The Beginning of a Tradition

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Starting at about 12,000 to 10,000 BCE, ancient man began to experiment with wild growing grains and plants. Species more adapted to the climate, stronger, more resistant to shortage of water and diseases, with more grains and easy to remove husks were selected and cultivated. The people soon started to keep and breed goat, sheep, and cattle. This transition from hunting to farming, from a mobile to a predominantly sedentary lifestyle is labeled the 'Neolithic Revolution', but it rather was a slow evolution: it took thousands of years before food production was more important than food collecting. Yet, hunting and gathering of food remained an important addition to nutrition, particularly during periods of food stress, caused through droughts, overpopulation, overgrazing and overuse of soils. Although this development is best documented along the Fertile Crescent, the beginnings of food production and settled life are now also attested further east.

In Pakistan, it is attested at a few sites. It was first discovered at Kili Ghul Mohammad, the type site near Quetta excavated by W. Fairservis, and, a little later, the transition from a nomadic to a sedentary lifestyle and the beginnings of pot-making were also found further south, at Anjira

Fig. 6.1
The Mehrgarh landscape

< Mehrgarh – Bolan section in 1981

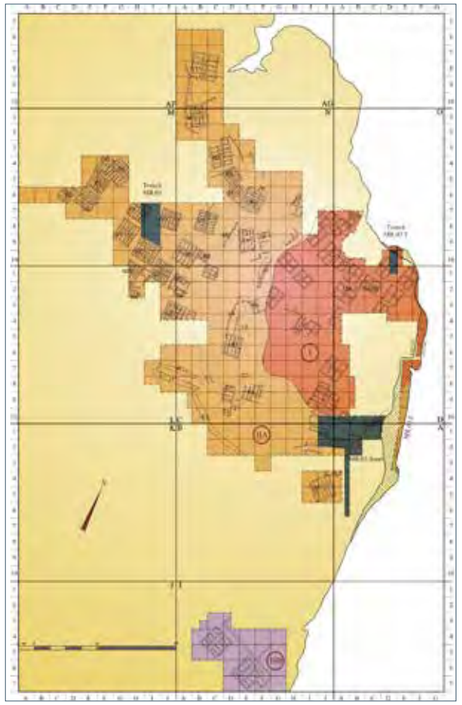

Fig. 6.2
Plan of Neolithic Mehrgarh

Neolithic Mehrgarh (I–II)

Situated at the foot of the Bolan Pass the Kachhi Plain represents a transitional zone between the highland and the alluvial plain (**Fig. 6.1**). The moderate climate and different ecotopes with diversified resources were favourable for the formation of sedentism. The decreasing importance of hunting, the increasing number of domesticated cattle, sheep and goats as well as the cultivation of several kinds of wheat and barley beginning with Period I and their modification in the following phases, including the relinquishment of einkorn and emmer, are evidence of a local adaptation to the habitat and an advanced use of resources.[4] The presence of dates (*Phoenix dactylifera*), jujbe (*Zyziphus jujube*) and cotton (*Gossypium sp.*) as summer fruits illustrates that agricultural foundations that had been laid by the time of phase Mehrgarh IIB remained essentially the same, while being improved until the Harappan period.

Whereas grains, goat and sheep are supposed to have arrived to the east from Southwest Asia, cattle, in particular the humped bull, the most frequent domestic mammal, most likely originated in eastern Iran or Pakistan.[5] The fact that among the wild game, animals such as the Indian elephant (*Elephas maximus*), the rhinoceros (*Rhinoceros unicornis*) and the wild pig (*Sus scrofa*) are also evidenced, allows the deduction that there was a large catchment area that encompassed the Kachhi Plain and the mountain foreland and, furthermore, that grave changes in the habitat have occurred since Neolithic times.

The cultivation of plants that require intensive irrigation (*Triticum sphaerococcum, Hordeum spaerococcum*) indicates that in addition to the spring floods, arable land was irrigated by means of small channels through the Bolan Pass as early as Period IIA.[6] Yields were enlarged by means of improved tools, agricultural techniques and a variety of cultivars. It was development that is also demonstrated by the enlargement of storage structures. Yet, hunting regained importance at the beginning of Period III and remained so until the end of settlement.[7]

This process of an optimal adaptation to the natural habitat was accompanied by the formation of social order with multi-roomed dwellings and communal storage structures as well as complex burial customs (**Fig. 6.2**). During nine layers of Period I in Mehrgarh, the settlement was shifted back and forth several times (**Figs. 6.3; 4**).[8] Pottery appears for the first time in Period IIA (**Fig. 6.5**), although simple clay figurines depicting females were produced as of Period IA.[9] Finds from the cemeteries attest the accessibility of non-local raw materials such as sea snails and shells, mother-of-pearl, steatite, lapis lazuli, turquoise, carnelian and even copper (**Fig. 6.6; 7**). Apart from information on diet and health, molar crowns from nine adults showed traces of drilling - the earliest example of dentistry.[10] During Period II, that is, shortly after 6000 BCE, the number of these status-related grave goods as well as the tools decreased in graves, and pottery was found more frequently in their place.

near Surab.[1] It was not until the opening of the French excavations at Mehrgarh (**Fig. 6.1**), however, that the full and surprising picture was unfolded, leading ultimately to the formulation of a long tradition from the beginning of a village farming life to the formation of the Indus Civilization.[2] This process is attested at Mehrgarh in seven periods dated from the late 8th to the earlier 3rd milennium BCE, and then followed up in the Kachhi Plain at Nausharo and Pirak.[3] The first two periods at Mehrgarh belong to the Neolithic Era, followed by the Chalcolithic (Period III) and Bronze Age. They are not attested in the present collection, which dates back to late Period III, but are included here to illustrate the antecedents of the tradition.

1 Fairservis 1956; de Cardi 1965.
2 See on the concept e.g. Shaffer 1978; 1992; Kenoyer 1991; Possehl 1999. The excavations of the neolithic levels were published recently by Jarrige et al. 2013.
3 See Chapters 12 and 13.
4 Meadow 1989a, 1993, 1996; Jarrige et al. 2013, 110–114
5 Meadow 1993; 1996; Jarrige 1995, 66.
6 Jarrige et al. 1995, 318; Jarrige 2009.
7 Jarrige 1995, 70.
8 Jarrige et al. 2005; Jarrige et al. 2013, 115–118
9 C. Jarrige 1997; Jarrige et al. 2005.
10 Coppa et al. 2006; Jarrige et al. 2013, 135.

Fig. 6.3
Subsequent levels of Neolithic mud brick houses

Fig. 6.4
Subsequent levels of the Neolithic occupation

Fig. 6.5
Red slipped and polished vessels from Period IIB

Fig. 6.6
Neolithic burial with necklace and head adornments still in place

Fig. 6.7
Grave goods: jewellry from various materials and lithic tools

Find contexts in Mehrgarh I and II show that the site may no longer be viewed as representative of the transition of a hunter-gatherer community to a way of life based upon agriculture, as is the case in, for example, Kili Ghul Mohammad I and Anjira I. From the lowermost layers the site already represents a sedentary community with far-reaching economic exchange, complex burial customs and an advanced architecture.[11] Improvement of the supply of foodstuffs and probably the increasing knowledge of more distant regions led to an expansion of settlements during the period of Mehrgarh III.

11 Jarrige et al. 2013, 110-123; 152-154.

Mehrgarh III

The craft of pottery-making experienced great impetus during Period III, dated to the 5th and early 4th millennium BCE[12] that was associated with decisive technological innovations. These include the introduction of the potter's wheel, the use of a spatula for forming and the development of an elaborate firing technology that involved reducing and oxidising firing in order to secure different colours. 70 % of the pottery was turned on the fast revolving wheel and fired on site.[13] Also buff

12 Jarrige et al. 2011b, 10.
13 Samzun 1987; Wright 1995.

Fig. 6.8
Compartmented houses from Period III

types were produced (**Fig. 6.9**). A change in burial customs is manifested by several aspects: ochre was no longer used, and secondary and partial burials disappeared. 80 % of the burials remained in primary position. The grave goods in most of the more than 100 recovered burials are simple; sometimes completely absent. Only a few of the deceased were more richly furnished with jewellery, bronze mirrors, bronze seals (**Fig. 6.11**) or jewellery of semi-precious stones. Most frequent were necklaces or head ornamentation of steatite-micro beads (**Fig. 6.10**). The latter are a technical innovation, which was introduced in Period IB and remained a characterising product of the Indian Subcontinent well into the 2nd millennium BCE. Copper tools replaced some of the stone and bone artefacts. Typically long, often bilaterally retouched blades were used in place of microliths. The presence of crucibles indicates copper-working on a limited scale. In place of finished products, predominantly raw materials were imported and worked on site.

Fig. 6.9
Pot with 'butterfly' motif and goat, from Period III

'Compartmented buildings', related with storage purposes and already erected since Period IA, represent a link between the Neolithic and the Chalcolithic (**Fig. 6.8**). Dwellings built in the agglutinative building style are separate from these storage structures. Handicraft continued to be

Fig. 6.10
Micro-bead necklace or headdress; Period III

Fig. 6.11
Compartmented metal seal, Period III

Fig. 6.12
Polychrome beakers, Period IV

carried out in special areas. For example, in Mehrgarh in a surface area of only 50 m^2 the production of semi-precious stones, including turquoise, lapis lazuli and carnelian, of maritime shells, bone tools and – although in very small amounts – copper took place in small workshops. The finds, whether finished objects or raw material, are evidence that raw materials were available since the beginning of settlement in Mehrgarh. The distances to the sources of these materials entailed up to 400 km for shells, carnelian and lapis lazuli, and up to 500 km for copper, and later tin, silver and gold.[14]

14 Copper mines in Las Bela, noted by Kenoyer (1998, Fig. 5.20f and Possehl 1999, Fig. 3.105, after Hughes-Buller 1907, 162), were not exploited until medieval times as survey results of the Joint German-Pakistani Archaeological Mission to Kalat have shown; see, however, Law 2008; Jarrige et al. 2013, 145; 146.

Mehrgarh IV to VII

The settlement at Mehrgarh was shifted a last time at the beginning of Period IV at about 3500 BCE to the main mound (MR 1) and remained at the same spot until its abandonment after Period VII at c. 2600 BCE. Pottery styles developed into intricate geometric ornament, often painted with additional colours, particularly white and red (**Fig. 6.12**). Well-preserved mud brick houses with a roof construction carried by beams are lined up along lanes. Kitchens and fire places were found inside the houses, along with thousands of complete vessels, figurines, seals, tools, and ornaments (**Figs. 6.13; 14**). The communal or collective storage facilities were now replaced by individual solutions. An open pottery firing area was situated to the north of the houses. This change in the handling of surplus grains and food is an indicator that the social system underwent important transformations. No large cemetery dating to these periods has been found, most of the tombs discovered are those of children which were buried apart from adults.

This time is marked by a considerable expansion in many spheres of life and economy, a development discussed in the next chapter. The Bolan River, which had seasonally flooded the fields (*kushkaba*) in the previous millennia and provided the water for agriculture, had dug its bed deeper into the plain. Traces of water channels indicate that irrigation was practiced now on a larger scale than before, an innovation which permitted the use of land outside the active flood plain. The system worked: wheat

Fig. 6.13
Room inventory from Period VII

Fig. 6.14
Human figurines from Period I to VII

Fig. 6.15
Grey ware dish with fish and water plants, Period VIIA/B

Fig. 6.16
Shell beads from Karez Damb, Ornach

became more important than barley as staple crop. Cattle still outnumbered goat and sheep, but the latter became more popular than food and secondary product suppliers.

While there is strong homogeneity in the material culture from these periods, changes in styles and techniques occur (**Fig. 6.15**). In Period VII, the 'Baluchi' styles, mainly painted decorations on or shapes of pottery, are replaced by features related to the Indus Plains, a development which foreshadows the expansion of a cultural horizon which around 2600 BCE will become the Indus Valley Civilization. Then, Mehrgarh was abandoned. However, occupation in the area continued at Nausharo, a nearby site founded in Mehrgarh Period VII and occupied up to the early 2nd millennium BCE. The earliest pottery from Mehrgarh, with its fine red fabric and thick red to blackish slips marks the beginning of a pottery tradition in Baluchistan[15] that was to continue to the very early 3rd millennium BCE, when buff wares became predominant.

The Late 5th and Early 4th Millennium BCE in Southeastern Baluchistan

The process of Neolithisation and the transition to a sedentary way-of-life in villages has not been attested further south than Anjirah, Periods I–II.[16]

The earliest sites in southeastern Baluchistan mentioned by B. de Cardi are located in the Ornach Valley. They are assigned to this phase by Kili Ghul Mohammad pottery, which is mentioned in a publication by de Cardi.[17] No related pottery was found during a visit to Karez Damb in 2000, where walls were visible on the hill's surface, whereas pottery and lithic objects were not observed.[18] However, the villagers, when digging an underground space for a well, cut the grave of a child and discovered a hoard of 250 cylindrical shell beads (**Fig. 6.16**).

Adam Buthi

Another mound further to the east is Adam Buthi. The site is a small mound, located amid a humble patch of agricultural land within a stony waste on the western bank of the stony Khakhar River, c. 10 km north of Bela, at major routes leading towards the north and west. Some portions along the eastern and western fringes are eaten away by agricultural activities, but the original size of the mound was rather small. Today, its length in north-south direction is 76 m, while its width is 28 m in the south and 11 m in the north. It rises 7.5 m above the level of the present plain (**Fig. 6.17**).

15 Jarrige et al. 2011b
16 de Cardi 1965.
17 de Cardi 1983, site no. 73: Karez Damb, no. 75: Phusi Damb.
18 Raikes (1968, 153) and de Cardi (1983, 39) make mention of flint artefacts and/or Kili Ghul Mohammad pottery.

Fig. 6.17
View of Adam Buthi, Las Bela (B4), with Sounding I

The mound is not at all spectacular, but being situated just west of the RCD highway to Quetta, as it leaves Bela towards the highlands, and near the historic mound Budi Buthi (see Chapter 13) just east of the highway, it cannot be overlooked even from the car. It is therefore not surprising that it was already discovered before the survey of the Joint German-Pakistani Mission to Kalat. The first reference to the site was made by hydrologist R. Raikes and R. Khan, a geographer from Karachi University.[19] A major difference to late 4th millennium sites, apparent at first glance, is that Adam Buthi is not covered with the 'pottery carpet' so typical for other prehistoric settlements.

Fig. 6.18
Boulder walls and a surface littered with flint tools, cores and nodules

Instead, chert flakes and lithic objects are strewn over the surface. Remains of boulder walls are visible on the flat top and along the slopes of the hills (**Fig. 6.18**).

A 12 m long and 2 m wide sounding, dug in 1999 at the southeastern slope of the mound, ran from the top to the present plain level, where virgin soil was reached. To light came a compact sequence of densely packed, well-built walls constructed in dry masonry with boulders from the river and a few mud bricks. Installations such as pits and small platforms were unearthed. The architecture

19 Raikes (1968, 157) mentions two hills which he assigned to the Londo horizon. The Londo tell (Ajab Damb = B05) is in fact east of the road, but the early tell (Kharkhar Kaur Damb = Adam Buthi) is west of the road, directly in the gravel bed of the Khakkar Kaur river. Raikes pictures two Londo sherds (Raikes 1968, Fig. 13), but describes another pottery, which is obviously not Londo-, but instead probably Kili Ghul Mohammad pottery. Khan (1973, 6 Fig. 2.1; 2) addresses the site as Kakkar Buthi, he describes a pre-pottery and a pottery settlement horizon in Khakkar Buthi, Las Bela. The bases for this attribution are unclear.

Fig. 6.19
Sounding with boulder and mud brick walls, various levels of use

Fig. 6.20
Chert blades and cores

Fig. 6.21
Nodules and cores from different types of stone

Fig. 6.22
Worked shell bangle fragment, bone tools, stone drill and carnelian bead

showed several traces of changes and renovations indicating that the site was occupied for a longer period of time (**Fig. 6.19**).

Finds were limited. Chert implements were most numerous: thousands of lithic tools, cores, flakes, scrapers, and a few drills were found (**Figs. 6.20; 21**). Microliths, particularly small blades and drills, were present, but rare. The material, with colours ranging from reddish-brown to greyish, is locally available in nodules carried into the plain by the rivers, and from nearby limestone outcrops. Other finds are marine shells cut into wide bangles and a few semi-precious stones, in particular carnelian beads (**Fig. 6.22**).

Fig. 6.23
Pottery with red to purplish slips and sand-slipped bases (upper levels)

Fig. 6.24
Small, handmade beaker with red band (lower levels)

The pottery includes coarser handmade and fine wheelmade fabrics present throughout the sequence, although wheelmade pottery prevails already in the lowest levels. It has very thin walls and is carefully finished. Frequently, bases and lower bottoms are covered with a fine, slightly micaceous sand slip (**Fig. 6.23**). The hallmark of this pottery are rich thick, very dark to purplish or plum red slips (**Fig. 6.24**). Occasionally, the surfaces are streak burnished, making the surface of the vessel compact and creating a pattern of oblique shiny and mat stripes. In the upper levels, slips with a full red tone become more frequent. Painted decorations are very few. They comprise of triangles with a dotted rosette, diagonal lines and a 'stitching' pattern, known from KIli Ghul Mohammad resp. Togau Wares. Other vessels carry a sand slip which enhances density and resistance against heat, making the pot more durable when used for cooking, for example.

This pottery resembles Kili Ghul Mohammad pottery, the type site near Quetta, where it was discovered first. Comparable sherds were also found at Anjira, and at Rana Ghundai and Sur Jangal in Loralai.[20] Despite the general resemblances to this ware, a couple of features marks its local identity. The use of the slow wheel (*tournette*), the building of very thin and carinated, and thus fragile bodies, scraping and trimming of the bodies to correct their shape and produce its final form, the preparation of slips mixed from clay, water and pigments as colouring agents, and the firing with high temperatures under controlled ventilation conditions reveal the same high quality as similar sherds elsewhere. The place of manufacture for the pottery, however, is unknown.

The first dating of the site into the 5th millennium BCE was based on the cited ceramic parallels for the pottery, particularly with the sequence from Mehrgarh. It was later confirmed by a radiocarbon date (AMS) which places the occupation in the second half of the 5th millennium BCE.[21] There is no trace of those pottery types which a little later became very abundant in the region, indicating that the mound was abandoned early in the 4th millennium BCE. Another mound in the area founded at about this time became more prominent, Niai Buthi, which is described in Chapter 8.

20 Fairservis 1956; 1959; de Cardi 1965.
21 Adam Buthi, Phase 4, middle layers: 4365/ 4105 BCE cal., uncal.: 5440 ± 60 BP (Sample 99.S3, Lab. No. KI-4775).