired by Routledge, London, and ever since the Routledge editorial team has been helpful in bringing out several new editions of this text which seem to have attracted many readers. Inspired by this interest in their work the authors have prepared this thoroughly revised edition in January 1997. They updated the text not only with regard to recent history, they also tried to take into account all major new publications in the field so as to reflect the state of the art in historical research. They have benefited from numerous discussions with Indian, British and American colleagues many of whom cannot read their German

publications and, therefore, they are glad to be able to communicate with them in this way. But, of course, this history of India is not primarily devoted to a dialogue among historians, it is written for the student and the general reader.

To this reader the authors want to introduce themselves here. Hermann Kulke studied Indology (Sanskrit) and history at Freiburg University and did his PhD thesis on the Cidambaram Mahatmya, a text which encompasses the tradition of the South Indian temple city Chidambaram. His second major book was on the Gajapati kingship of Orissa. He has actively participated in the Orissa Research Project of the German Research Council and was co-editor of *The Cult of Jagannath and the Regional Tradition of Orissa*. At present he is conducting a research project on the temple chronicles of Orissa. He has also worked on Indian historiography and medieval state formation in India and Indonesia and on the Devaraja cult of Angkor. Recently he published a book on state formation and legitimation in India and Southeast Asia and edited *The State in India 1000–1700*. In 1988 he was called to the new Chair of Asian History at Kiel University. The distance between Heidelberg and Kiel has not reduced the contacts with his co-author. Dietmar Rothermund studied history and philosophy at Marburg and Munich Universities and at the University of Pennsylvania, Philadelphia, where he did his PhD thesis on the history of eighteenth-century Pennsylvania. He then went to India and worked on a history of the Indian freedom movement which was published in 1965. He subsequently published a book on India and the Soviet Union and a detailed research monograph on agrarian relations in India under British rule. His most recent publication is a comprehensive political biography of Mahatma Gandhi. He participated in the Dhanbad Project of the South Asia Interdisciplinary Regional Research Programme. This project was devoted to the study of the history, economy and social conditions of an Indian coalfield and its rural hinterland. He has mostly worked on Indian economic history. In recent years he has published *An Economic History of India* as a companion volume to *A History of India*. This short textbook first appeared in 1988; a revised edition was published in 1993 by Routledge. He has produced a research monograph on *India in the Great Depression, 1929–1939* (1992), followed by a more general text on *Global Impact of the Great Depression, 1929–1939* (1996). He is now working on a research monograph on liberalisation in India. The research interests of the two authors are also reflected in the pages of this volume, but they have taken care to present a balanced picture and not to get carried away by their enthusiasm for their favourite subjects. As *An Economic History of India* covers this aspect of Indian history, references to the economic context have been restricted here to some essential points. In keeping with their respective fields of specialisation the authors have divided the work on this volume. Hermann Kulke has written chapters 1 to

4. He benefited a great deal from discussions with Martin Brandtner, Kiel, while revising the first chapter. Dietmar Rothermund has written the introduction, chapters 5 to 8, and has also prepared the entire English version of the text. The present paperback edition has been thoroughly revised as far as the account of recent events, the bibliography and the chronology are concerned.

The book does not have footnotes but the authors have provided a bibliography in which the works on which the text is based are listed. Notes referring to specific quotations included in the text are appended to the bibliography of the respective part of the book. For the transcription of Indian names and terms the authors have adopted the standard English style and have omitted diacritical marks.

The general emphasis in this book is on the structural pattern of Indian history rather than on the chronology of events. Therefore, a chronological table, a detailed index and several maps have been appended to the text so that the reader can easily find references to names and events. (Maps 1 and 12–14: D.Rothermund. Maps 2–11: H.Kulke.) The ancient and medieval periods of Indian history which are relatively neglected in historical atlases are highlighted in these maps whereas the latter periods are not covered in detail because the reader will find enough maps for these periods in the historical atlases which are readily available.

Kiel and Heidelberg, July 1997
Hermann Kulke
Dietmar Rothermund

INTRODUCTION
History and the environment

Environment—that is a world alive and related to a living centre, the habitat of an animal, the hunting grounds and pastures of nomads, the fields of settled peasants. For human beings the environment is both an objective ecological condition and a field of subjective experience. Nature sets limits, man transgresses them with his tools and his vision. Man progressively creates a specific environment and makes history. In this process it is not only the limits set by nature which are transgressed but also the limits of human experience and cognition. From the elementary adaptation to the natural environment to the establishment of great civilisations, the horizon of experience and the regional extension of human relations constantly expand.

The conception of the environment changes in the course of this evolution. Ecological conditions which may appear hostile to man at one stage of this evolution may prove to be attractive and inviting at another stage. The hunter and foodgatherer armed only with stone tools preferred to live on the edge of forests near the plains or in open river valleys, areas which were less attractive to the settled peasant who cut the trees and reclaimed fertile soil. But initially even the peasant looked for lighter soils until a sturdy plough and draught animals enabled him to cope with heavy soils. At this stage the peasant could venture to open up fertile alluvial plains and reap rich harvests of grain. If rainfall or irrigation were sufficient he could grow that most productive but most demanding of all grains: rice. Wherever irrigated rice was produced, plenty of people could live and great empires could rise, but, of course, such civilisations and empires were very much dependent on their agrarian base. A change of climate or a devastation of this base by invaders cut off their roots and they withered away.

Indian history provides excellent examples of this evolution. Prehistoric sites with stone tools were almost exclusively found in areas which were not centres of the great empires of the later stages of history: the area between Udaipur and Jaipur, the valley of the Narmada river, the eastern slopes of the Western Ghats, the country between the rivers Krishna and Tungabhadra

(Raichur Doab), the area of the east coast where the highlands are nearest to the sea (to the north of present Madras), the rim of the Chota Nagpur Plateau and both slopes of the mountain ranges of central India (see Map 1).

The cultivation of grain started around 7000 BC in Southern Asia, according to recent archaeological research. This was a time of increasing rainfall in the region which has always depended on the monsoon. Before venturing into the open plains of the lower Indus the precursors of the Indus civilisation experimented with cultivating alluvial lands on a small scale in the valleys of Baluchistan. There they built stone walls *(gabarbands)* which retained the sediments of the annual inundation. Initially the archaeologists mistook these walls for dams built for irrigation, but the holes in these walls showed that they were designed so as to retain soil but not water. Such constructions were found near Quetta and Las Bela and in the Bolan valley. In this valley is also the site of Mehrgarh which will be described in detail in the next chapter.

Palaeobotanical research has indicated an increase in rainfall in this whole region from about 3000 BC. The new methods of cultivating alluvial soil were then adopted not only in the Indus valley, but also in the parallel Ghaggar valley some 60 to 80 miles to the east of the Indus. This valley was perhaps even more attractive to the early cultivators than the Indus valley with its enormous inundations and a flow of water twice that of the Nile. The builders of the great cities Mohenjo-Daro and Harappa were masters of water management as the systems of urban water supply and sewerage show. So far no village sites have been found in the Indus valley. Perhaps due to the inundations agricultural operations were only seasonal and no permanent villages were established. The cities may have served as organisational centres for such seasonal operations. They were also very important centres of trade. Harappa which was situated near the borderline between agriculture and the pastoral zone served as a gateway city on which the trade routes coming from the north converged. Metals and precious stones came from the mountains and entered international maritime trade via the big Indus cities.

Life in the Ghaggar valley may have been of a different kind. There was a much greater density of settlements there. It was probably the heartland of this civilisation. The site of Ganweriwala, near Derawar Fort, which has been identified but not yet excavated, may contain the remains of a city as big as Harappa. It is surrounded by a large cluster of smaller sites. Perhaps here one could find the rural settlements which are conspicuous by their absence in the Indus valley. Archaeological evidence points to a drying up of the Ghaggar around 1700 BC which may be due to a sudden tectonic change. The river Yamuna which now parallels the Ganga is supposed to have flowed through the Ghaggar valley until an upheaval in the foothills of the Himalayas made it change its course. The distance between the present valley of the Yamuna and the ancient Ghaggar valley is less than

40 miles in the area between Jagadhri and Ambala. The land is rather flat in this area and even a small tectonic tilt could have caused the shift in the flow of the river. The northward thrust of the subcontinental shelf which threw up the Himalayas causes tectonic movements even today, as frequent earthquakes indicate. Other tectonic upheavals at the mouth of the Indus river may have produced a large lake submerging Mohenjo-Daro. This latter hypothesis is contested by scholars who think that the mighty Indus could never have been blocked for any length of time. However, even one sudden blockage or several seasonal ones would have done enough damage. The drying up of the Ghaggar and the blocking of the lower Indus could thus have ruined the major centres of the Indus civilisation.

There was one region which remained initially unaffected by these upheaveals: the Kathiawar peninsula of Gujarat. This region had been colonised by the people of the Indus civilisation and had emerged as a major link with the outside world. Only a few sites have been excavated there so far. Dholavira is a site to watch. It lies far inside the Rann of Kutch, but it was obviously a seaport like Lothal on the other side of the peninsula. Clearly, Dholavira is an important site. Maritime trade via Oman brought African millets to this region where inland settlements like Rojdi lived on cultivating them rather than wheat and barley which were the mainstay of the Indus civilisation elsewhere. The millets were of great importance for the spread of settled agriculture into the highlands further to the east.

The total area covered by the Indus civilisation was very large. So-called Late Harappan remains have been found even at Daimabad in Maharashtra. Shortugai in Badakshan, Afghanistan, is so far the most northern settlement of the Indus civilisation located by archaeologists. The distance between Shortugai and Daimabad is about 1,500 miles. Such distant outposts, as well as cities not threatened by tectonic upheavals, decayed when the heartland no longer provided trade and cultural supervision. The vigour of the Indus civilisation had thus been sapped long before the tribes of cattle-rearing nomads who called themselves Aryans (the noble ones) descended from the north. The ecological scenario faced by these newcomers was very different from that which had given rise to the Indus civilisation. As nomads they could adjust to a changing environment. Initially the plains of the Panjab provided rich pastures for their cattle until a sharp decrease in rainfall drove them eastwards, to the jungles of the Ganga-Yamuna river system which receded in this period of perennial drought.

THE ROUTES OF ARYAN MIGRATION

The main thrust of Aryan migration was probably south of the Terai region where the tributaries of the river Ganga must have dwindled to the point that they could be easily crossed and where the dry forest could be

burned down. The Aryan fire god, Agni, was credited with the feat of colonising this land for the Aryans. They stopped at the river Gandak which enters the plains north of present Gorakhpur and joins the Ganga near Patna. Unlike the other tributaries further to the west, this river seems to have been still full of good water because the Aryans named it Sadanira (everlasting) and their sacred texts report that the land beyond was swampy. Only some daring pioneers crossed the Gandak in due course without the support of Agni.

With the growth of royal authority in the Aryan Kingdoms to the west of the river Gandak, escape to the uncontrolled east may have been attractive to those Aryans who preferred the more egalitarian tribal organisation of earlier times to the twin tutelage of kings and their Brahmin priests.

After some time, Brahmins also crossed the river Gandak and were welcome there if they did not insist on subverting the tribal organisation by consecrating kings everywhere. There is much evidence in ancient texts that there were two ideal types of Brahmins in those days, the royal priest or advisor *(rajpurohit, rajguru)* and the sage *(rishi)* who lived in the forest and shared his wisdom only with those who asked for it. The people beyond the Gandak perhaps did not mind sages but were suspicious of the Brahmin courtiers. This suspicion was mutual, because these royal priests had no good words for kingless tribes, whom they thoroughly despised.

The Aryan drive to the east seemed to be preordained by the terms which they used for the four directions. They regarded the sunrise as the main cardinal point, so they called the east 'what was before them' *(purva)*. To their right hand *(dakshina)* was the south. But *dakshinapatha,* the way to the south, was obstructed by mountain ranges and a hostile environment. Nevertheless, just as some pioneers crossed the Gandak and explored the fertile eastern plains, other venturesome Aryans proceeded either via the Malwa plateau or further east along the northern slopes of the Vindhya mountains to the fertile region of the Deccan Lava Trap. The rich black soil of this region became the southernmost outpost of Aryan migration. Only small groups of Brahmins proceeded further south in search of patronage, which they found in due course.

Territorial control in the modern sense of the term was unknown to these early Aryans and their kings adopted a very flexible method of asserting their authority. The more powerful chief amongst them let a sacrificial horse roam around for a year vowing that he would defeat anyone who dared to obstruct the free movement of the horse. If a challenger appeared, he was attacked. If nobody showed up, it was presumed that the king's authority was not questioned. By the end of the year the king could celebrate the horse sacrifice *(ashvamedha)* as a symbol of his victories or of his unchallenged authority. But this pastime of small kings came to an end when a major empire arose in the east which soon annexed the kingdoms of the west.

ANCIENT EMPIRES AND RELIGIOUS MOVEMENTS

The east not only produced the first Indian empire, it also gave rise to new religious movements, Buddhism and Jainism. Both flourished in a region which was in close contact with the Gangetic civilisation of the west but had not been subjected to the slow growth of its royal institutions and courtly Brahminism. Thus, entirely new forms of organisation evolved, like the monastic order *(sangha)* of the Buddhists and the imperial control of trade and land revenue which provided the resources for a greater military potential than any of the Aryan kingdoms could have achieved. Rice was one of the most important resources of this region, because the eastern Gangetic basin was the largest region of India to fulfil the necessary climatic conditions. Well-organised Buddhist monasteries were initially better suited for the cultural penetration of this vast eastern region than small groups of brahmins would have been. Monasteries, of course, required more sustained support than such small groups of Brahmins, but this was no problem in this rice bowl of India.

The new empire of the east, with its centre in Magadha to the south of the river Ganga, first vanquished the tribal republics in the Trans-Gandak region to the north of the Ganga and then the Aryan kingdoms of the west, showing little respect for their traditions and finally imposing a new ideology of its own. But this empire in turn succumbed to internal conflicts and the onslaught of new invaders who came from the north, where the Aryans had come from more than a millennium earlier. The new invaders arrived when ecological conditions were improving once more in northern India. They also had the benefit of finding readily available imperial patterns which they could adopt very quickly. Aryan royal institutions had taken centuries to mature in the relatively isolated Gangetic basin. In a world of closer connections and wider horizons where Hellenistic, Iranian and Indian models of governance and ritual sovereignty were known to all, a new invader could leap from the darkness of an unrecorded nomadic past to the limelight of imperial history within a relatively short period. Shakas and Kushanas swept in this way across northern India. Their short-lived imperial traditions embodied a syncretism of several available patterns of legitimation. They also adopted Hinduism, not the Vedic tradition but rather the more popular cults of Vishnu and Shiva.

The waves of imperial grandeur which swept across northern India then stimulated the south. But when the first great indigenous dynasty of the south, the Shatavahanas, emerged they did not follow the syncretism of the northern empires but harked back to the tradition of the small Aryan kingdoms of the Gangetic civilisation. The great horse sacrifice was celebrated once more by a Shatavahana king, but the meaning of this ritual was now very different from that of the old flexible test of royal authority. It was now a great symbolic gesture of a mighty king whose

Brahmin advisors must have prompted him to identify himself with the Vedic tradition which they had preserved in the south rather than with the ideologies which great emperors from Ashoka to Kanishka had propagated in the north. This was of crucial importance for the future course of Indian history as well as for the export of the Hindu idea of kingship to Southeast Asia.

THE PERIODS OF INDIAN HISTORY

The resurgence of old traditions throughout Indian history prevents the ready transfer of the Western periodisation of history to India. Ancient, medieval and modern history cannot be easily identified in India. For this reason many historians adopted another division for Indian history: Hindu, Islamic and British periods. Hindu historians tended to glorify the golden age of the Hindu period and considered Islamic and British rule as two successive periods of foreign rule. Islamic historians accepted this clearcut division though they may have had their own ideas about the Hindu period. British historians were equally comfortable with this division as it implied that British rule made such a mark on Indian history that one could very well forget about everything else.

This periodisation, though, has given rise to many misconceptions. First of all, the Hindu period was not at all homogeneous in its traditions and cultural patterns, nor did these Hindu traditions disappear when Islamic rule spread in India nor even when the British controlled the country. Islamic rule in India was of a very heterogeneous character and the cooperation of Hindus and Muslims in many spheres of political, social and cultural life was in many respects more important than the reference to a well-defined Islamic period would indicate. British rule was ephemeral both in terms of its time span and of the intensity of its impact. Due to its fairly recent end it still looms large in our minds, but if we take a long view of history we must regard it as an episode, though a very important one. The younger generation of historians in India has criticised the misleading periodisation of Hindu, Islamic and British, but due to the lack of a better alternative it still lingers on.

We shall adopt in this book a different periodisation and refer to ancient, medieval and modern Indian history in terms of the predominant political structure and not in terms of the religious or ethnic affiliation of the respective rulers.

At the centre of ancient Indian history was the *chakravartin,* the ruler who tried to conquer the entire world. His limits were, of course, his knowledge of the world and his military potential. The ideal chakravartin turned his attention to the elimination or silencing of external challenges rather than to the intensive internal control of the empire. A rich core region and control of the trade routes which provided sufficient support

for the military potential of the chakravartin was enough for the maintenance of universal dominance. Many such empires rose and fell in ancient India, the last being the Gupta empire which embodied all the splendour and the problems of this type of ancient Indian political organisation. One important impact of these empires was the dissemination of information about the art of governance, the style of royal or imperial courts, the methods of warfare and the maintenance of an agrarian base. Even though the internal administrative penetration of the various provinces of the ancient empires was negligible, the spread of information certainly was not. At the time of the Maurya empire many parts of India were still so inaccessible that there were natural limits to this spread of information, but by the time of the great Indian campaigns of the Gupta emperors almost all regions of India were receptive to the imperial message. Thus when the empire broke up and India's ancient period drew to an end, numerous regional states arose which set the pattern for India's medieval history. These were concentric states with a royal centre in the core region and a periphery in which the influence of competitors also made itself felt. Intense competition among such concentric states stimulated the political penetration which was so ephemeral in the far-flung empires of the ancient period. A uniform court culture spread to all parts of India. The Islamic rulers who invaded India did contribute new features to this pattern, but to a large extent the rulers were assimilated. Their court culture had a different religious base but it functioned in a way similar to that of the Hindu rulers whom they displaced.

The modern period of Indian history begins with the Mughal empire which was comparable in size with some of the ancient Indian empires but was totally different from them in its internal structure. It was a highly centralised state based on the extensive control of land revenue and of a military machine which could rival that of contemporary European states. In fact, the size of the machine was the reason for the final collapse of this empire which could not meet its financial needs. This was then achieved by the British who conquered the remnants of this empire and continued its administrative tradition and made it much more effective.

CHARIOTS, ELEPHANTS AND THE METHODS OF WARFARE

The course of Indian history which has been briefly sketched here was deeply affected by changes in the methods of warfare. The Aryan warriors relied on their swift chariots which made them militarily superior to the indigenous people but could, of course, also be used for incessant warfare among themselves. Chariots did not lend themselves to monopolisation by a centralised power. But the war elephants on which imperial Magadha based its military strength were ideal supporters of a

power monopoly. The eastern environment of Magadha provided an ample supply of wild elephants, but maintenance was of greater importance than supply. Only a mighty ruler could afford to maintain adequate contingents of war elephants. The entrance of the elephant into Indian military history around 500 BC thus made a profound difference to the political structure and the strategy of warfare. Chandragupta Maurya's gift of 500 elephants to Seleukos Nikator was one of the most important military aid transactions of the ancient world.

Indian military strategy is faithfully reflected in the game of chess which is supposed to have been invented by an Indian Brahmin for the entertainment of his king. In this game as well as on the battlefield, the king himself conducts the operations from the back of an elephant. He has to take care not to expose himself too much, because if he is killed his army is vanquished even if it is still in good condition. Therefore the movements of the king are restricted. The dynamics of the battle are determined by the general, the cavalry and the runners. The flanks of the army are protected by elephants which may also be moved into front-line positions as the battle draws to a decisive close. The infantrymen, mostly untrained, slow and armed with very elementary weapons are only important because of their numbers and because of their nuisance value in some critical phases of the battle. This strategic pattern remained more or less the same for more than 2,000 years.

The upkeep of such an army required a regional stronghold of sufficient dimensions. The structure of the Indian environment and the distribution of such nuclear regions predetermined a standard extension of direct rule over an area about 100–200 miles in diameter and a potential of intervention in regions at a distance of 400–500 miles. Direct rule refers to the ability to collect revenue and the potential of intervention is defined as the ability to send a substantial army with war elephants to a distant region with a good chance of defeating the enemy but not with the intention of adding his region permanently to one's own area of direct rule.

If we keep these rules of the game in mind we can delineate three major regions in India which in turn can be subdivided into four smaller subregions, each of which theoretically would be able to support a regional ruler. But generally only one ruler in each major region would be strong enough to establish a hegemony over the respective sub-regions, but his resources would not permit him to annex all of them permanently. A ruler who had achieved such a hegemony in his major region might then also have tried to intervene in one or two other major regions. This interaction was conditioned by the location of powerful rulers in the other major regions. It is of great importance in this respect that there was also a fourth region, a vast intermediate area in the centre of India which provided a great challenge to the potential of intervention of aggressive rulers.

THE REGIONAL PATTERN OF INDIAN HISTORY

The first major region of the Indian subcontinent is the alluvial land of the northern rivers which extends for about 2,000 miles from the mouth of the Indus to the mouth of the river Ganga. This belt of land is only about 200 miles wide. The two other major regions are the southern highlands and the east coast. They are separated from the northern region by the large intermediate zone which extends right across India for about 1,000 miles from Gujarat to Orissa and is 300–400 miles wide.

The northern region is subdivided into four smaller regions, the first one being the region of the first great Indian empire in the east, Bengal and Bihar, the second the middle Gangetic basin including the lower Ganga-Yamuna Doab, the third the Agra-Delhi region and the Western Doab, and the fourth the Indus region. The intermediate zone is both a mediator and a buffer between the northern region and the two other ones. Its two terminal regions, Gujarat and Orissa, are both separated from the other major regions in specific ways, Gujarat by the desert in the north and Orissa by mountains and rivers which are always in flood in the monsoon season. The interior of the intermediate zone contains four enclaves which are isolated from each other: the fertile plains of Chattisgarh, a region which was called Dakshina Koshala in ancient times; Vidarbha, the area around present Nagpur; the Malwa Plateau around Ujjain which was called Avanti in antiquity; and finally the Rajput country between Jaipur and Udaipur. Of course, there have been some contacts among these regions of the intermediate zone and with the other major regions. Furthermore Gujarat and Orissa, predestined by their location on the coast, have been in touch with regions overseas. But for military intervention, this intermediate zone has always been a major obstacle.

The four sub-regional centres of the highland region are the Deccan Lava Trap around Aurangabad and Paithan, the central region around Haiderabad, including the old capitals of Bidar, Manyakheta and Kalyani, the region between Bijapur and Vijayanagara which includes old capitals such as the Badami of the Chalukyas, and finally the region around Mysore, the stronghold of the Hoysalas and later on of Tipu Sultan. The four subregions within the east coast region are the Krishna-Godaveri delta, Tondaimandalam around present Madras, the centre of the old Pallava empire, Cholamandalam in the Kaveri delta region, the home ground of the Chola dynasty, and finally Pandyamandala around Madurai, the centre of the Pandyas.

The three last mentioned sub-regions are close to each other, but they are divided from the first east coast sub-region, the Krishna-Godaveri delta, by a stretch of land called *Rayalaseema*. Here the highland comes close to the coast and cuts into the fertile coastal plains. Thus, though Rayalaseema and the region adjacent to it, the Raichur Doab located

between Krishna and Tungabhadra, never became an important centre of power, it was fought over frequently. It has a rich cultural heritage and is full of ancient temples, but no powerful ruler ever put up his headquarters there. This may also be due to the fact that Hindu kings did not like to build capitals near the confluence of rivers which are considered to be sacred and must therefore be accessible to pilgrims from everywhere and that means accessible also to enemies.

Another interesting region is Kongunad, the area to the south of present Coimbatore, being the hinterland of the three southern coastal regions. This region was of some importance in antiquity. The many Roman coins found there suggest it may have been an area of transit for important trade routes. However, it never provided a stronghold for an important dynasty, except perhaps for the Kalabhras who dominated the southeast coast from the fourth to the sixth century AD and of whom not much is known so far. The west coast has been omitted from our survey of major regions for good reasons, the small strip of land between the Ghats and the Arabian Sea never provided a foothold for any major power; it only supported some local rulers.

The capitals of the kingdoms which were established in these various regions have, with few exceptions, not survived the decline of those kingdoms. Today we may only find some ruins and occasionally a village which still bears the ancient great name. There are several reasons for this disappearance of the old capitals. First of all they depended on the agricultural surplus of the surrounding countryside and, therefore, on the ruler who managed to appropriate this surplus. Once the ruler was gone, the capital also disappeared and if a new dynasty rose in the same region it usually built a new capital. In the central area of each of these regions there were many places suitable for the location of a capital. In fact, these central areas are demarcated by the frequency of capitals constructed there (see Map 1).

Only in a very few instances did a unique strategic location compel many dynasties throughout the ages to build their capitals more or less on the same spot. The prime example of this is Delhi, which controls the entrance to the fertile Ganga-Yamuna Doab. The Aravalli mountain range closely approaches the Yamuna here where this river flows in a wide, flat bed. Whoever was in control of this gateway held sway in this part of northern India, or, to put it differently, he who wanted to rule this region had to capture this gateway. Therefore the area around Delhi is, so to speak, littered with the remnants of about a dozen ancient capitals which have been built here for more than two millennia.

Patna, the old Pataliputra, is a strategic place of similar importance. It is located on a high bank of the river Ganga and when the river is in spate in the monsoon season, the city looks like an island in the midst of the flooded plains. Pataliputra emerged as a bastion of Magadha in its fight

against the tribal republics to the north of the Ganga. It also controlled the access to the eastern route to the south via the Sone valley and along the slopes of the Vindhya mountains. When the rulers of Magadha moved their capital from southern Bihar into the centre of the valley of the Ganga they naturally selected Pataliputra as their new capital and many of their successors did the same. The highlands and the east coast have no perennial capital sites like that, the regional pattern remained fixed, but the location of the capital was a matter of discretion.

The great distances which separated the regional centres of the southern highlands and the east coast from those of the northern region meant that in many periods of Indian history great rulers of the South and of the North co-existed without ever clashing. Intervention across the wide intermediate zone was always very hazardous, and even more problematic was the attempt at governing a huge empire from two capitals, one at Delhi and the other in the northernmost regional centre of the highlands (Daulatabad/Aurangabad). But even the regional centres of the highlands and of the east coast were so distant from each other that the potential of intervention was fairly restricted. For instance, Badami (Vatapi), the capital of the third sub-region of the highlands is about 400 miles from the centres of the first and the second regions of the east coast. The Krishna-Godaveri delta was subjected to frequent intervention from the highlands whenever the foremost ruler of that region had his headquarters around present Haiderabad which is only about 150 miles west of this fertile delta. The only exception to this rule seems to be the establishment of Vengi by the Chalukyas whose home base was at Vatapi at that time.

Within the three major regions the struggle for hegemony continued. The likelihood of conflict between rulers of two major regions was dependent on these 'domestic' struggles. For instance, if the ruler of a southern centre of the highlands was in power and a ruler of the Delhi-Agra region had attained hegemony in the North, there was hardly a chance of their clashing. But if the foremost ruler of the southern highlands was located in the north of this region and the North was in the hands of a ruler of the middle Gangetic basin, a clash was much more likely (for example, the Rashtrakuta encounter with the Gurjara Pratiharas).

The potential for long-distance intervention and conquest grew only when the Islamic invaders of the North introduced the new method of swift cavalry warfare. However, it did not, at first, change the pattern of regional dominance. All rulers quickly adopted the new strategy and thus there was once more a uniform standard of warfare throughout the subcontinent. However, the new strategy had important internal consequences for the political structure of the regional realms. Horse breeding was always a problem in India and good warhorses had to be imported from Arabia and Persia at a high price. This made the maintenance of the military machine more expensive. At the same time the

man on horseback was an awe-inspiring collector of land revenue and thus the appropriation of surplus could be intensified. A new military feudalism, hand-in-hand with a military urbanism, arose in this way. Cavalry garrisons were established in the countryside and their commanding officers became local administrators making their headquarters focal points for their respective neighbourhoods. The extraction of surplus from the countryside was delegated to a large extent. These cavalry officers were rarely local notables. They were usually strangers who owed their appointment to the regional ruler, and if they thought of rebellion at all they thought in terms of replacing the ruler himself rather than gaining autonomy over the area which they happened to control.

THE MARITIME PERIPHERY AND THE INTRUSION OF EUROPEAN POWERS

The preoccupation with the cavalry warfare blinded the Indian rulers to the maritime challenge of European powers. They would only take an enemy seriously if he confronted them with large contingents of cavalry. They did not pay any attention to the Indian Ocean as the most important element of the total Indian environment. Nobody had ever invaded India from the sea and, therefore, the rulers were sure that they could neglect the Europeans who, at the most, hired some Indian foot soldiers to protect their trading outposts. They knew the monsoon would not permit a sustained maritime invasion of India, as it only carried ships to India during a few months of the year. Thus a maritime invader would find his supply lines cut within a very short time. Actually the European powers never attempted such an invasion but built up their military contingents in India, drilling infantry troops which were less expensive to maintain but proved to be fatal to the Indian cavalry. At the same time control of the sea and of the maritime periphery provided the European powers with a much greater potential for intervention.

Indian rulers had not always neglected the Indian Ocean. The Chola kings had equipped great naval expeditions and Indian seafarers had a remarkable tradition of long-distance voyages. The Hindu prejudice against crossing the black water *(kala pani)* of the ocean had grown only in the late medieval period and the Mughal emphasis on the internal control of a vast empire had added to India's isolationist tendency. On the other hand India did not conceive of the peripheral foreigners as a serious threat as did Japan, which adopted a policy of deliberate isolation. In this way the British were able to extend their control over India from their peripheral bridgeheads on the coast until they captured the vast land revenue base of the fertile eastern region which had provided the foundation for the first Indian empire more than 2,000 years previously.

In fact, the British conquest of India closely paralleled the pattern of expansion of the Maurya empire. They subjected the Gangetic basin up to the Ganga-Yamuna Doab as well as the east coast and penetrated into the interior of the south where they defeated Tipu Sultan of Mysore. Just like the Mauryas, the British left large parts of the interior untouched. Indirect rule was less expensive in areas which did not promise a high yield of land revenue. But, unlike the ancient Indian empires, the British Indian empire emphasised efficient administrative penetration. The Mughal heritage was already strong in this respect, but the British were able to improve greatly upon it. The Mughal administration was, after all, a military one: the officers who made the decisions were warriors and not bookkeepers. The British replaced the warriors with bookkeepers who were under the strict discipline of a modern bureaucracy. In fact, British bureaucracy in India was far ahead of British administration at home which was both supported and encumbered by British tradition. This new system of bureaucratic administration was both much cheaper and more efficient than the Mughal system. The Mughal warrior administrator spent a large part of the surplus which he appropriated in the region from which it had come, but the British collected more and spent less and could transfer the surplus abroad. This implied a decline of the internal administrative centres which shrank to a size in keeping with their functions in the new system. Only the major bridgeheads on the maritime periphery, Bombay, Calcutta and Madras, grew out of all proportion. They also became the terminal points of the railway network which linked the interior of India to the world market. Thus the old regional pattern of Indian history which has been outlined above was subverted by the British rulers. The pattern was turned inside out. The periphery provided the new regional centres of the three great Presidencies which encompassed the three major regions outlined above. Only some of the capitals of Indian princes who lived on under British paramountcy remained as rather modest centres in the interior of the country until the British rulers decided to revive Delhi as the capital of British India. But this transfer of the capital was more of a symbolic gesture than an effective change in the structure of British rule. Even independent India could not easily change the new regional order of India which was dominated by the great peripheral centres. The rise of new industrial centres in the Indian coal and iron ore belt around Chota Nagpur has not made much difference in this respect. These are industrial enclaves in a very backward region which has never been a nuclear region but rather a retreat for the tribal population.

THE REGIONAL PATTERN OF POPULATION DENSITY

One indicator of the relative changes of the importance of different regions in India is the density of population. Unfortunately we know very little about the distribution of population in earlier periods of Indian history. We can only guess that the great rice areas of the eastern Gangetic

basin and of the east coast have always been regions with a much higher population density than the rest of India. These conditions remained more or less the same under British rule, because canal irrigation was introduced only in very few areas which could then be expected to support greater numbers of people than earlier. Fairly reliable census data are available only from 1881 onwards and since then the Census of India has continued in its decennial rhythm. The late nineteenth century was characterised by a slow but steady population growth which was then checked by the great famines at the end of the century. The 1901 census reflected this stage of development. It thus provides a fairly accurate picture of the regional pattern of population density which must have prevailed for quite some time. The regions of highest population density (more than 150 people per square kilometre) were the following: the first three sub-regions of the northern plains, the first three sub-regions of the east coast, the southern tip of the west coast and a few districts in the fertile plains of Gujarat. This pattern has probably existed also in earlier centuries. Of course, population density must have been less in earlier times, but the relative position of the regions listed here must have been the same. This relative position is still more or less the same at present. But since population increased much more rapidly after 1921, population density is a liability rather than an asset to the respective regions nowadays. The rate of increase has declined in some of these regions and risen in others. The southern rim of the Gangetic basin, the western and southern parts of the highlands, parts of Gujarat and the northern part of the east coast have been areas of above average population increase in recent decades. Particularly the changing structure of population density in the highlands, which had always been below average in earlier years, seems to be of great significance. This may also imply a shift in the political importance of various regions. Hitherto Uttar Pradesh, which encompasses the second and most of the third sub-region of the northern plains, has played a dominant role in India's political history, earlier because of its strategic location and nowadays because of its enormous population which means a corresponding weight in political representation. But this position may not remain unchallenged. On the other hand those regions of India which still continue to be well below the national average in population density are also regions which never played a prominent role in Indian history. These are mainly four zones which cut across the subcontinent (see Map 1). The first reaches from the great desert in the west to the Chota Nagpur Plateau in the east. The second one consists of the Vindhya mountain range. The third extends from the centre of the highlands to the mountain ranges along the northern east coast, and the fourth one is the Rayalaseema region and the adjacent area to the west of it. Thus census data help us to support the main conclusions of the regional analysis presented above.

The four areas which we have delineated are also important barriers of communication which limited the spread of regional languages. The border between the Tamil and the Telugu region follows the southern rim of the Rayalaseema region, the northern border of the Telugu language region and thus the border of the Dravidian languages in general more or less follows the third zone. In the western highlands the region of the southernmost Indo-Aryan language, Marathi, is situated between the second and the fourth areas. The area between the first and the second zones is a region of a variety of old tribal languages, but this region has been penetrated by the *lingua franca* of the North, Hindi. But Hindi did not manage to penetrate the area beyond the second zone. Not all borders of language regions in India are marked by such thresholds, but the pattern illustrated here shows a remarkable coincidence of environmental conditions with the spread of languages. History and the environment are interdependent and Indian history owes much to an environment which has a highly differentiated structure and which is in some ways extremely generous but can also prove to be very hostile and challenging to those who have to cope with it.

1

EARLY CIVILISATIONS OF THE NORTHWEST

PREHISTORY AND THE INDUS CIVILISATION

When the great cities of Harappa and Mohenjo-Daro were discovered in the 1920s the history of the Indian subcontinent attained a new dimension. The discovery of these centres of the early Indus civilisation was a major achievement of archaeology. Before these centres were known, the Indo-Aryans were regarded as the creators of the first early culture of the subcontinent. The Vedic Indo-Aryans had come down to the Indian plains in the second millennium BC. But the great cities of the Indus civilisation proved to be much older, reaching back into the third and fourth millennia. After ancient Egypt and Mesopotamia, this Indus civilisation emerged as the third major early civilisation of mankind.

Harappa and Mohenjo-Daro show a surprising similarity although they were separated by about 350 miles. In each city the archaeologists found an acropolis and a lower city, each fortified separately. The acropolis, situated to the west of each city and raised on an artificial mound made of bricks, contained large assembly halls and edifices which were obviously constructed for religious cults. In Mohenjo-Daro there was a 'Great Bath' (39 by 23 feet, with a depth of 8 feet) at the centre of the acropolis which may have been used for ritual purposes. This bath was connected to an elaborate water supply system and sewers. To the east of this bath there was a big building (about 230 by 78 feet) which is thought to have been a palace either of a king or of a high priest.

A special feature of each of these cities were large platforms which have been interpreted by the excavators as the foundations of granaries. In Mohenjo-Daro it was situated in the acropolis; in Harappa it was immediately adjacent to it. In Mohenjo-Daro this architectural complex, constructed next to the Great Bath, is still particularly impressive. Its foundation, running east to west, was 150 feet long and 75 feet wide. On this foundation were 27 compartments in three rows. The 15-foot walls of these are still extant. These compartments were very well ventilated and, in case they were used as granaries, they could have been filled from outside the acropolis. At Harappa there were some small houses, assumed to be

those of workers or slaves, and a large open space between the acropolis and these buildings.

The big lower cities were divided into rectangular areas. In Mohenjo-Daro there were nine such areas, each about 1,200 by 800 feet. Broad main streets, about 30 feet wide, separated these parts of the city from each other. All the houses were connected directly to the excellent sewage system which ran through all the numerous small alleys. Many houses had a spacious interior courtyard and private wells. All houses were built with standardised bricks. The width of each brick was twice as much as its height and its length twice as large as its width.

But it was not only this excellent city planning which impressed the archaeologists, they also found some interesting sculptures and thousands of well-carved seals made of steatite. These seals show many figures and symbols of the religious life of the people of this early culture. There are tree deities among them and there is the famous so-called 'Proto-Shiva' who is seated in the typical pose of a meditating man. He has three heads, an erect phallus, and is surrounded by animals which were also worshipped by the Hindus of a later age. These seals also show evidence of a script which has not yet been deciphered.

Both cities shared a uniform system of weights and measures based on binary numbers and the decimal system. Articles made of copper and ornaments with precious stones show that there was a flourishing international trade. More evidence for this international trade was found when seals of the Indus culture were found in Mesopotamia and other seals which could be traced to Mesopotamia were discovered in the cities on the Indus.

Before indigenous sites of earlier stages of the Indus civilisation were found it was believed that Harappa and Mohenjo-Daro were merely outposts of the Mesopotamian civilisation, either constructed by migrants or at least designed according to their specifications. These speculations were strengthened by the mention in Mesopotamian sources of countries such as Dilmun, Magan and Meluhha. Dilmun has been identified as Bahrein and Magan seems to be identical with present Oman. Meluhha may have referred to the Indus valley from where Mesopotamia got wood, copper, gold, silver, carnelian and cotton.

In analogy to the Mesopotamian precedent, the Indus culture was thought to be based on a theocratic state whose twin capitals Harappa and Mohenjo-Daro obviously showed the traces of a highly centralised organisation. Scholars were also fairly sure of the reasons for the sudden decline of these cities since scattered skeletons which showed traces of violent death were found in the uppermost strata of Mohenjo-Daro. It appeared that men, women and children had been exterminated by conquerors in a 'last massacre'. The conquerors were assumed to be the Aryans who invaded India around the middle of the second millennium

BC. Their warrior god, Indra, was, after all, praised as a breaker of forts in many Vedic hymns.

However, after the Second World War, intensive archaeological research in Afghanistan, Pakistan and India greatly enhanced our knowledge of the historical evolution and the spatial extension of the Indus civilisation (see Map 2). Earlier assessments of the rise and fall of this civilisation had to be revised. The new excavations showed that this civilisation, at its height early in the late third millennium BC, had encompassed an area larger than Western Europe.

In the Indus valley, other important cities of this civilisation, such as Kot Diji to the east of Mohenjo-Daro and Amri in the Dadu District on the lower Indus, were discovered in the years after 1958. In Kathiawar and on the coast of Gujarat similar centres were traced. Thus in 1954 Lothal was excavated south of Ahmadabad. It is claimed that Lothal was a major port of this period. Another 100 miles further south Malwan was also identified in 1967 as a site of the Indus civilisation. It is located close to Surat and so far marks, together with Daimabad in the Ahmadnagar District of Maharashtra, the southernmost extension of this culture. The spread of the Indus civilisation to the east was documented by the 1961 excavations at Kalibangan in Rajasthan about 200 miles west of Delhi. However, Alamgirpur, in Meerut District in the centre of the Ganga-Yamuna Doab, is considered to mark the farthest extension to the east of this culture. In the north, Rupar in the foothills of the Himalayas is the farthest outpost which is known in India. In the west, traces of this civilisation were found in Baluchistan close to the border of present Iran at Sutkagen Dor. This was probably a trading centre on the route connecting the Indus valley with Mesopotamia. Afghanistan also has its share of Indus civilisation sites. This country was known for its lapis lazuli which was coveted everywhere even in those early times. At Mundigak near Kandahar a palace was excavated which has an impressive façade decorated with pillars. This site, probably one of the earliest settlements in the entire region, is thought to be an outpost of the Indus civilisation. Another one was found more recently further to the north at Shortugai on the Amu Darya.

This amazing extension of our knowledge about the spatial spread of the Indus civilisation was accompanied by an equally successful exploration of its history. Earlier strata of Mohenjo-Daro and Harappa as well as of Kalibangan, Amri and Kot Diji were excavated in a second round of archaeological research. In this way continuous sequence of strata, showing the gradual development to the high standard of the full-fledged Indus civilisation, was established. These strata have been named Pre-Harappan, Early Harappan, Mature Harappan and Late Harappan. The most important result of this research is the clear proof of the long-term indigenous evolution of this civilisation which obviously began on the

periphery of the Indus valley in the hills of eastern Baluchistan and then extended into the plains. There were certainly connections with Mesopotamia, but the earlier hypothesis that the Indus civilisation was merely an extension of Mesopotamian civilisation had to be rejected.

The anatomy of four sites

The various stages of the indigenous evolution of the Indus civilisation can be documented by an analysis of four sites which have been excavated in more recent years: Mehrgarh, Amri, Kalibangan, Lothal. These four sites reflect the sequence of the four important phases in the protohistory of the northwestern region of the Indian subcontinent. The sequence begins with the transition of nomadic herdsmen to settled agriculturists in eastern Baluchistan, continues with the growth of large villages in the Indus valley and the rise of towns, leads to the emergence of the great cities and, finally, ends with their decline. The first stage is exemplified by Mehrgarh in Baluchistan, the second by Amri in the southern Indus valley and the third and fourth by Kalibangan in Rajasthan and by Lothal in Gujarat.

Mehrgarh

Mehrgarh is situated about 150 miles to the northwest of Mohenjo-Daro at the foot of the Bolan Pass which links the Indus valley via Quetta and Kandahar with the Iranian plateau. The site, excavated by French archaeologists since 1974, is about 1,000 yards in diameter and contains seven excavation sites with different strata of early settlements. The oldest mound shows in its upper strata a large Neolithic village which, according to radiocarbon dating, belongs to the sixth millennium BC. The rectangular houses were made of adobe bricks, but ceramics were obviously still unknown to the inhabitants. The most important finds were traces of grain and innumerable flint blades which appear to have been used as sickles for cutting the grain. These clearly establish that some kind of cultivation prevailed in Baluchistan even at that early age. Several types of grain were identified: two kinds of barley, and wheat, particularly emmer. Surprisingly, the same types of grain were found in even lower strata going back to the seventh millennium.

The early transition from hunting and nomadic life to settled agriculture and animal husbandry is documented also by large numbers of animal bones which were found in various Neolithic strata of the site. The oldest strata of the seventh millennium contained mostly remnants of wild animals such as antelopes, wild goats and wild sheep. But in later strata the bones of domesticated animals such as goats, sheep and cows were much more numerous. The domestication of animals must have begun in Baluchistan at about the same time as in Western Asia. Sheep were the first

animals to be tamed, followed by water buffaloes whose earliest remains, outside China, were discovered here.

Precious items found in the graves of Mehrgarh provide evidence for the existence of a network of long-distance trade even during this early period. There were beads made of turquoise from Persia or Central Asia, lapis lazuli from Afghanistan and shells which must have come from the coast 400 miles away.

Next to this oldest mound at Mehrgarh there is another site which contains chalcolithic settlements showing the transition from the Stone Age to the Bronze Age. Ceramics as well as a copper ring and a copper bead were found here. The rise of handicraft is clearly in evidence at this stage. Hundreds of bone awls were found, as well as stones which seem to have been used for sharpening these awls. The uppermost layer of this site contains shards of painted ceramics very similar to those found in a settlement of the fourth millennium (Kili Ghul Mohammad III) near Quetta. When this stage was reached at Mehrgarh the settlement moved a few hundred yards from the older ones. The continuity is documented by finds of the same type of ceramics which characterised the final stage of the second settlement.

In this third phase in the fifth and early fourth millennia skills were obviously much improved and the potter's wheel was introduced to manufacture large amounts of fine ceramics. In this period Mehrgarh seems to have given rise to a technical innovation by introducing a drill moved by means of a bow. The drill was made of green jasper and was used to drill holes into beads made of lapis lazuli, turquoise and cornelian. Similar drills were found at Shahr-i-Sokhta in eastern Iran and at Chanhu-Daro in the Indus valley, but these drills belong to a period which is about one millennium later. Another find at Mehrgarh was that of parts of a crucible for the melting of copper.

At about 3500 BC, the settlement was shifted once more. In this fourth phase ceramics attained major importance. The potters produced large storage jars decorated with geometric patterns as well as smaller receptacles for daily use. Some of the shards are only as thick as an eggshell. Small female figurines made of terracotta were found here and terracotta seals, the earliest precursors of the seals found in the Indus valley, were also found. Mehrgarh must have been inhabited by that time by a well-settled and fairly wealthy population.

The fifth phase of settlement at Mehrgarh started around 3200 BC. The features characteristic of this phase had also been noted in sites in eastern Iran and Central Asia. Because not much was known about Baluchistan's protohistory prior to the fourth millennium BC, these features were thought to have derived from those western regions. But the excavations at Mehrgarh show that the early settlers of Baluchistan were not just passive imitators but had actively contributed to the cultural evolution. Long-

distance trade certainly contributed to the exchange of cultural achievements in this early period.

The subsequent phases of settlement at Mehrgarh, from about 3000 to 2500 BC and immediately preceding the emergence of Harappa and Mohenjo-Daro, show increasing wealth and urbanisation. A new type of seal with animal symbols, and terracotta figurines of men and women with elaborately dressed hair seem to reflect a new life style. Artefacts such as the realistic sculpture of a man's head and small, delicately designed figurines foreshadow the later style of Harappan art. The topmost strata of settlements in Mehrgarh are crowded with two-storeyed buildings. Firewood seems to have been scarce in this final period as cow dung was used for fuel, as it still is. Ceramics were produced on such a large scale that archaeologists label it semi-industrial mass production. One kiln was found which contained 200 jars which were obviously left there after a mistake had been made in the firing of the kiln.

Sometime around the middle of the third millennium BC the flourishing town of Mehrgarh was abandoned by its inhabitants. However, recent excavations at nearby Nausharo reveal a continuous settlement of population in this area throughout the Harappan period. Towards the end of this period Mehrgarh produced an important graveyard, the cultural assemblage of which shows strong similarities with the culture of Central Asia and the famous Cemetery 'H' at Harappa of the early second millennium BC.

Amri

Amri gives us some clues with regard to the transition from the Pre-Harappan to the Mature Harappan culture. This site is located about 100 miles to the south of Mohenjo-Daro on the west bank of the Indus at a point where the hills of Baluchistan are closest to the river. It almost seems as if the people of Amri wanted to keep in touch with the early culture of Baluchistan and considered it as something of a daring venture to settle in the great plains near the river. This new venture was started only about 2,000 years after the early cultures of Baluchistan appeared in places like Mehrgarh. Unlike Mehrgarh which started in the seventh millennium BC, Amri's earliest strata go back only as far as the early fourth millennium. But Amri and similar sites in the lower Indus valley were inhabited throughout the millennia of the Indus civilisation and, therefore, provide interesting evidence of the cultural evolution in the valley.

The excavations at Amri from 1959 to 1969 were so revealing that the Pre-Harappan culture of the Lower Indus is now referred to as Amri culture. The four stages of the Indus valley culture are clearly exhibited here at Amri: Pre-Harappan, Early Harappan which is a phase of transition, Mature Harappan and the Jhangar culture which is a regional

variation of the Late Harappan. The Pre-Harappan stage at Amri is subdivided into four phases. The earliest phase shows no traces of building but its jars and ceramic shards have patterns related to those of the finds in Baluchistan. There were also some tools made of flint as well as a few items of copper and bronze found. The second and third phases show Amri at the height of its development. Radiocarbon dating points to a period from 3660 to 3020 BC for this flowering of the Amri culture. This coincides with a similar state of development at Mehrgarh. The area of the village had doubled by this time and there were houses constructed of adobe bricks. These houses had interior courtyards and were designed in a more regular fashion as time went by; similarly, the bricks showed a more standardised form. Ceramics were produced on potters' wheels and decorated with geometric patterns of a characteristic style.

Towards the end of this Amri period, there appeared for the first time isolated items with the style characteristic of Early Harappan ceramics. Such items did not, however, replace the indigenous Amri ceramics. This happened only in the Mature Harappan phase at Amri. Probably this new type of ceramics had only been imported into Amri in the Early Harappan period and it was not until the Mature Harappan period that the potters of Amri adopted the style themselves and abandoned their old style altogether. Early in the Mature Harappan period, the new style seems to have come from Mohenjo-Daro and Chanhu-Daro to the Lower Indus, whereas Harappa and Kalibangan stuck to a different northern style. A uniform style, which replaced all regional styles, emerged only at the end of this period, at the height of the Indus civilisation towards the end of the third millennium BC.

The correlation of this stylistic analysis with the pattern of growth and decline of the Amri settlement provides a great deal of insight into the evolution of Indus civilisation. At the beginning of the Early Harappan period, when new influences emanating from Mohenjo-Daro were making themselves felt at Amri, Amri's settled area suffered a remarkable reduction. One of the two mounds of Amri was obviously abandoned at that time. This was followed by a brief period of recuperation when both mounds were occupied. But in the beginning of the Mature Harappan period, when the Amri style was replaced by the style of Mohenjo-Daro, there was another setback and even the main mound was abandoned for some time. In the subsequent phase, Amri was settled again but the smaller mound remained deserted forever. It seems that the rise of Mohenjo-Daro meant a decline for Amri. Perhaps wars and social conflict were at the root of this decline. There are no traces of direct combat at Amri, but there seems to have been some kind of fortification. However, at Kot Diji, a town only 30 miles from Mohenjo-Daro, there were elaborate fortifications even during the Pre-Harappan and Early Harappan periods which ended with a great conflagration in this place. This seems to indicate

that the spread of the Mature Harappan culture was accompanied by war and conquest. After the burning down of old Kot Diji there followed a new phase of reconstruction noticeably influenced by Mohenjo-Daro.

Kalibangan

Kalibangan in Panjab experienced a similar upheaval in the latter part of the third millennium. Situated on the then Ghaggar river, this city was next to Harappa and Mohenjo-Daro. What is most interesting about Kalibangan is not its size, but the excellent preservation of its Early Harappan strata. This makes Kalibangan an eminent witness of the circumstances which accompanied the transition from the Early Harappan to the Mature Harappan period.

Kalibangan was founded around 2900 BC and included some features then which later became standard for the cities of the Indus civilisation. For instance, it was a planned city of rectangular shape, about 750 feet long and following a north-south axis. The city was fortified and the houses were constructed with adobe bricks of 10 by 20 by 30 centimetres. The sewerage system was constructed with regular bricks fired in a kiln. Kalibangan's ceramics produced on the potter's wheel were of excellent quality and nicely decorated, their patterns being clearly different from those of the subsequent period. But since this early Kalibangan had so many features similar to those of the later Mature Harappan period some scholars refer to it as Early Harappan rather than Pre-Harappan. Nevertheless this first city of Kalibangan is clearly characterised by a regional style of its own.

Sometime around 2650 BC, when the expansion of the Mature Harappan culture started, Kalibangan was abandoned for reasons which are not yet known. It was reconstructed only 50 to 100 years later and its new pattern reflected the design of Harappa and Mohenjo-Daro. Now for the first time there was a clear distinction in Kalibangan between an acropolis and a separate lower town. The acropolis was built on the ruins of old Kalibangan which had become partly covered by sand. The lower town was situated at a distance of about 120 feet from the acropolis and was about four times larger than old Kalibangan. The acropolis was divided by a wall, the southern part containing what seem to be public and religious buildings, and the northern part, the residential quarters of the dignitaries. The lower city was planned on the same regular pattern as the lower cities of Mohenjo-Daro and Harappa. In fact, standards were extremely rigid: the various streets of the city had a width of 12, 18 or 24 feet according to their relative importance. The bricks, which had been made to strict specifications even in old Kalibangan, were now fashioned according to the uniform measure of Harappa and Mohenjo-Daro (7.5 by 15 by 30 cm).

A special feature of New Kalibangan was a third smaller natural mound at a distance of about 240 feet from the lower city. This mound contained only remnants of fire altars. Perhaps it was a religious centre for the people of the lower city whereas the altars of the acropolis were reserved for its residents. Only further research will provide answers to such questions. The absence of mother goddess figurines in Kalibangan is peculiar, since these goddesses were ubiquitous in all other centres of the Indus civilisation.

New Kalibangan seems to have flourished without interruption until the eighteenth century BC. After a brief period of decline, the inhabitants abandoned the city in the seventeenth century BC. The reasons for its decline seem to be rather obvious: the Ghaggar river had dried up and thus the city lost its agricultural base.

Lothal

The fourth site whose anatomy we want to examine is Lothal near Ahmadabad which is presumed to be the great port of its age. Lothal was founded much later than the other three settlements discussed so far. Construction began here around 2200 BC during the Mature Harappan period. Lothal had the features typical of all towns of the Indus civilisation. Its acropolis was built on a high platform, about 150 by 120 feet, but its city walls surrounded both the lower city and the acropolis. The pattern of streets and alleys was the same as that of Mohenjo-Daro and Harappa.

But Lothal had a unique feature: a large basin, 770 feet long, about 120 feet wide and 15 feet deep, east of the city. The walls were made of hard bricks and had two openings which are believed to have been sluice gates. Four large round stones with holes in their middles were found at the bottom of the basin. It is thought they may have served as anchors for ships which used this basin as a dock. A raised platform between the basin and the city also seem to indicate that this was the dock of a major port, an emporium of trade between the Indus civilisation and Mesopotamia. Critics have doubted this interpretation and have pointed out that the 'dock' may have been a water reservoir which served the city and was also used for irrigating the neighbouring fields. But, regardless of the use of this basin, there seems to be no doubt that Lothal was an important trading centre and a major sea port.

Many tools, stone beads and seals were found in Lothal, among them the famous 'Persian Gulf seal'. Probably Lothal not only served long-distance trade but also supplied the cities on the Indus with raw materials such as cotton from Gujarat and copper from Rajasthan. This would explain why Lothal was founded at a rather late stage when the demand for these raw materials was at its height in Harappa and Mohenjo-Daro.

Although Lothal must have been an important entrepôt, it was not a very large city, only about 900 feet long and 750 feet wide. Its size was thus akin to that of later emporia in the classical period of Indian history. There are no traces here at Lothal of the crisis which had begun to affect the other cities of the Indus civilisation by the beginning of the second millennium BC. But Lothal did not survive the final decline of those cities. Around 1850 BC there was a reduction of the settled area of the town. Perhaps this was due to a decline in the demand for Lothal's products in the great cities on the Indus. This reduction of the settled area was accompanied by a pattern of wild construction when the earlier standards of planning were violated. The end of Lothal came around 1700 BC, at a time when the other great cities were also doomed.

Conclusions

What are the conclusions about the Indus civilisation and its great cities which can be derived from this study of four sites? The new excavations at Mehrgarh show that in this area of Baluchistan there was a continuous cultural evolution from the seventh millennium BC throughout the subsequent five millennia. Earlier it was thought that this evolution started in Baluchistan only in the fifth millennium, but now we must conclude that the transition from nomadic life to settled agriculture occurred in Baluchistan simultaneously with the transition in Iran.

The excavations of Amri show that the decisive step towards the establishment of settlements in the Indus valley was made in the fourth millennium and that it was an extension of indigenous developments and not a mere transfer of a cultural pattern by migrants from Mesopotamia, Iran or Central Asia. The discovery of Neolithic settlements in Baluchistan has led to the conclusion that the Indus civilisation was the outcome of an indigenous evolution which started in the northwest of the Indian subcontinent. The many settlements of the fourth millennium which have been traced in recent years provide added evidence for this new hypothesis.

The rise of indigenous crafts obviously led to an increase in long-distance trade with Central and Western Asia but this trade did not have the unilateral effect of cultural borrowing as an earlier generation of scholars had thought—scholars who were naturally puzzled by the discovery of a mature civilisation which did not seem to have any local antecedents.

Whereas we do have a much clearer idea of the indigenous roots of the Indus civilisation by now, we still know very little about the rise of the specific Mature Harappan culture. The exact date of its rise is still a matter of debate. The dates 2600 to 2500 BC, suggested by those who first excavated the great cities, have not been revised so far, although recent research suggests that the most mature stage of this civilisation is probably

limited to 2300 to 2000 BC. Where and how this stage was first attained still remains a puzzle. The archaeologists who initially excavated the two great cities were not very careful about establishing the stratigraphy of the various settlements. Moreover, Mohenjo-Daro, the most important site, is badly affected by groundwater which covers the earliest strata. The original foundations of Mohenjo-Daro are now approximately 24 feet below the groundwater level. The rising of the groundwater level was, presumably, one of the reasons for the decline of that city and it also makes it impossible to unravel the secrets of its birth. This is why it is necessary to excavate parallel strata in other sites of the Indus civilisation which are more accessible and whose age can be found out by means of radiocarbon dating. Future excavations at the newly discovered but yet unexplored vast site of Ganweriwala half-way between Mohenjo-Daro and Kalibangan may lead to new discoveries.

Excavations of Amri and Kot Diji on the Lower Indus show that a new type of ceramic made its appearance there around 2600 BC—a type unknown in Kalibangan at that time. This new type of ceramic and the culture connected with it seem to have arisen at Mohenjo-Daro. Changes in the pattern of settlement reaching from extinction at Mehrgarh to a reduction at Amri and fortification and conflagration at Kot Diji may have been due to this rise of Mohenjo-Daro. The Upper Indus region, Panjab and Rajasthan, with their later centres at Harappa and Kalibangan were not yet affected by this early development in the south. But they shared the cultural period referred to as Early Harappan.

State formation in Mohenjo-Daro, Harappa and Kalibangan was probably not uniform at this stage, each centre serving as an independent capital of its particular region. But then from about 2500 BC onwards there is evidence for a striking uniformity of all these centres. This was probably achieved at the cost of war and conquest. The sudden extinction of early Kalibangan around 2550 BC and its reconstruction in the uniform Harappan style about 50 to 100 years later seem to point to this conclusion. There was also a spurt of fortification at Harappa at that time where some city gates were completely closed with bricks. Kot Diji witnessed a second conflagration around 2520 BC from which it never recovered. But Lothal and several other settlements which have been found in recent years can also be traced to the Mature Harappan phase of rapid expansion and uniform construction.

All this evidence seems to support the conclusion that this period witnessed a new phase of 'imperial state formation' in South Asia. Mohenjo-Daro was obviously the capital of this earliest state in South Asia which might already have developed certain features of an early empire. Harappa and Kalibangan as subsidiary centres may have enjoyed some regional autonomy; perhaps Mohenjo-Daro held sway over the whole region only for a relatively short period. If this interpretation of the

evidence is correct, state formation in the Indus valley proceeded along similar lines as that in the Ganges valley some 1,500 years later. In the Ganges valley, too, state formation in some nuclear areas preceded the establishment of a larger regional context until one of the centres emerged as the imperial capital. But all such questions about early state formation in the Indus valley cannot be finally settled until the script on the Indus seals is deciphered.

The secret of the decline: a change of climate?

Recent research has not only shed more light on the antecedents of the Indus civilisation, it has also helped to explain the reasons for its sudden decline. All excavations support the conclusion that this decline occurred rather suddenly between 1800 and 1700 BC, but they do not support the theory of a violent end as no traces of 'last massacres' were found in any of the centres, apart from Mohenjo-Daro. Moreover, recent research has also exculpated the Vedic Aryans; they most probably arrived in the Indus valley only centuries after its great cities had been extinguished. The excavations have revealed many striking symptoms of endogenous decay in those cities during the Late Harappan period. Some settlements seem to have been abandoned rather suddenly, which would explain why kitchen utensils have been found scattered around fireplaces. Other places were resettled for a short period in a rather rudimentary fashion, before they were finally abandoned. The archaeologists call this the squatter period because there was no planning any longer, broken bricks were used for construction and no attention was paid to a proper sewerage system. There are traces of this period at Kalibangan, Amri and Lothal. But there are no such traces in Mohenjo-Daro and Harappa, perhaps because their last inhabitants simply died out or were exterminated by marauders as in Mohenjo-Daro's 'last massacre'. But the decline of the big cities was obviously due not only to the raids of marauders, but also to other forces, against which man was helpless.

Research in different disciplines has led to the conclusion that the decline of the Indus civilisation was precipitated by a great change in environmental conditions which set in at the beginning of the second millennium BC. Geologists have pointed out tectonic changes which may have thrown up a kind of dam in the lower Indus valley, thus inundating a large part of the plains. This would explain the existence of thick layers of silt in the upper strata of Mohenjo-Daro which are now about 39 feet above the level of the river. Such inundations moreover would have provided an ideal setting for endemic malaria in the Indus plains. The tectonic changes may have caused a very different situation in the plains of the eastern Ghaggar river with its flourishing cities of Kalibangan and Ganweriwala and hundreds of smaller Harappan sites. Apparently it was

during this period that the Yamuna river which originally had been flowing into the Ghaggar river shifted its ancient course to its present course in the Ganga-Yamuna Doab. The annual flooding of the Ghaggar, the life spring of the eastern cities of the Harappans, was thus reduced in a dangerous way. Other scientists have suggested ecological reasons for the decline of the great civilisation: over-grazing, and deforestation caused by the operation of innumerable fireplaces and kilns for firing bricks.

Palaeobotanical research in Rajasthan may provide another amazing explanation of the decline of the Indus civilisation. According to these findings there was a slight increase of rainfall and vegetation in the Indus region in the sixth millennium, and during the third millennium there was a sudden and steep rise in rainfall which reached its peak around 2500 BC. But by the end of the third millennium this rainfall had receded as rapidly as it had increased, and by about 1800 to 1500 BC it had come down to a level well below that of 3000 BC. There was another slight increase of rainfall between 1500 and 1000 BC then it decreased once more. The period around 400 BC was probably one of the driest periods of all. Subsequently, rainfall became more abundant but never again reached the peak which it had attained around 2500 BC. The last 2,000 years up to the present have witnessed a pattern of rainfall and vegetation in South Asia which conforms to a mean value between the extremes of 2500 and 400 BC.

It is fascinating to see the course of history in the context of these findings. The rise and fall of the Indus civilisation could thus have been strongly influenced by changes in climate, and even the immigration of the Vedic Aryans and their settlement in the northern Indus region could then be attributed to the renewed increase of rainfall and vegetation in the period after 1500 BC. Similarly the decline of the fortunes of the Aryans in that region after 1000 BC and their movement eastwards into the Ganges valley could be explained by means of these climatological data. The dry period would have made the jungles of the Gangetic plains penetrable and when the climate improved again after 500 BC the migrants would have already established their footholds along the Ganges and have started cutting and burning the forest, thus reclaiming fertile lands for agriculture. The improvement of the climate would then have contributed to the second wave of urbanisation which started in South Asia at that time. But only more detailed palaeobotanical research can prove that these hypotheses derived from the findings in Rajasthan are applicable to other regions of South Asia as well.

In addition to changes in climate and perhaps an inundation caused by a tectonic upheaval, there seem also to have been socio-economic factors which contributed to the decline of the great civilisation. At their height around 2200 BC, the centres of this civilisation had become far removed from their agricultural roots and yet they were more dependent than ever