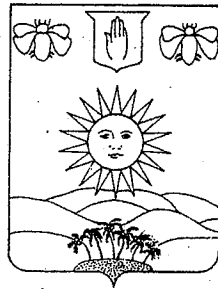


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ARCHAEOLOGICAL FIELD RESEARCH IN PAKISTAN SINCE INDEPENDENCE: AN OVERVIEW

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Since 1947, a great number of archaeological field research programmes involving extensive surveys and systematic excavations at selected sites have been carried out in Pakistan covering a wide chronological range dating from prehistory to the Islamic and later historical times. The emphasis has been shifting frequently from one region to another, and also on the selection of sites depending upon the problems to be investigated. However, the pre- and protohistoric periods of Pakistan have somehow received much greater attention than the sites of later periods, largely due to the specific orientation and scope of the research projects rather than searching for the antiquity of Pakistan which was already well known from the Potwar plateau and the major cities of the Indus Valley civilization. Another significant feature of archaeological research has been the involvement of foreign archaeologists from several countries in Pakistan whose number and size have been increasing progressively particularly since the 1970's. An important outcome of the presence of foreign archaeologists has been the accumulation of a vast body of new information bearing upon a multitude of important issues of diverse kinds. Further researches are opening up new perspectives and providing explanations, if not the full answers to various problems. The present overview is aimed at pointing out significant aspects of archaeological investigations so far carried out in Pakistan rather than presenting a critical evaluation of each work. An assessment of archaeological discoveries pertaining to different periods has just been published

(Dani 1988). However, to complement Dani's review, an attempt has been made to list all the primary and important sources of each field work referred to in the text. The present outline is presented according to the commonly used archaeological or historical periodization instead of treating the discoveries by regions or in chronological order.

The Palaeolithic Period

The Potwar plateau lying between the Attock and Jhelum rivers contains the earliest known hominid remains and associated lithic materials which were originally brought into focus through the investigations of a joint Yale-Cambridge team in 1930's (De Terra and Paterson 1939; Paterson and Drummond 1962). This was the first major survey aimed at documenting data on prehistoric environment, study of geological sequence and for the location of stone tools that led to their classifications into (uniface) pebble tools or choppers, (biface) chopping tools, hand-axes, flakes of different types and blades. Their dating resting on the geological history of the region has been questionable and also the technological and typological studies of the stone tool assemblages and their parallels with tool types outside South Asia.

After Independence, limited investigations were done in the the Potwar plateau by a team from the Geological Institute of Milan, Italy during 1954-55 and 1960-62 (Graziosi 1964). Another team under Dr. Elden O. Johnson (1973; and Krantz 1973) from the University of Minnesota, U.S.A. carried out explorations in the Potwar that included areas of

Gujar Khan, Chauntra, Chakri, Rawalpindi and Taxila. They recorded more than three dozen sites consisting of open-air sites, caves and rock shelters among which the sites of Mohra Battan, Ghila Kalan, Adiala and Khanpur were investigated by test digging. In 1963-64, A.H. Dani (1964) excavated at Sanghao Cave at the border of Mardan district, N.W.F.P. The Sanghao Cave was reinvestigated by the University of Peshawar and the Department of Archaeology in 1975. It yielded a flake industry belonging to the terminal Pleistocene period which could be placed in the Middle Stone Age industry but also continuing into the later period. Earlier, the excavation done at the Khanpur cave near Taxila by the University of Peshawar had revealed evidence of the Mesolithic occupation dominated by the microliths.

While these researches were in progress, Mohammad Salim, a young and dedicated Pakistani prehistorian at the Quaid-i-Aziz University, Islamabad, was making significant contributions by his field researches in Attock and Rawalpindi districts of the Potwar plateau with particular reference to the prehistoric cultural and environmental changes that occurred during the Middle Stone Age (Salim 1978, 1981, 1986a, 1986b; and Salim *et. al.* 1986). He resumed field work again in 1986 in collaboration with his colleagues in the Earth Science Department of the Quaid-i-Aziz University. In the same area Ibrahim Shah, a renowned geologist and palaeontologist of the Geological Survey of Pakistan with a team led by David Pilbeam of the Harvard University started field research in 1976; and they were able to collect a large number of hominoid fossils. A complete lower jaw of *Ramapithecus Punjabicus* was also reported (Pilbeam 1982; Pilbeam *et. al.* 1977; and Pilbeam and Stiles 1978).

Another major programme of prehistoric research in the Potwar was started in 1980 by a team composed of the Cambridge University and the Geological Survey of Pakistan

with participation of the Archaeology Department of the Pakistan's Government. The studies so far made systematically and published promptly are indicative of the great potential of the area in yielding evidence pertinent to the antiquity of man in Pakistan and his prehistoric environment (B. Allchin 1981, 1986, 1987; Dennell 1984; Dennell, Rendell and Halim 1985; Rendell 1984; Rendell and Thomas 1980; and Rendell and Halim 1985; Rendell 1984; Rendell and Thomas 1980; and Rendell and Dennell 1985).

In lower Sind, Abdur Rauf Khan of the Geography Department of the Karachi University carried out periodic surveys of the Indus Kohistan and Karachi areas during 1970's and located several sites which could be assigned to the Neolithic, Middle and Upper Paleolithic times typologically. In upper Sind, Rohri Hills were long known to be factory sites for the production and distribution of stone tools especially blades and flakes. The hills were reinvestigated in 1970's and in 1986 by the British and Italian teams respectively. Besides locating new sites and collection of data, important evidence is emerging to suggest climatic changes in that area between the Early/Middle Pleistocene and the Harappan period (B. Allchin 1976; Biagi 1988).

Neolithic Culture

The Neolithic stage of cultural development which was usually defined merely in technological terms before Independence was virtually unknown in Pakistan. Its presence was suggested at the earliest levels of Rana Ghundai located in the Loralai valley of northern Baluchistan. Despite its mid-fifth millennium B.C. radiocarbon date equating Rana Ghundai I with the Neolithic of the Quetta valley, this site has not yet received due attention. The evidence of the Neolithic culture also came from the Quetta valley in central Baluchistan during the excavations at Kile Gul Mohammad (Fairervis 1956). The

earliest occupation at that site was called pre-pottery (rather aceramic) which according to the recalibrated radiocarbon dates, began in the middle of fifth millennium B.C. No parallels, either cultural or chronological of the Quetta valley Neolithic assemblage, were known until the discovery of a long Neolithic horizon at Mehrgarh in the mid-1970's located in the Kachi plain of the administrative province of Baluchistan, but otherwise lying within the physiographic region of the Greater Indus Valley. At that site, the earliest aceramic Neolithic occupation is dated to the end of the 7th millennium B.C. (Jarrige 1982, 1982, 1984; Jarrige and Lechevallier 1979; Lechevallier and Quivron 1981 and 1984). There is an apparent continuity from the earliest levels in ceramics, architecture, local craft specialization (Lechevallier 1984) to the mid-third millennium B.C. Access to raw materials through trade or exchange, full domestication of plants (Constantini 1984) and animals (Jarrige and Meadow 1980; Meadow 1979, 1964) and continuity in burial practices (Samzun and Sellier 1984) are also indicated from the Neolithic to the Chalcolithic and the Bronze Age. During the Mature Harappan period, the site of Nausharo was occupied (Jarrige 1986; and in press) while a part of Mehrgarh site was used for internments with funerary objects having striking parallels to the second millennium B.C. cultural materials of Central Asia (Santoni 1984).

In northern Pakistan, different kinds of Neolithic assemblages have been discovered especially in the Swat and Taxila valleys. At Loebanr III (Stacul 1976, 1977 and 1980) and Ghalagai (Stacul 1967 and 1969) in Swat, handmade grey pottery with basket impressions at the base and associated with ivory pieces, stone disks and beads of jade, links the Swat materials with the Yang-Shao Neolithic tradition of North China where it began during the fourth millennium B.C. In Swat, it falls into the first half of the second millennium B.C. and later, a date which is about a

millennium later than the time-range suggested by the radiocarbon dates of the identical materials found at Burzahom and related sites such as Gufkral in Kashmir. Further southward in the Taxila valley, M.A. Halim (1970-71 and 1972) found handmade red burnished pottery assigned mostly to the beginning of the third millennium B.C. in the earliest levels of Sarai Khola with pit dwellings, stone celts and lot of bone implements. Still further north in the Bannu Basin, Farid Khan of the Peshawar University and Robert Knox are discovering a Neolithic occupation at Sher Khan Tarakai with a radiocarbon date of at least the middle of the fifth millennium B.C. (Khan, Knox and Thomas 1986 and 1987)).

Early Baluchistan

The barren highlands of Baluchistan are sparsely populated but in its accessible valleys, drained by the seasonal streams, ancient sites are clustered where modern towns and villages are also located. The moisture of meagre rainfall and the sub-soil water, if available, are still utilized effectively for subsistence and related activities by the modern population.

Before Independence, Sir Aurel Stein conducted surveys in the valleys of Baluchistan and recorded a great number of sites belonging to the protohistoric period which can now be dated from at least the fifth to the second millennium B.C. These sites seemed to fall into significant groups of almost identical and recurrent cultural materials especially the pottery which came to be known by the site-names such as Kulli, Mehi, and Nal-Nundara in southern Baluchistan, the Quetta wares of central Baluchistan and those concentrated in the Zhob and Loralai valleys of north Baluchistan.

The field researches carried out during the post-Independence period have completely altered the archaeology of Baluchistan. The new evidence has emphasized the vital role of

Baluchistan in the development of human material culture leading to the rise of civilization in the vast plains of the Indus river and its tributaries inclusive of the (now dry) Ghaggar-Hakra river system. The new items of fieldwork in Baluchistan are the surveys in the Zhob and Loralai valleys, excavations in the Quetta valley in early 1950's, and the survey of the Las Bela plain in 1959-60 by Walter A. Fairervis (1959, 1956 and 1975 : 189-205); the explorations and test excavations in Kalat by Beatrice de Cardi in 1948 and 1957 (1964); a limited survey by Henry Field (1959); and the exploration of the Arabian Sea coast by George F. Dales in 1960 (1962a and 1962b) who also excavated at Bala Kot near the coast (1971, 1974 and 1979). The present writer also carried out a survey of a part of Las Bela and the coast in 1962 and extensive survey of northern and central Baluchistan in 1972 (Mughal 1974). In the Ornach and Jhalawan region R. L. Raikes (1968) recorded a number of protohistoric sites. Nindowari, a characteristic Kulli ware site, was excavated by J. M. Casal (1966) before moving on to the Kachi plain of east-central Baluchistan where Mehrgarh has yielded a very long sequence of cultures beginning from the end of the seventh millennium B.C. already referred above. Another site, Nausharo which is being excavated, appears to shorten the gap between the Late Harappan cemetery at this site and Pirak, investigated by the French in the early 1970's (Jarrige, Santoni and Enault 1979). They have now taken up digging of yet another site, Lal Shah (Pracchia 1985). The results of extensive explorations of southern Baluchistan initiated three years ago by an Italian team are awaited.

THE INDUS VALLEY CIVILIZATION: ORIGINS, CLIMAX, AND DECLINE

South Asia's first civilization which is known to the world as the Harappan or Indus civilization and best represented by the two largest urban centers of Harappa and

Mohenjo-daro in Pakistan, has been the focus of major interest for many an international team of archaeologists and specialists. All of them have been working to unfold new facets of this remarkable civilization which appears to have climaxed in the Greater Indus valley around the middle of the third millennium B.C. Since Independence, the major research efforts have been focused on such important issues as the origins of the Indus civilization, its fully urban phase and cultural dynamics, its decline, also called "collapse", "end" or "fall", but actually representing the Late Harappan period, settlement patterns, cultural ecology of the Indus valley, mechanism of ancient trade or exchange, location, identification and interpretation of specialized craft activities, decipherment of Indus script, documentation of architecture and town planning of the Indus cities, and reanalyses of the known cultural materials. The major breakthrough, however, was the identification, recognition and definition of the Early Harappan or early developmental phase of the Indus civilization (Mughal 1979, 1983 and 1988). It was demonstrated that an Early Harappan phase of cultural development already existed about seven to eight hundred years prior to the rise of large Indus cities. The Indus civilization did not emerge as a result of stimulus diffusion from other centres located in Iran and Mesopotamia but it had an indigenous origin and growth in the Greater Indus valley. Here only the significant developments in research on the Early, Mature and Late Harappan periods, which have so far been made in Pakistan since Independence are pointed out.

The Origins or The Early Harappan Period

The excavation at Kot Diji during 1954-55 by F.A. Khan (1965) revealed convincing evidence of the early or formative stage of the Indus civilization in the cultural assemblage called Kot Dijian. In it, were found the traits which marked the beginning of the Indus civ-

ilization or its early urban form which later on developed and climaxed in the middle of the third millennium B.C. as represented by Mohenjo-daro and Harappa. Since then, a large number of sites of the Early Harappan period have been excavated all over the Greater Indus valley which encompasses both the Indus and Hakra river systems. The new discoveries amplified and substantiated further the existence of an early formative or early urban stage of the Harappan civilization in the Indus valley and its indigenous growth.

The evidence most relevant to this Early Harappan phase has been discovered at several sites, namely, Amri in southwestern Sind and excavated between 1959-62 by J. M. Casal (1964); Sarai Khola in the Taxila valley excavated by F. A. Khan and M. A. Halim during 1968-71 (Halim 1970-71 and 1972); Jhang which was dug by the present writer in 1974; and Hathial also in the Taxila valley where limited excavations were carried out by G. M. Khan in 1979-80 and 1982 (1983; and Dani 1986). In the central Punjab plain, Jalilpur on the Ravi river was excavated twice by the present writer in 1971 and 1976 (Mughal 1972b, and 1974). Another site of contemporary date has been discovered at Khadianwala north of Lahore by S. R. Dar (1983), thus filling a gap between Sarai Khola and Jalilpur.

The most extensive and systematic explorations of the desert called Cholistan (or 'Rohi' locally), were undertaken by the present author for four winter seasons between 1974 and 1977. Among 414 sites and monuments recorded, 264 belong to the Early, Mature and Late phases of the Indus civilization dated approximately from the second half of the fourth to the second millennium B.C. (Mughal 1981, 1982, 1984, 1988, and in press). The largest single group of 40 sites represents the Early Harappan phase of the Indus civilization and was recorded in Cholistan.

To the north in the Gomal valley and Bannu basin, the University of Peshawar has

added a number of early sites through systematic explorations which were originally started in 1960's under A. H. Dani (1970-71), who investigated an Early Harappan site of Gumla. The major excavations, however, were conducted at Rahman Dheri under the leadership of Farzand Ali Durrani of the Peshawar University between 1976 and 1982 (Durrani 1981, 1982 and 1988; and Khan 1979). Farid Khan of the Peshawar University joined hands with a team from the Cambridge University and mapped a number of early sites in the Bannu Basin (Durrani 1984) amongst which two sites, Lewan and Tarakai Qila, were excavated in 1977-78 and 1978-79 (Allchin *et al.* 1981; and Allchin and Allchin *et al.* 1986). Another important site, Sheri Khan Tarakai with occupation going back to at least the fifth millennium B.C., is currently being excavated jointly by Farid A. Khan and Robert Knox (1986 and 1987).

In the southern Indus valley covering the entire Sind province, sporadic explorations have been carried out in different parts by the Pakistani and foreign archaeologists. However the major surveys were those done by Muhammad Sharif in southern Sind as reported in *Pakistan Archaeology (PA)*, no. 8: 133-7; in the Indus Kohistan by Louis Flam in 1970's (1981 and 1986), and a limited one by Hans Nissen in northwestern Sind during 1983. The site of Ghazi Shah near the Kirthar mountains in western Sind has been under excavation by Louis Flam during the last three years. The major trench has not yet touched the natural soil but the evidence so far reported by the excavator in his recent lectures at the University Museum includes the Nal, Togau C and D, Amri IC and D, Kot Dijjan, Mature Harappan and Kulli ceramics and specialized craft activities.

The Climax or The Mature Harappan Period

It is now well known that the cultural processes leading to urbanization in the Greater

Indus valley climaxed around 2500 B.C., as exemplified at Mohenjo-daro and Harappa. Some of its outstanding characteristics include remarkable town planning, complexity of domestic architecture, monumental public buildings, mass production and standardization of cultural materials such as sculptures, seals, metals and ceramics, an established pattern of long distant trade or exchange, social stratification and an existence of writing.

Since Independence, further investigations have been carried out at the Mature Harappan sites and the previously known data is being reexamined and reinterpreted. In 1950, the citadel site of Mohenjo-daro was excavated by Sir Mortimer Wheeler where he uncovered a large structure interpreted as granary and also tried to reach the early levels. In 1964, George Dales (1965) excavated at the city site to determine the stratigraphic and structural sequence. A fresh documentation of the architectural remains was started by a German team led by Michael Jansen between 1979 and 1986. The huge body of data collected at Mohenjo-daro is being interpreted afresh (Jansen 1983, 1984a, 1984b, 1984c and 1987; Jansen and Urban 1985; Urban 1987; Veradi 1987; and Wanke 1987).

Simultaneously, morphological and surface features of Mohenjo-daro were also carefully studied and areas of craft activities identified at the site (Balista and Leonardi 1987; Bondioli and Tosi 1984; Pracchia 1984 and Vidale 1987). Areas of pottery production (Pracchia 1987), kilns and bangle-making (Halim and Vidale 1984; Schneider 1987 and Vidale 1987), manufacture of shell objects (Kenoyer 1984a and 1984b) have been delineated and ancient manufacturing techniques reconstructed. However, the true function of the craft areas in the context of its growth remains to be ascertained. Geophysical investigations are throwing important light on the depositional history of Mohenjo-daro and its architectural remains (Cucarzi 1984, 1985 and

1987).

In addition to Mohenjo-daro, attention was also focused on the small village settlements and their local environment. Between 1973 and 1977, a Harappan village at Allahdino located in the Malir river basin near Karachi, was excavated by an American team led by Walter A. Fairservis (1973, 1976 and 1982; Hoffman and Cleland 1977). Just northwest of Mohenjo-daro, the site of Jhukar was also excavated by the present author in 1973-74 where the Mature and Late Harappan occupations were found to be overlapping with each other without cultural discontinuity.

In the Punjab, the survey of Cholistan yielded an impressive number of 174 Mature Harappan sites among which about 45% were found to be related to craft activities exclusively and about 28% were habitation sites. In terms of settlement size, over 60% measured up to 5 ha while large sites covering 15 to 20 ha were also present. Another large city, Ganweriwala sprawling over an area of more than 80 ha was discovered. It lies precisely between Mohenjo-daro and Harappa.

At the site of Harappa, excavations were done by the present author at the cemetery R 37 in 1966 (*PA*, no. 5: 63-68). The site is now under excavation on a large scale by an American team led by George F. Dales and J. M. Kenoyer (1988) with focus on the cemetery R 37, Mound AB and Mound E. The latter mound was never excavated because it was plundered by the railroad contractors in the 19th century for baked bricks. The Early Harappan Kot Diji type of pottery as recorded by Wheeler in 1946 from below the defences at Harappa has been found to occur at the lower levels of mound E in recent excavations.

The Harappan studies also extended to the Frontier Province of Pakistan where in the Gomal valley, the University of Peshawar added new Mature Harappan sites (Dani 1970-71; Durrani 1981, and 1984). The discovery of Harappan painted designs by G.

Stacul at Ghalagai in the Swat valley indicates the extent of penetration of Harappan influence in northern Pakistan (Stacul 1984).

At the southern coastal area of Baluchistan, Bala Kot near Sonmiani Bay in Las Bela district had been under investigation by George F. Dales between 1974 and 1977. Its upper levels represent a Mature Harappan occupation dependent on the marine resources as distinct from the economy of earlier period based on cattle, goats and sheep. In the Kachi plain, J. F. Jarrige (1986, in press) is now excavating a Mature Harappan site at Nausharo linking Mehrgarh period VII with the Mature Harappan period.

The Decline or The Late Harappan Period

Before Independence, the decline of the Indus civilization sometime in the middle of the second millennium B.C. was generally attributed to the invasion of Aryan speaking people. The new researches done since 1960's are bringing into focus multiple causes which seem to have contributed to a gradual decline or change in the material culture rather than a sudden end, demise or collapse of the Harappan civilization. In this connection, the excavations at Jhukar located about 17 miles northwest of Mohenjo-daro in 1973-74 were aimed at understanding the precise nature of material changes first pointed out by Majumdar (1934) and their cultural implications during the final stage of the Indus civilization in the southern Indus valley. The new ceramic evidence of Jhukar suggested continuity from the Mature Harappan to the overlying "Jhukar" levels containing bichrome pottery and other materials. Earlier, the upper levels designated as IIIC at Amri had yielded similar ceramics which were comparable with those from Chanhu-daro II (upper) levels overlying the Mature Harappan remains (Mackay 1943). Identical materials were also present at Mohenjo-daro but their significance as to represent a late phase of the Indus civilizations was never put in proper perspective. On

the present evidence of the lower Indus valley, it seems that certain changes in the material culture had taken place within the Harappan cultural tradition but those did not represent a discontinuity. Moreover, the period represented by the Jhukar style of ceramics, in fact, covered quite a large area in central Sind. It was also observed that the known Jhukar assemblages show conspicuous scarcity or absence of the standard cubical weights, square size seals with pictograms and the characteristic representation of the female figurines.

In the upper Indus valley, the contemporary situation was quite different. At Harappa, a distinctive ceramic group known from the uppermost occupation at Mound AB but mostly from the cemetery called, 'H', that was dug into the debris of the Mature Harappan period, was thought to mark an influx of new people (Aryans) whose arrival could have caused or hastened the decline of the Indus civilization. South of Harappa, the discoveries along the Hakra river bed in Cholistan have demonstrated that the Cemetery H type of materials are not localized at Harappa only but are widespread in the upper Indus valley covering the whole of Punjab (in Pakistan and India) and Haryana. In Cholistan alone, among fifty sites with Cemetery H pottery, 28% are habitation sites and an equal number combine the functions of habitation and craft activities while 18% are exclusively industrial sites. 46% sites are up to 5 ha in size and there is one site measuring 38 ha. The Ghaggar-Hakra drainage system and the settlement locations suggest that frequent changes in the hydrographic pattern of the river and excessive utilization of the environment combined with increasing population pressures may have been the major contributory factors to force shifting of settlements and in consequence, induce cultural re-adjustments and changes during the Late Harappan period. At that time, the organizational fabric which kept the entire Greater Indus valley together

was apparently weakened but not destroyed. The populations seem to have regrouped themselves to carry on the Harappan tradition for some time, a situation similar to that of the lower Indus valley where Harappan tradition continued to persist amidst Jhukar type of materials at several sites spreading over an area from Amri to Chanhu-daro.

In addition to fieldwork, the known materials have been the subject of specialized research on the Indus civilization dealing with systems of exchange and regional interaction (Fentress 1976), Bronze Age stone industries (Cleland 1977) and shell working industries (Kenoyer 1983). The intensity and strategies of research on the Indus civilization during the last fifteen years have given a new perspective to the various issues involved and mark a shift in emphasis, as pointed out before (Mughal 1983).

Post-Harappan Interlude And The Iron Age

Until recent years, an apparent gap in Pakistan's protohistory between the end of the Indus civilization around 1730 B.C. and the beginning of historical era about the 6th century B.C., had defied satisfactory explanations. An absence of information on this period had created the so-called "Dark Age" of more than one thousand years, a period which was a subject of considerable speculation. The excavation at some sites has helped to fill this lacuna in our knowledge even though the sequence of events in any region of new discovery remains to be reconstructed and understood properly.

Isolated but significant evidence was revealed at Pirak in the Kachi plain of Baluchistan where excavation by J. M. Casal between 1967 and 1974 brought to light a cultural sequence of about one thousand years ending in the first millennium B.C. (Jarige, Santoni and Enault 1979). In southern Baluchistan, diggings at Kulkian Damb near Nindowari in the Ornach valley by J. M.

Casal and surveys of the Las B. 'a plain along the Porali river by Fairservis, produced evidence of a cultural complex falling within the time frame of Pirak but distinctly different from its contents.

In the Malir river basin of Sind, Said Qamar and Gulzar M. Khan of the Department of Archaeology excavated a cist stone burial complex of menhir type in 1975 which in the absence of firm date, may belong to the third century B.C. on typological grounds, as it recalls parallels with those of Baluchistan and southern India (Qamar 1983). In central Sind, certain ceramics as known from the site of Jhangar seem to fall somewhere in the first millennium B.C. Comparable evidence is limited due to circumstances of recording or discovery but fragmentary evidence is reported from the uppermost but disturbed layers of Amri and Lohemjo-daro. It seems that the cultural mosaic so far known from southern Baluchistan and parts of Sind provides us with regional manifestation of cultures, but their details as well as implications are still poorly known.

In the east-central Indus valley, a new picture has emerged as a result of explorations of Cholistan. The pottery and associated materials known as the Painted Grey Wares (PGW) have been discovered on 14 single period sites. Numerous PGW sites have been discovered in the adjacent Indian territory of Rajasthan, Punjab and western Uttar Pradesh where they fall between 1100 and 300 B.C. and even later. Several scholars have associated the PGW with the Aryan-speaking people who reportedly moved to the Hakra-Ghaggar valley (also identified with Sarasvati) sometime in the first millennium B.C. As regards their early movements into northern Pakistan, the discovery of some extensive cemeteries and settlement sites in the Frontier region called the Gandhara Grave culture, are providing important evidence pertaining to the late Bronze Age and the beginning of Iron Age in Pakistan.

A large number of Gandhara Grave culture sites have been excavated in Dir, Swat, Peshawar, Taxila, Buner, Chitral and Northern Areas by A. H. Dani (1967, 1973 and 1983) and his colleagues at the University of Peshawar, the Italian archaeologists (Antonini 1972; Stacul 1966a, 1966b, 1967, 1969, 1970 and 1987) and by M. A. Halim and G. M. Khan (1973 and 1983) of Pakistan's Department of Archaeology. These cemeteries represent a long period from about 13th to 5th centuries B.C. The burials are marked by extended and inflexed positions accompanied with funerary vessels and objects. The dead were also cremated and ashes and bones disposed off in large vessels buried in the ground. The pottery associated with the Gandhara Graves consists of red and grey wheelmade vessels of various shapes. The different modes of burials are also thought to mark influx of people at different times in northern Pakistan who eventually moved onto the Hakra-Ghaggar (Sarasvati) valley and then to the east into the Doab of Northern India. In addition to the evidence from the cemeteries, further information on their settlements has also been discovered in the Swat valley (Stacul 1978 and 1985; Callieri and Filgenzi 1984; Filgenzi 1985; Stacul and Tusa 1975 and 1977) and at Taxila (G. Khan 1983).

The Historical Era And Buddhism

The archaeological richness of the Gandhara region of Pakistan has always attracted orientalists, archaeologists and art historians from across the world interested in the Buddhist culture. As such, an enormous amount of new data has been brought to light in the Gandhara region especially in the Swat valley where the Italians have been on the scene for the last 32 years. The sites excavated by the Italians make a long list and includes important Buddhist sites of Butkara I and II, Udergram, Loebanr I and II, Katalai I and II, Panr, Barama, Gogdara, Ghalagai and Aligrama. Some publications have come out on

Butkara (Facenna 1962-64, 1980-81) and more are awaited.

The Japanese archaeologists from the Kyoto university have excavated in the Mardan district between 1959 and 1967 at Kashmir Samst, Chanaka Dheri, Tarelli and Maka Sanda (*PA* no. 5: 143-155). Another Japanese team from the same university was in the field during 1984-85 for excavations at Rani-gat and to explore the surrounding area.

Abdur Rahman of the Peshawar university who had earlier excavated at other sites including Andan Dheir, Chatpat and Damkot (Rahman 1968-69), has recently completed two seasons of work at a Buddhist site near Butkara, revealing a monastic establishment and numerous votive stupas in the forecourt. The present writer and Nazir Khan excavated at Nimogram in 1967, where Nazir Khan continued digging in 1968. Nimogram is a Buddhist monastic establishment representing three stupas symbolically, the Buddha, Dharma and Samgha (*PA* no. 5: 123-126).

In the Taxila valley limited excavations were done at the Buddhist site of Hasan Abdal by G. M. Khan in 1983 and Said Qamar in 1988. South of the Taxila valley, Saifur Rahman Dar excavated at one of the ancient mounds close to Mankiala stupa in 1968, an important and flourishing religious center referred to by the Chinese travelers (Dar 1970-71). In 1967, Mohammad Sharif of the Department of Archaeology carried out extensive excavations at Bhir mound, Taxila, to uncover and further study the history of the earliest city of Taxila which was in existence at the time of Alexander's invasion (Sharif 1969). Recently, he excavated at Haji Shah Morr near Attock, revealing a Buddhist stupa and monastery assignable to the 5th century A.D. (Sharif 1986). Another important and contemporary Buddhist site was under excavation at Sarai Saleh in Hazara district north of the Taxila valley in 1988 where numerous stuccos of the mid-fifth century A.D. have been found amidst Buddhist monastic

remains.

In 1958, the high mound of Bala Hisar near Charsada was excavated under the direction of Sir Mortimer Wheeler where a long sequence of occupations was revealed with a succession of structural levels and associated finds starting from about the fifth century B.C. to the Medieval period in the 17th century A.D. (Wheeler 1962). Soon afterwards, A. H. Dani, then at the University of Peshawar carried out extensive excavations at the nearby city, Sheikhan Dheri in early 1960's (Dani 1965-66). The ceramics from this site have also been a subject of detailed study and reanalysis (Hussain 1980).

The Muslim Period : Early And Medieval

The Muslim period of Pakistan's history spreads over one thousand years beginning from the arrival of the Arabs under Mohammad bin Qasim in 712 A.D. to the decline of the effective rule of the Mughal dynasty with the death of Aurangzeb in 1707 A.D. Since Independence, research on the archaeology of the Muslim period has been exclusively carried out by the Pakistan's Department of Archaeology. Only very recently, an Italian and an American team have begun field work on sites of the Medieval period of Muslim history.

In 1958, a major program of excavations at an early Islamic site of Banbhore was launched by the Department of Archaeology under the direction of F.A. Khan which continued until 1964. Banbhore is now identified with the historic city, Daibul, recorded by the Arab geographers and historians of the Ummayyad and Abbaside times. After the conquest by the Arabs, it was rebuilt on a new plan over a pre-Muslim town which was originally founded in about first century B.C. (*PA* no. 5 : 176-185; Khan 1976). Mansurah, the capital city of the Arabs was founded in the early eighth century A.D., the remains of which are located near Shahdadpur in Sanghar district of Sind. It has been under

extensive excavations for thirteen winter seasons after F.A. Khan commenced excavations in 1966 (Farooq 1986; *PA* no. 5 : 186-202). In 1964, another fortified settlement of the Islamic period at Bhira Bham in Nawab Shah district was test excavated by the present writer (*PA* no. 2 : 4-5). The search for sites of the early and later Islamic periods prompted Mohammad Sharif to explore the Hyderabad and Thatta districts of southern Sind in 1972 and to reconstruct ancient settlement patterns from the prehistoric to the Islamic period (*PA* no. 8 : 133-137.)

The excavations and documentation of the Muslim sites have been limited in number and extent. Whatever work has been done, it was carried out by the Pakistanis mostly of the Department of Archaeology. Tulamba in central Punjab is so far the only site where the present writer laid a cross trench down to 65 feet to discover a chronological sequence with which other sites in that region could be related (Mughal 1967). The site represented successive occupations from at least the fourth/fifth century B.C. to the 13th/14th century A.D. For the later periods, Satgara near Okara, was excavated by the writer in 1971 (Mughal 1972c) and surrounding area was intensively surveyed to determine medieval settlement patterns (Mughal 1972b). The cultural sequence obtained at these two sites is still the basic frame of reference for relative dating of a great number of sites in central Pakistan. In 1959, deep trenches were laid at Lahore Fort that rises about 60 feet above the surrounding city streets, and at another place in the old city of Lahore to determine the antiquity of the Fort and Lahore city. The evidence available from excavation seemed to suggest the beginning of occupation in the northwestern part of the city not earlier than the 3rd century A.D. (*PA* no. 5 : 156-160). Near Lahore, a large mound, Main Ali Faqiran located in Shaikhupura district, has been under excavation for six seasons by the Department of Archaeology. On initial show-

ings, the site seems to cover a period from the early centuries of the Christian era to the beginning of Mughal rule but the excavated materials are still under study. In the same administrative division of Lahore, the Gujranwala district has been surveyed by S. R. Dar and his colleagues of the Lahore Museum, Tariq Masud and Shahbaz Khan in 1987. They have documented a large number of Muslim sites and monuments. Dr. Farukh A. Khan of medical profession but a great enthusiast and lover of archaeology has reported (in a lecture given at Lahore Museum) a large number of Muslim sites in central Punjab of the early historical and Medieval period.

In Swat, Mohammad Nazir Khan (1958) pointed out the architecture of a Ghazneva mosque which was later excavated by Umberto Scerrato (1985 and 1986). In the same region, several mosques distinguished by their beautiful wood carvings and architectural style reflecting local traditions have been studied and documented by Luca Mariami (1984) and Umberto Scerrato (1983 and 1984).

Research In The Northern Areas

The opening of Karakorum Highway in 1978 provided an eagerly awaited opportunity for carrying out a systematic anthropological and archaeological research in the Northern Areas. A Pakistan-German Study Group constituted under the joint leadership of Ahmad Hasan Dani and Karl Jettmar respectively of the universities of Islamabad and Heidelberg have so far documented and collected a mine of linguistic, epigraphical, ethnological, historical and archaeological data on the ancient Silk Road. Over three thousand inscriptions including those of early Kharosthi, Brahmi, Sogdian, and some Chinese and more than twenty thousand petroglyphs representing figural engravings, Buddhist shrines, pre- and protohistoric sites and a great variety of wooden mosques built in the traditional style have been documented

(Dani 1981, 1983a, 1983b and 1985; Jettmar 1979, 1982 and 1984; Fussman 1978; and Thewalt 1984). An enormous amount of information so far collected awaits full analysis, proper interpretation and final publication. The field researches already carried out in the Northern Areas have demonstrated the antiquity and cultural diversity of that region and need expeditious publication of results. It is hoped that sites of the Mesolithic/Neolithic period, late Bronze Age and early Iron Age, of the Buddhist and later periods would also be studied and interpreted fully.

Future Prospects

There is no doubt that during the last forty-two years, Pakistan has made great strides in archaeological research and development in all major periods commensurate with its very long history and rich cultural heritage. The major developments have been in the pre-Muslim period: Buddhist archaeology of Gandhara, the Chalcolithic and Bronze Ages and the Paleolithic period. On the other hand, the field researches pertaining to the Islamic and later periods (historical or Medieval, 8th-18th centuries A.D.) have not yet caught up with the number as well as increasing pace of the prehistoric, protohistoric and early historic archaeology of Pakistan. Although some extensive surveys of selected regions have been conducted still a full picture of the entire archaeological wealth of Pakistan has yet to emerge through a systematic programme of comprehensive explorations and prompt publications of results. With growing interest in the archaeology of Pakistan among the public, teaching of archaeology and anthropology at the universities of Peshawar, Punjab, Khairpur and Karachi and the creation of Provincial Departments of Archaeology (so far in Punjab and Sind), archaeological field researches are expected to be intensified in future. In 1987, the Federal Government established an Institute of Archaeological Training and Research at

Lahore Fort under the Department of Archaeology and Museums to provide basic training to the Pakistanis to enhance their

capabilities for archaeological and cultural research in Pakistan.

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