Chapter 12
LIFE IN THE EARLY IRON AGE.

(a) Life among the Users of the Painted Grey Ware.—The excavations conducted so far on sites yielding the Painted Grey Ware have mostly been in the nature of index excavations, no attempt having been made so far to excavate anywhere horizontally or on a scale to compare with the excavations at Harappa or Mohenjo-daro. As a result the material equipments of cultural life recovered till now are comparatively meagre. The picture of the life that was led during the period labelled by the distinctive Ware is, therefore, neither as clear nor as full as one would expect and wish to unravel. The Aryan speakers, as the users of the Ware may now be called, came on the heels of the decline of mighty Harappa. The old tenour of life came suddenly to a halt, and the new pattern of the life that took its place lacked all the glamour and colour of the past, and the folks were launched upon a course of life that can be termed as poor in contrast.

There is yet another snag in the way of a full estimation of the lives of the new folks. The report of the excavations at Ahichchatra, in Districts Bareilly of Uttar Pradesh, where the Painted Grey Ware was first noticed is yet to see the light of the day. The other relevant excavations conducted at Purana Qila, Delhi, Rupar, District Ambala, Panjab, Alamgirpur, Sravasti, District, Bahraich, Uttar Pradesh and to an extent, etc., have been rather briefly reported in comparison with the full report of the excavation at
Hastinapura and a shorter report of the excavation at Kausambi. Notwithstanding these handicaps, a broad picture of the life among the Painted Grey Ware users as gleaned from the full or fragmentary reports is presented below.

The richest yield of the material remains of these folks is of course the tenacious remains of their pots and pans. While the Painted Grey Ware dominates the ceramic repertoire primarily in its quality as de luxe ware, its use was limited to bowls and dishes. Alongside were pots of the other wares of everyday use like the brownish-grey ware, the plain red ware, the black-and-red ware. The bulk of the ceramic service was borne by the plain red ware, which accounted for the jars and vessels for various domestic purposes, while the lighter service was taken by the other members of the miscellany in the form, generally, of bowls and dishes. The painted designs on the Grey Ware speak of a taste for beauty and decoration, and the most familiar symbol of to-day, the swastika was a favourite with these folks as well.

Not much has remained of the architecture of these days, which had to depend for its life-blood on mud, or at best, sun-dried mud-bricks, and no more than barely recognizable lengths of walls in crumbling desolation can be accounted for.

It is interesting, however, to record that a variety of wild cane was used along with husks of rice to reinforce the mud or mud-brick walls with plaster as observed at Hastinapura. As rains were expected to be heavy in all the region where the
Painted Grey ceramic occurs from present experience, the roof may have had a thatch as mud could hardly be relied upon, the cane should have played a prominent role in it perhaps as the wattle base.

It was a period when defensive fortification to safeguard the township against extraneous attacks of both floods and human enemies, regardless of the flimsiness of the residential remains enclosed, had begun to come up, as exemplified at Ujjain. As the towns grew up on river banks for various natural advantages that such situations conferred, the advantage of the river waters was also taken to surround the fortresses with unfordable moats that were at once deep and wide. The forts were provided with gateways and passages, that were properly cambered and secured against erosion by being cobbled on an adequate soling of hard clay.

The fort at Ujjain was roughly a parallelogram in shape, about a mile in length, north-south, and three-fourths of a mile across, east-west, and it was reinforced on the water-front along an incurring bend of the fickle stream, which rose frequently in spate, with a framework of neatly cut wooden logs that served as a buffer and the first line of defence against the periodically rising matters. Apart from the ingenuity of the scheme, which was successfully carried out and maintained, it is to be wondered at that the ancients were undaunted by the problems of transporting lengths of 17 ft. (510 cms) and more of heavy logs of Acacia ferruginea or Tectonia grandis, which in their finished stage were about 10" (25.4 cms) square. If they had to be finished at the spot, the lengths and measures to which the ancients went to transport the still heavier
logs from the forested area can better be imagined than described, regardless of the labours of felling trees in the not-too-near forests.

The thought of the fort conjures up pictures of warfare. The equipments of the times were, no doubt, flimsy by to-day's standards but consisted of arrow-heads of bone and copper and later of iron, besides, in course of time, spear-heads and daggers of iron. The tenacious smear of the blood of a bird on one of the arrow-heads from Ujjain point obviously to their limited use, which doubtless put bird flesh, and, inferably, also of other edible animals on their menu. Hunting was doubtless an early and profitable undertaking.

Agriculture was of course the mainstay of life, and the crops were harvested and one of the principal crops raised was of course rice as Hastinapura has shown and lent support to the Vedic mention of Vṛhi and dhanva, which would mean rice and paddy respectively.

Copper as a metal could not take them very far, as very soon iron indicated larger possibilities than copper alone could grant. The repertoire of objects of iron point to the many-sidedness of its application, comprising as it did, comprehensively, of knives, arrow-heads, spear-heads, wedges and axis. There is indication also of local manufacture of iron objects in the form of slags, found at Hastinapura. This meant indeed not only mining of ores, but also smithy, involving the twin action of smelting and forging. The axes and wedges helped the Aryans to fell trees to provide them with firewood and charcoal and cut down forests on a large scale to reclaim areas for living and expansion than may have been possible earlier. The arrows and spears defended them against wild
animals and human foes, helped them to hunt down game for food and knives enabled them carry on their daily avocations of sorts.

Fishing must indeed have been resorted to as indicated by conical terracotta net-sinkers as a means of increasing food supply.

It is also to be noted that writing, or at least engraving on a soft surface such as clay, had come into vogue as evidenced by a neatly worked bone point to secure which is a socket sheath was also available, at Ujjain, though no trace of any written matter has come to light.

The use of a copper borer, as Hastinapura has shown, points to various kinds of craftsmanship in wood or metal, of which however, no direct evidence is to hand.

The articles of toilet provide a modest outfit, consisting as they did of antimony rods and nail parers of copper, and of a hollow object, with segmented interior, that has been described without adequate reason, as hair cleaner.

Among ornaments were the time-honoured bangles, but, rather strikingly, made of glass. That glass could be produced at this time is a thing to wonder about and is the earliest evidence India has so far known. Even on a small scale it stood for the beginnings on industry that has reached unimaginably soaring heights to-day.

Beads, no doubt, strung together as necklaces, were made of diverse materials like agate, carnelian jasper, glass, copper, bone and even terracotta and played an important role in ancient jewellery, in their spherical or barrel shapes. The beads of terracotta are usually pear-shaped, often biconal. These were supplemented by
ear-ornaments in the shape of convex discs with concave sides, made of bones or agate, brightly polished, in a shape that lived in popularity for centuries of history, and has only slightly modified variants even to this day.

Inspite of an advance in industries and exchange of commodities, coins do not seem to have come into vogue, and possibly barter was the principal means of exchange employed. The presence of coins in very limited numbers, as punch-marked coins, cannot however, be ruled out as the evidence of Nagda has shown.

A basic and yet very essential industry should have been that of weaving baskets, whereupon at once art and skill were bestowed. The warp and woof of the baskets, even from their crumbling impressions upon the earth in which they had lain, are amazingly modern in form.

Though no material objects have been unearthed to convey objectively the religious life of the folks, the discovery of the evidence of what has been interpreted as sacrifice of cow at Ujjain indicates the importance attached to this practice, calculated no doubt to bestow benefits upon the faithful in a spiritual sense. This partakes of an important aspect of the life of the Vedic Aryans, and bids fair to be an additional argument in favour of the underlying equation of the Vedic Aryans with the users of Painted Grey Ware. As a source of children's amusement discs of terracotta often decorated at the edge with notches or fashioned out of sherd have played their eternal role, as hopscotches as also discs with double perforations, plastic variants of which are now on the market, through which strings are passed and dexterously pulled and released alternately to raise a music that
children revel in. With a single perforation they would have served as wheel to a child's toy. Even terracottas in the shape of human (Ujjain) and animal figurines as playthings, articles of decor, or pure essays in artistic creations, have made their appearance as Ujjain and Hastinapura have shown.

The picture thus culled together from straggling evidences, some on this side, some on the other, presents in its simplicity, despite its variety, a dismal contrast to the elaborate material culture of the preceding civilization that had the Indus valley as its focus. This was indeed the state of the beginnings of the Aryan civilization in India as revealed so far by archaeology, and more is yet to come.
Life among the users of the H.B.P. Ware

Life among the users of the H.B.P. Ware followed closely on the heels of the Painted Grey Ware-using people, and it would, therefore, be worthwhile to consider the various aspects of life in a sequence after the Painted & subsequent periods, in the same sequence so that the differences may be seen in clear perspective. Ahichal had shown an overlap between the two cultural phases, Sravasti has almost shown that the one derived itself from the latter. The accumulating evidence is just as it be, for they do not surely represent two different sets of people in the sense in which the Indus valley people were the Aryans were. The Painted Grey Ware phase ought to culminate in the H.B.P. phase in an evolutional trend.

Architecture in the new era weaned itself away from the lure of mud and mud-bricks, and used more increasingly bricks which had already begun, limitedly, to appear in the later days of the earlier period. But it was yet confined to buildings or structures of public utility as the barn and drain at Hastinapura or the tank and well in Ujjain. At the latter site the limited use of dressed stone is also attested. The latter was again a gift of iron tools and equipments.

Fortifications continued in their former career but now wagons to transport men and cinews of moved hourly in and out of the defences through, no doubt, their well-guarded passages over the cobbled roads, w
have borne to this day the indelible imprint of their wheel-marks in ruts. The width works out to 5 ft. 6 ins. (165 cms.) which is accidentally the universal gauge of bullock-drawn wagons in vogue at the time.

Repairs to the fortifications were now executed with burnt bricks to stop a sudden breach and present a stout veneer to the gashing tongues of the angry river swollen in flood, or when the waters in the river have subsided, causing a fall in the level of water running through the moat, by shortening its width to enable the same volume of water to serve effectively a narrower channel, and by safeguarding the turns and bends with bricks. Mud-bricks or layers of clay continue delightfully to enclose men and women and provide them with the much needed shelter and protection as of old.

The pottery, the main characteristic of the people's needs and genius, has assumed a different miscellany, not less sturdier than before. The Northern Black-Polished Ware has replaced the Painted Grey Ware as the ceramic pot excellence, and is infinitely more sturdy, as judged from its metallic sound. It presented a variety unknown to the Painted Grey Ware in its diversity of shade, which shifted from coal-tar black, through steel-grey and silvery resplendent to a golden shine, and was sometimes, though rarely, painted in a decorative essay. As before it nonsensified, with an exception, in the case of the rimless handi, the de luxe shapes of bowls and dishes or lids of exquisite
caskets for use on special occasions. They were so much valued that broken pieces were joined and held together by copper rivets. The other associates in the plain red and ware, black-slipped ware, vesiculated ware, shared the other various burdens of early ceramics in daily life.

Warfare as of old continued to be conducted but more exclusively with iron equipments, such as spear-heads and arrow-heads, axes, daggers and knives, with a substantial support from the bone-tipped arrows, no doubt, for reasons of economy and for easy availability. Copper lost its face and had no place in the armoury. Iron had dug itself in.

Agriculture continued too, but now sickles of iron helped the peasant to gather his sheafs.

Fishing and hunting provided food of essential nature, but varied taste as before as judged from net sinkers and equipments of the chase.

The weaving of cloths became stabilized as indicated by the spindle-whorls employed in the spinning of yarn, and now and then by a bit of rope well preserved by centuries of immersion in the preserving waters of the moat (at Ejna) and its dregs of moist clay or the impression of the warp and woof of a piece of textile on the surface of a sherd (Ejna).

The articles of toiletry remained the same in character, comprising, as they did of old, of kohl-sticks or (antimony-rods), nail-parers and hair-cleaners, but had the added equipments of the
familiar rough and granular-surfaced chin rubber of terracotta, and the pigment stuck of bone or ivory to add to the attractions of beauty. A comb was also then but sometimes in ivory, often gathered together and riveted with copper pins when broken, or an exquisite handle of mirror, made of ivory. Such objects were not, of course, common and reflected then, as they do even now, luxury and prosperity.

Among ornaments, the pristine simplicity gives way to a sophistication that the new age brought about with its infinite variety of glass beads, in monochrome and in diverse colours, as well as in shapes, or of stones which covered agate, carnelian, amethyst, blood stone, chalcedony, coral, crystal, faience, jasper, lapis lazuli, soap-stone, steatite and, of course, the age-old terracotta. Beads of copper were also worn.

Bangles had for their material terracotta, glass, copper and shell, and rings of glass, shell and copper and of even horn with a bezel were, no doubt, cheerfully worn.

Ear ornaments made of polished jasper or copper weighed heavily down on the delicate ear lobes in the shape of bi-convex discs with a concave side, but continued to be worn in the fashion of the sculptured figures in stone of early medieval and medieval days. Occasionally the convex sides of
mirror-like polished discs were additionally embellished with a gold-foil firmly fitted into place with worked decorative designs on the face.

Coins in the form of punch-marked and uninscribed coins, usually cast, of copper removed the old uncertainty as to the medium of exchange, and recorded at once a technological advancement and reflected the growing prosperity and volume of exchange of goods. The diversity of materials going into use as objects of daily life should suggest either local manufacture or imports, and more likely the latter, resulting in the establishment of distant contacts, trades, and the resultant flow of cultural influences in different directions to the common advantage of all. Such a phenomenon also explains the quick dispersal of cultural traits and the unification of cultural patterns over the vast expanses of the land.

Amusements continued to be as nimble as in the olden days, though it expanded its scope. The children, no longer content merely with hopscotches, or perforated discs and wheels, began to have toys in the shape of articles of terracotta in the shape of diverse animals such as the elephant, or the bull. The elephant at Austing-pura was the recipient of a very careful and artistic treatment. Apart from the likeness to real nature, they had decorative patterns in the form of circles or leafy patterns or chakras (wheels) stamped, notched or pierced on them. Human
figurines must also have had a role in it in the form of elaborately accoutred males and females, the latter outnumbering the former. Whether these figures had any religious or ritualistic significance is not known. It would be worthwhile to note, however, that female figures delineated as sporting with a parrot or a swan was the most popular form of art in terracotta.

Terracotta lamps, with a flat base and oval almond-like in shape, may well have been playthings, but were with greater likelihood employed usefully to illuminate through the darkness of the night. The pinched channel of wicks bear the stain of soot, from use, inferably in a fatty medium.

A large number of terracotta crucibles, with their outer surfaces enameled of vitrified were obviously employed in the smelting of metals on small scales and is a pointer to the trade of the metal craftsmen.

The days of copper in an age of iron are expected to be lean, and its field shrinks increasingly with the passage of time. Iron invaded the household as well and soon ousted copper from its place.

Apart from going round wrists as bangles, it came fully into its own as chisels and drills, the primary tools of the carpenter, axe, adze, knife, clamps, nails and also bowls, limitedly though, following the shapes available in pottery, and ladles with horizontal or vertical holds.
Such was the picture of the diversity of life and its expanding scope and hold on nature that was ushered in by the extensive use of iron. Needless to say, it was richer and more prosperous than that of the one preceding it, though the limitations of the excavations during the last twenty years made it scarcely possible to obtain an adequately representative picture, not to speak of a complete reconstruction of the life that had sprung into vigour and ebbed away.

The increased efficiency of iron, its greater production as a result of the discoveries of sources of ores found by conscious exploration and more extensive use as a consequence made it possible to cut down the wooded countryside, lay roads, or cut passages through and bring the distant parts, which were unexplored or little known, closer together and made possible the rapid dispersal of technological advances and articles of utility, bringing them within the reach of people widely separated from one another. A common cultural link united peoples over distant regions and helped evolve the cultural pattern that is ever growing in its scope and compass, and is even now in the process of formation in the wake of the new metal. Such was indeed the impact of the Iron Age in its early days. The process had begun earlier in the days of the Painted Grey Ware but was accentuated and accelerated during the period of the Northern Black Polished Ware.
(c) Life in the Pre-R.B.P. Ware Iron Age Phase.– The chalcolithic tenour of life in west and central India and upper Deccan seems to have received a jolt after it had run its course for several centuries for a reason which now seems to be widespread flood. At Navasa or Magda there is a black clayey deposit sealing the stratigraphical accumulation of the previous period. The clay from Magda was analyzed by B.B. Lal, Archaeological Chemist in India, and found to be the result of stagnation of standing waters and made up of decomposed vegetation. The site appears, for sound reasons, to have been abandoned for a while. When it was reoccupied, not very much later, the use of iron had been acquired, as the evidence at Magda shows. It is supported, as stated before, by the evidence of Ban and Prakash.

The people had not, naturally, weaned themselves completely from their centuries-old chalcolithic moorings, but the acquaintance with iron gave them a new power and a new sense of security, and they began progressively to share in the common heritage of the Iron Age.

The continued use of microliths – as many as 112 being found in Magda – as of the tradition of the painted black-and-red ware pottery alongside newer fabrics and shapes do indeed point, commingling of two different traditions.

Houses continued to be made as before of mud-bricks or were mud, burnt bricks being still not in vogue. Clearly mud-houses were strong enough to
withstand the stress and strain of the climate, particularly the rains, which, it can be inferred from modern experience, could not have been meagre. A roof of thatch or straw, with a protective plaster, as in the slightly earlier days at Hastinapura, seems to be indicated.

The use of iron gave these people distinct advantages over copper, and its extensive use is indicated by the find of 29 objects, beginning with a well-formed celt or chopper from the earliest days. The assemblage of the equipments of iron, comprising spear-heads, arrow-heads, including the tanged types, knives, blades, rings or clamps for fastening tools, possibly also axes of the socketed type, besides the chopper or celt, mentioned earlier, points to divergent and yet specialized applications of iron objects. The specialized tools of weapons of attack and defence suggest a less peaceful life than in the earlier days when microliths and comparatively flimsy copper implements were the mainstay of defence and offence. By this time the Aryan tribes had been expanding themselves in different directions, and should have been at pains to safeguard their expansionist endeavours in search of newer lands and peace. It was not until the troublous days had ended that the new land of the Aryan adoption became paralleled out into 16 section Mahājanapadas or kingdoms. By the middle of the
sixth century B.C., some kind of stability had been reached, though as a result of trials of strength and tribulations of sorts, four of these kingdoms, namely, Magadha, Avanti, Vatsa and Kosala became the most powerful and prosperous. The wars of Pradyotsa, a contemporary of Buddha, and king of Avanti (the Ujjain country) which encompassed Navara-toli or Maheshwar and Nagda, were fought into the enemies’ camps away from the capital in the region of Taxila, or on the borders of Kausambi or even of Patliputra (Patna); and Kajgir was threatened with an attack. All these came in the wake of a prosperous situation that had been steadily built up over the past centuries. The organized expansion and parcelling out of territory should have followed the cutting down of the barriers of hills, forests, and rivers and laying of roads that passed from one city to another. All this and much more that must be read between the lines and taken for granted, grew with rapid strides after the coming of iron. It must be recognized that with the introduction of Buddhism an order of ascetics, i.e., monks and nuns, came rapidly into being and for their residence and religious practice monasteries began to be thrown up all over the country. Such an India-wide order could only be sustained by public munificence. For the country to be in a position to support vast numbers of the economically unproductive order of monks and nuns, considerable prosperity is indicated. Such
a prosperous situation, judged even from the days under consideration, could not have been built up all on a sudden. It means centuries of patient hard work, and the existence of industries and commerce, imports and exports. Such things must have had an organized pattern even earlier than the days of the Buddha. The times under consideration were indeed the formative period in the background of the prosperity of the early historical period. It may be conceded that all this was, indirectly, the gift of iron, which had helped pave the way.

In contrast to the use of iron, copper was confined to less important uses, though its continuance in the material economy is beyond dispute. Copper is relegated to such forms as the antimony-rod (kohl-stick) or objects of indeterminate shape and utility.

Microliths could not have been of much use in a metal economy dominated by iron, though they were indeed produced, perhaps as a matter of habit, as the oval flakes of stone with battered and rounded edges recognized as fabricators, clearly indicate. The use of microliths in this period would have been confined at the most to the cutting and paring of vegetables and fruits.

In ceramics, new wares and forms make their appearance while the older tradition continues. The new developments comprise the black-slipped ware, a granular-surfaced course ware called the vesiculuated ware and a double-slipped ware, which has a black-slip
over a red-slipped base. They have parallels in comparable levels at Ujjain or even in distant Abhishektra. But the older wares comprising (i) the black-on-red painted ware, (ii) black-and-red ware, (iii) the burnished grey, and (iv) the plain red ware continue alongside. These indicate that the old and new lived together adjusting themselves to the needs and tastes of the times. The tradition of painting in black on the red pottery or decorating with incised and appliqué patterns point to the old rooted faith in decoration.

The domestic equipment of the kitchen or household comprised of the unlagged quern hollowed by heavy use for the grinding of grains, and gristles, to match, that did the job. The repertoire of tools of sorts consisted of mace-heads, sling-stones, pounding stones, stone hammers, as a legacy of the past.

The spindle-whorls of terracotta follow the shape of pears in vogue since the earlier days, and point to spinning and as a corollary, to weaving, which is further indicated by a double-pointed object of ivory with a median recess that recalls the shape of a shuttle, an essential equipment of looms.

The ornaments were not confined as before to bangles and beads, but included now the ear-ornaments. The bangles came to be made now of glass, an evidence that agrees with that from Hastinapura, though the use
of glass was still rather small. The beads were made of terracotta, shell, stone and ivory. The beads of terracotta were in the shape of pears, vesica, cones and cylinders, while those made of different varieties of stone including carnelian, agate, chalcedony, jade and coral were either barrel-shaped or biconal, with rare exceptions of groove-collared specimens. The shapes still speak of simple taste, neither enriched nor spoilt by sophistication, except for an attractive temple-shaped bead in ivory of fastidious fancy.

The ear-ornaments are circular in shape made of terracotta for the not so opulent, and of jasper and agate, very laboriously and carefully finished, for the fastidious. A single specimen of glass discs with shell inlay speaks not only of expert workmanship but also a fanciful taste. The high polish that the discs bear has the reflective brightness of a mirror, and the industry that produced this article of luxury can be expected to have supplied the needs of a far-flung market. Nagda, after all, was a comparatively small settlement within a territory of which Ujjain was obviously the dominating city. The evidence of local manufacture of the mirror-like polished ear-ornaments, of semi-precious stones, at Ujjain would point to such a possibility and also to the source. Jasper and agate, specially fancied for ear-ornaments, was available in plenty in the region around Ujjain.

The toilet articles of this Period include the well known antimony-rods of copper to apply callyrium to the edges of the eyes, no doubt, no such in the
time-honoured effort to combat the affections of the eye as to enhance its attractiveness by imparting to it the loveliness of the doe-eye, an eternal feminine weakness. The presence of a decorated comb of ivory, indicate, apart from the ivory engraver's art, even if not local, the users' financial status as well as a taste for beauty. This speaks of an economy that envisaged articles of luxury after meeting the bare necessaries and comforts of life. It implies also, possibly, import from outside in exchange for local articles of value, establishing widespread trade and commerce.

A fl atish fragment of ivory, shaped to suggest symbolically the human figure, marked decoratively with circlets could have served either as a pendant or an object of reverence.

A human-shaped figure in ivory with a naturalistic head and a pronounced hip would suggest a deliberately assumed pose of grace, or of coquetry in curves, unless it is a cameo in a presentation of the dancing female form. Though it would indeed be wrong to allow imagination to overstep the limits of objective observation, the possibility of dancing as an amusement and an art being in vogue cannot be discarded.

The dancing female also Nakenjo-dare, as a still earlier evidence in the line, can easily be quoted as a possible distant source of inspiration. As a work of
art of the ivory carver, it has delicacy and grace and, of course, naturalistic features.

These figures were all modelled and were recognizably of human shape.

Several conical objects of terracotta, with their tops truncated, served possibly as game pieces of a kind indicating a game of patience and leisure.

A specimen with a horizontal perforation across the top suggests a net-sinker, and the practice of fishing, for which rivers on which the settlements grew provided ample scope.

Agriculture as usual was, of course, the main occupation and means of sustenance. Though no remains of hoes or ploughshares can be accounted for, the use of the so-called mace-heads as weights for digging sticks, whether reinforced at the working end with copper or iron or not can be conceded.

The bare-fields around bear a mantle of the black cotton soil, suitable for a variety of grains besides cotton. It is to be noted, however, that the next succeeding period at Nagda during the use of the Northern Black Polished Ware knew the use of rice, though this staple grain was known earlier at Ujjain. It can be presumed that rice formed a part of the dietary at the time in the light of the added evidence of its occurrence at Lothal in the Harappan levels, or at Hastinapura in association with the Painted Grey Ware.
The common occurrence of bone-points with a thick stub and sharp working, in this period at Nagda, at Hastinapura in the Painted Grey Ware levels and at Ujjain in the comparable pre-Northern Black Polished Ware levels, would either indicate the thriving of the engraver's art or of writing.

The evidence of Nagda in its pre-N.B.P. phase broadly corroborates and supplements the evidence of the Painted Grey Ware levels of Hastinapura and of the associated period at Ujjain and elsewhere.
(d) Life among the Megalith-Builders of South India.- The Megaliths of south India represent a distinctive phase of culture that came in succession to the primitive neolithic-chalcolithic culture of south India. The difference in the cultural equipments of the two phases of life was enormous, for the latter also meant the coming in of a new people, characterized among others, by brachycephalic features in the midst of the nature Proto-Australoids, on the present showing. A cultural conquest was at once made and the indigenous people succumbed to the force and vigour of the newcomers. While the brachycephalic features have been observed, there are no doubt several others to be found among the conquerors, the bulk of them speaking, as is now growing increasingly clear, the Dravidian tongue.

The society that had lived in timber houses, raised crops on small scales, used copper and bronze for some of their domestic needs in the form of copper or bronze rods or chisels and the like and stone implements in the form of neolithic polished celts and microlithic knife blades, used a greyish ceramic in the shapes of jars, for cooking and storage, and dishes occasionally daubed hesitantly with an irregular-lined evanescent paint of red, buried their adults in extended position, and their infants and children in grey-coloured jars or urns and were only influenced a little by the more vigorous chalcolithic culture of west-central India and the upper Deccan at the fringes of their geographical horizons in the north, merged almost miraculously and imperceptibly overnight into the megalithic culture that invaded the south in force.

The new culture spread rapidly far and wide into the
peninsula and flowered into a variegated and yet unified pattern of life that filled every nook and corner of the new land of its adoption. The acquaintance and extensive use of iron, made possible by their knowledge of mining and metallurgy and the exploitation of the deposits of iron ores in the south occurring in Mysore, Hyderabad and Madras, made all the difference in their lives. It was one of the industries that engaged and provided with food quite a large section of the society, though the methods of working could not have come anywhere near the familiar blast furnaces of today. The Wootz process of smelting iron in crucibles, in vogue among the native iron workers seems to have been largely employed, and against this background it is to be wondered at that they could forge to shape not merely small arrow-heads, but javelins and spears or crowbars several feet (5-6 ft or 133-213 cms) in length. The process was at once skilful and exacting and called for infinite patience and concentration, such as can emerge in an efficiently and vigorously organized society, with a centralized control and direction.

Of their architecture next to nothing is known, except that they lived in all probability in houses that employed wooden posts to hold the walls and roof together, and no doubt wattle, or timber had to be used for the purpose. It meant naturally the felling of trees and dressing of planks, which their axes and chisels could achieve.

Iron was not the only metal used. In the wake of metallurgical experience came the use, though on smaller scales, of gold, silver, bronze and copper, while not entirely eliminated.

The use of large-sized stones in the construction of
the graves also marked a state in technological advancement, for though readily available boulders were freely used the rocks had to be split to extract slabs of desired size and thickness to form the cist-chamber. In an age that knew no gunpowder or explosive, the application of heat to chosen surfaces of rock after they had been marked out and weakened by preliminary drilling of holes along the edges of the desired size of slab, and by sudden cooling by the application of water seem to have been the process that delivered the goods. That was indeed not the end of the process. The slabs had to be carried to the spot. Either they were carried by means of ropes and supports carried on the shoulders of an army of labourers or they were propelled by leverage on logs of wood to the desired spot. The processes of quarrying and easy transport controlled by organized behaviour had been mastered. In this task their chisels, wedges and crowbars of iron were freely employed.

The stone cutter's job was not, however, limited to the splitting of rocks; he had often to dress the stones, first laboriously extracted, especially in areas where the rock was soft enough to permit dressing, and also to cut a little hole, either oval or circular on one of the slabs that was chosen to carry the port-hole, a very skilful undertaking indeed. The society that could command his dexterous service must have paid him handsomely indeed to maintain his cheer and efficiency.

On the Malabar coast the cheesy-soft lateritic subsoil lent itself easily to be scooped into subterannean caves, to contain the mortal remains, and perfection was attained after much practice.
Yet such a vigorous people were primarily an agricultural community, and after their peregrinations for Lebensraum had ceased, they remained rooted to the soil. It is not a marvel that they built their burials rather away from their haunts of habitation as well as from any plot of land that could be tilled, i.e. on the foothills of rocky areas, or amid barren outcrops. But the sites chosen were always in the neighbourhood of a pool of water that was at once adequate enough to last throughout the year to supply their needs at home and for irrigating the fields in the neighbourhood. They huddled together in areas skirted by an extensive and natural hollow or grounds that looked like having a large catchment area wherefrom all the waters drained into the hollow, and if the gradient seemed to stand in the way, they were quick to press the advantage home by bunding up the sloping side and imprisoning the waters that nature had bountifully bestowed upon them. Tank irrigation has lasted through the mists of history to this day in the service of man in the south.

The megalithic people seldom allowed the graves to encroach upon or sprawl into arable lands, though it is surmised that the spirit of the dead, symbolised even by an empty dolmenoid-cist built on a rocky outcrop and rising gigantically above the fields as at Uttiramerur, in District Chingleput, Madras, at once guarded the standing crops and bestowed prosperity upon the faithful community.

Rice is the staple food in the south to-day. It may have been so even in the days of megaliths, as grains of rice have been found in associated levels at Kunnattur in
District Chingleput, Madras. Incidentally it is also
the earliest evidence of the use of rice so far known
in south India. As rice grows best to-day in southern
and eastern India the climate and temperature under
which it thrives could not then have been very different
from what obtain to-day.

Hunting should indeed have been another means
of varying and augmenting their food supply as the
equipments of arrow-heads or spears would suggest. Stone
balls may as well have been employed with slings to strike
and bring to ground a running game. It cannot be
asserted with certainty if the flesh of cows was eaten at
the time, but the presence of bones of *Bos indicus* Linn
(the domestic humped cattle of India) do indeed point
to such a possibility. But sheep (*Ovis vignei* Blyth) and
goat (*Capra hircus*) and the domestic fowl (*Gallus sp.*) may
well have gone into their diet for the bones of these
animals have been found in the graves.

It is interesting to note that the wolf or
hyena had probably been stalking in the neighbourhood
of the megalithic habitations, and had to be hunted down
to save the sheep, goats and fowls from its clutches. Its
bones also found interment along with the rest to unfold
the interesting vignettes of day-to-day life the megalith-
builders led.
For the ploughing of the soil bulls may have been used as now, while the cows provided the milk. The sheep and goats were domesticated for their obvious advantages, nor was the poultry lagging behind. The diet of the megalith-builders bids fair to have been rich in carbohydrates and proteins that sustained well in balance the muscles that were engaged in constantly arduous tasks involved in their undertakings indicated above.

The occasional occurrence of the remains of a horse as at Junapani, near Nagpur, or the fragments in iron of stirrup and horsebits indicate also the domestication and breeding of horses, besides use on the chase and hunt and internecine tribal warfare, which the vast miscellany of arms in any single grave would easily vouch for. It speaks in short of hard days and conditions of vigil and alertness, and, of course, tense nerves.

Yet another big industry was of the pot-maker. Not only was the pottery employed of high quality, it was also varied, consisting as it did of the ubiquitous black-and-red ware, the black-slipped ware and the red ware, represented in a variety of shapes and sizes, encompassing the bowls, dishes, jars, vases, lids, ring-stands for supporting larger vessels, and three-footed jars that could stand on their own. Sometimes, though rarely, they were further decorated by painting. They were also scratched with marks of graffiti.
vessels were of equal efficiency or strength. For the
urn-burials large jars in a coarse gritty red were with
suitable lids of matching size were produced. For the
sarcophagi, which were, in fact, terracotta coffins
in two parts with a lower container and an upper lid,
obleng in shape, and supported on several rows of hollow
elephantine legs, recalling the caterpillar, a slightly
different technique had to be employed. Both urns and
sarcophagi, because in the former case of their size,
and of latter of their size and shape, had to be hand-
made. The latter called sometimes for artistic skill,
as a zoomorphic form, sporting for instance the head
of a ram, had to be produced. The burning of both the
types, because essentially of their size, called for
great caution and they learnt from the experience of
damage from expanding gases during burning to provide
on the walls of the urns or sarcophagi
holes here and there, for the gases to escape and
prevent cracking of the walls. All the pottery belonged
to the Necropole, and, paradoxically, these habitations,
barring the scope of the extremely limited trace of the
megalithic habitations for the present, reveal not a
wait of the rich miscellany of the sculptural ceramics.
Yet, if one must stop to think and ask oneself the
reason of such large numbers of pots that go with the
dead, the explanation may flash across the mind that
the dead spirits had probably a life beyond and needed
food and drink to sustain themselves in their endless(?)
journey. The pots and jars bore the humble tribute of
those that still lived and cared for them and carried
the essential sustenance in food and drink. This would probably explain the annual celebrations that some tribes, who practise megalithism to-day, in almost unrecognizable attenuation mentioned earlier, and bring food and drink to the megalithic relics to propitiate the dead spirit. A similar practice prevails among the Hindus as well as they offer food and drink to the Pratas on specified occasions.

The sculptured features display a variety, with an underlying cultural link, in response and adjustment to changing geological conditions and local reactions or influences. The basic features are, however, commonly shared. The primary exposure of the body at a place of maceration presupposes an underlying spirit of service to some ideas of divinity even in death, as the Zoroastrian Parsees practice to this day, and the beasts and birds were allowed to feast on the remains. Here is an example of stoic sacrifice of sentiments for a cause that can at best be guessed but not determined. The bundling together of gathered bones of several individuals and their common interment may either indicate kinship or ties of family. As the raising of a megalithic tomb, except in the simplest form of the urn-burial without the megalithic appendage, invariably involved considerable effort, perhaps of the entire community, a single megalith could not be assigned to just one person at a time. The collection of bones of several individuals imply
waiting for a considerable period for several deaths to take place in a family, so that their spirits hovering over their remains could sleep together in the place of death. It may be recalled that the megalithic tombs in the west contained multiple burials to the extent of 40 or 50 together, pushed periodically into the hold, repetitively over a period of time, each new series of bones pushing and pressing the earlier away, until it could hold no more. But in India repeated use of the tomb is seldom observed. Obviously there was a time-lag between the erection of the tomb and the actual interment so that as many as could be accommodated at a single ceremony were interred at a time and the burial sealed once for all.

Yet a variant of the usual mode of the disposal of the dead was to lay the full body into a pit or dolmen-cist as Nagarjunakonda and Maski have shown recently. Even so they were within the bounds of megalithic features and partook fully of the megalithic ritual.

The feature of the port-hole or opening on the eastern side, rooted in the west, had a significance that has to be guessed. If it was connected with the direction of the rising sun and the axis of the sun’s diurnal course, as the burials, in all possible cases, were oriented east-west, a religious significance connected with the worship of the sun-god has to be postulated as a mere surmise. Or was the port-hole a
means of the escape of the souls of the buried dead to eternity or reincarnation left solicitously by the faithful posterity? None can as yet provide the answer.

As to the variety of their activities the miscellany of interred tools and weapons are an ample index, and these have been recounted above. The justification for the stowing away of such large numbers of still utile equipment is hard to find. If imagination must come to succour, they represented probably the belongings of the dead and were embowelled into the earth with their earthly owners for their need had ceased. They consisted at once of the weapons and tools of the vigorous male, the ornaments or the grinding slab or pestle of the soft female and the little playthings and toys of the forlorn children who died long before their years.

On the softer side the ornaments which comprised beads of stones like agate, carnelian, sometimes etched, ornaments of shell of a large variety, or of gold in the form of beads or diadems and even of silver and copper speak of the love for decorating the person and no less of the jeweller's craft and trade.

The toys that remind us of the innocent young consisted of a stone ball here or a terracotta animal form there or a miniature jar somewhere else.
All this would show the urban bias of the megalith-builders, who had to depend as much on agriculture as on the chase or hunt and domestication of animals, or various crafts and industries to sustain the varied pattern of life that they revelled in. It is clear that their life was different from any that was lived in the more northerly regions of the river valleys in north India, either during the heyday of the Painted Grey Ware or the Northern Black Polished Ware. There was greater vigour and interest in life, and a reverence for the dead unmatched elsewhere. They were at once capable and prepared to pay the price for all their joie de vivre. They stand for a different people and divergent tradition. And yet, alas, the paradox remains that not much trace of their townships that teemed anciently with the hum of varied activity in the ordinary business of life has come to light!
Life among the Cairn-Builders of Indo-Iranian Borderlands—Very little remains indeed to be said about the life of the cairn-burial folks of Pakistan as most aspects of their life as gleaned from scattered relics of old have already been covered earlier.

To recapitulate, it may however be stated that though little is known of their architecture, it is likely that they built it dry out of rubble stone that was available in plenty in their neighbourhood.

Being located in a comparatively arid area, which may no doubt have been wetter in the ancient days than they are to-day, the folks apparently depended less on agriculture than on the rearing of domestic animals, the most important of which was of course the horse, which was indeed dearly loved, as their remains have been found interred together with those of men. The flattish flasks of pottery, with loops to pass a cord through and keep them in suspension, point to arid conditions and movements in search of food and fodder through dry areas for the existence of men and animals, and surely, on horseback, which was at once an efficient and quick means of transport. Yet they were not nomads, for their pottery, painted in a variety of ways, indicates settled conditions and a love for beauty and delicacy and which at once presuppose leisure.

They lived in a close-knit community, and built their burials by common effort, and the multiplicity of human remains point to multiple burials as in the megaliths. The fractional post-excaiation burials again speak of a similar attitude to the utility of the dead
flesh to the carrion beasts in service and humility to an awe-inspiring and unknown Divinity. The opening in the wall of the burial chamber, of which only a single instance has come to light, betrays a distant inspiration of cultural and chronological significance, if not also spiritual, which has been recounted before.

The iron tools including swords, blades and knives speak of their utility in the hunt and chase and bespeak a connection with Iran.

Their womenfolk's love of ornaments is also indicated by the remains of anklets, bracelets and rings of bronze, silver or copper.

Life indeed was not drab or dull, but many-sided and, to an extent, even leisurely. But this is not all that may be said about these vigorous people, for excavations conducted under modern scientific conditions might reveal more to the spade and eye than it has been our fortune so far.

As to relating the inadequate and unrepresentatively fragmentary picture reconstructed with the help of scraps of archaeological evidence to the literary accounts of the Vedas, or even later literature, if only to see if they tally, the stage is decidedly premature, conceding that such a hypothetical correspondence would be possible to find some day. Yet these partial portraits serve their purpose of indicating the technological advances and heights of artistic merits attained by the ancient dwellers of the land besides the general tenour of their lives. Instead of treating the evidence as isolated items of information, the connected trends of life in the early Iron Age in India at different stages and in different zones have been tentatively presented here.