

## CHAPTER - VII

### C\_O\_N\_C\_L\_U\_S\_I\_O\_N

The archaeological field-work carried in fulfilment of the objectives of the present thesis in the Sarasvati and Drisadvati Valleys, the crucial 'protohistoric tri-junction' of Subbarao<sup>1</sup>, has amply fulfilled its purpose. It has placed 97 prehistoric sites on the map of India, 17 of which are located in the Sarasvati Valley, 40 in the Drisadvati Valley, 24 in the Yamuna Valley (1st westerly course) and 16 in the Ghaggar Valley (Fig.1). The excavations at Siswal, (No.18) Mitathal (No.59) and Daulatpur (No.57), though limited in nature, have for the first time established a continuous cultural sequence throwing welcome light on the evolution of the prehistoric cultures ranging from C.2300 to 1500 B.C. As a result, the following sequence of cultures has been established in this region (Fig.2):

<u>P_e_r_i_o_d</u>	<u>C_u_l_t_u_r_e</u>
Daulatpur II	The Painted Grey Ware Culture
Gap	
Mitathal IIB (Daulatpur I)	The Late Harappa Culture
Mitathal IIA	The Harappa Culture
Siswal B(Mitathal I)	The Late Siswal Culture
Siswal A	The Kalibangan I Culture.

#### 1. The Kalibangan I Culture (C.2300 B.C. - 2100 B.C.):

The stratified deposits at Siswal are divisible into two sub-periods called Siswal A and Siswal B. Siswal A marks the

earliest phase of prehistoric colonization of the region by the Kalibangan I culture, and is characterized by all the six Fabrics of the typical Kalibangan I ware.<sup>2</sup> The use of white pigment in addition to the black to produce bichrome designs over matt red surface and the incised decoration on the interior of sturdy troughs are the other hallmarks of this ware. The pottery is generally ill-potted and has coarse gritty fabric, generally burnt to greyish core. The main shapes include Lota-shaped vase, medium water vessel, handled vase, stemmed bowl, dish-on-stand, pedestal-footed basin, perforated vase and storage jar. Although the over all pattern of painting shows individuality, the design elements are mostly common with Kalibangan I pottery. The absence of certain naturalistic motifs such as the birds, plants, moustaches like bifold, scroll, flower and Trisula or horns seem to be due to the limited nature of the work done, as also the absence of the stone blades, copper objects, mud brick structures and the citadel. The incised decoration on the exterior of vases includes linear and geometric designs comprising the horizontal, flowing or oblique grooves; lattice, chevron and cord designs, etc. The linear designs executed with the help of sharp-teethed comb-like instrument betray the incised designs on the Bara<sup>3</sup> or the Late Harappan pottery. The range of the forms and painted and decorated motifs in Siswal A differ from the pottery of Amri or Kot Diji though certain parallels also occur (Chapter V). The parallels between Baluchistan and the Siswal A wares are limited and remote (Chapter V) as at Kalibangan.<sup>4</sup>

### E x t e n t

The Siswal A ware was recovered from 16 sites in the southwestern parts of Haryana adjoining northern Rajasthan (Fig.1). It

extended to Jind (No.37) and Paoli (No.64) in the north-east. The comparative preponderance of the ware in the Drisadvati Valley suggests the preference of the Pre-Harappan folks for smaller river valleys as in north Rajasthan.

Most of the Siswal A Ware sites in the region are small ranging between 40x40 meters and 100x100 meters and are generally low mounds not more than 1.50 meters in height. A few of the sites like Siswal (No.18), Alipur Kharar-2 (No.27) and 3(No.28) and Farmana-1(No.62) are larger and higher though not exceeding 200x200 meters in area and 3 meters in height. The dearth of finds at almost all the Siswal A Ware sites suggest a simpler life of the Siswal A folks in this region. In the absence of any large scale excavation of the Kalibangan I culture site, it is not possible to ascertain if any of these pre-Harappan settlements had attained the status of a city.

No remains of the preceding Indian cultures which might have influenced the pre-Harappan culture of the region or their own antecedents in turn, have been recovered. It seems probable that the earliest settled communities of the region (Siswal A Ware people) were the colonizers from North Rajasthan whose advent may be placed slightly later than at Kalibangan as discussed in Chapter IV.

## 2. The Late Siswal Culture (c. 2100 B.C. - 2000 B.C.):

Siswal B (Mitathal I) is distinguished by a late phase of the Kalibangan I culture called here the Late Siswal Culture after the type site where its stratigraphical position was first recognised. The ceramic industry of the sub-period is

distinguished from that of the earlier phase by the occurrence of evolved shapes and the absence of white pigment in the former. Although all the six Fabrics of Kalibangan I ware continue to survive, there is a lack of variety in shapes and designs and the pottery is generally sturdier and better potted in this phase. Some of the sherds bear graffiti marks also. The occurrence of a few classical Harappan shapes such as scored goblet, beaker, storage jar and perforated jar in the otherwise non-Harappan culture complex indicates a contact between the two cultures and marks the transitional stage for the sub-period (Chapter V).

The structures of the sub-period are constructed with mud bricks measuring 30x20x10 cms. and adobe at Mitathal I, while remains of reed huts plastered with clay are attested at Sarangpur.<sup>6</sup> The household objects included saddle querns; terracotta triangular cakes, discs with tapering ends and sling balls from Siswal; and tiny blades and terra-cotta blade-sharpener from Sarangpur. The copper and clay bangles, the latter painted with black strokes and beads of copper, terracotta and semi-precious stones from Sarangpur and Mitathal I and a gold object from Sarangpur constituted their ornaments.

### E x t e n t

Siswal B ware was recovered from 32 sites most of which were located in the Drisadvati and Yamuna Valleys. Its expansion is noticed as far north as Sarangpur (No.97) under the shadow of the Siswalik foothills, Manak Majra (No.56) near Karnal in the north-east, Baliana (No.80) near Rohtak in the east, Tigrana (No.58) in the south and Bani (No.1) in the south-west.

The distribution of the ware indicates the survival and expansion of the Kalibangan I culture in this late phase almost colonizing <sup>now</sup> the whole of the Upper Sarasvati Basin (Fig.1). The Harappan contacts in the sub-period provide the chronological horizon for the phase. The Siswal B ware sites are generally as small as those of Siswal A ware sites or even smaller. The biggest of these is Rakhi Shahpur (No.35) measuring approximately 150x100 meters in area and 2.50 meters in height.

### 3. The Harappa Culture ( c.2000 B.C. - 1700 B.C.):

The sequence of Siswal is carried forward at Mitathal without any break. Mitathal sequence falls into two cultural Periods, viz. I and II. Period I corresponds to Siswal B, while Period II is sub-divided into two phases, viz., IIA and IIB. Mitathal IIA is characterised by full-fledged Harappa culture represented by the twin mounds; extensive structures of mud bricks measuring 36x18x9 cms. and 40x20x10 cms.; chert blades; cubical stone weights; beads and bangles of paste and faience; terracotta triangular cakes, animal figurines, toy carts and wheeled toys; a chert blade and typical utilitarian red ware painted with black designs. The discovery of a clay tablet bearing Harappan script, chert blades and classical Harappan painted pottery with pipal leaf designs makes Rakhi Garhi (No.34), the most efflorescent Harappan site of the region.

A large element in the sub-period is derived from the Late Siswal culture which survives all through the Harappa period and is gradually assimilated by the Late Harappan times unlike at Kalibangan <sup>6a</sup> where it dies out about the middle of Period II.

The surviving elements of Siswal B include the terracotta disc with tapering ends, saddle querns, terracotta joined and painted bangles, biconical truncated terracotta beads, the pure copper metallurgy<sup>7</sup> and the characteristic ceramic industry.

### E x t e n t

The classical Harappa ware has been recovered only from nine sites in the Basin. Of these Mitathal, Rakhigarhi and Vanawali (No.2) seem to be the important centres with twin mounds representing the dichotomy of the Harappan town plan, respectively dominating the Yamuna, Drisadvati and the Sarasvati Valleys. At Siswal, Farmana (No.52) and Paoli, the Harappan vestiges are limited and associated with the Late Siswal Culture. Daulatpur, Kurdi (No.94) and Chandigarh (No.95) seem to begin in the late stage of the mature Harappa culture and have pre-dominant Mitathal IIB phase.

The stratigraphic evidence at Siswal and Mitathal shows that the Harappans were the younger contemporaries of the Kalibangan I folks and had come in their wake. The impressive twin mounds at the above chief centres lying superimposed upon the pre-Harappan sites and the occurrence of Harappan relics at other non-Harappan Siswal B sites suggests that the Harappans while expanding in the Upper Sarasvati Basin were not moving in an unfamiliar hostile land. The limited number and the character of the mature Harappan sites as also their superior material culture in contrast with the larger in number but smaller mounds with poorer material culture of the Late Siswal proletariat might indicate a political bias in the expansion of the Harappa culture in our region. The use of extensive mud brick structures,

staggered streets, the absence of any elaborate drainage and the association of the surviving Late Siswal elements in Mitathal IIA show a close relationship with the Harappa culture of Kalibangan zone. In view of the contiguity of the regions and the common river system one may be tempted to suggest North Rajasthan as the source of the Harappan colonizers of our region, though the possibility of such an influx from the Sutlej Basin, specially in the upper parts, also cannot be ruled out.

The specific differences in the settlement pattern, the plans of structures, the size of the bricks and blades and the ceramic industries between the two assemblages preclude the possibility of any genetic relationship postulated by A. Ghosh<sup>8</sup> between the Kalibangan I or Sothi and the Harappa culture in our region though there do occur a few common elements between the two in cord decoration, graffiti marks, dish or bowl-on-stand, terracotta bull figurine, bangles, triangular cakes; steatite disc beads, saddle querns and traditions of pure copper metallurgy (Chapter VI) etc.

*limited*  
The ~~distribution~~ of the classical Harappan ware in our region <sup>*the superimposition of the classical Harappan settlements over the Siswal sites and*</sup> and its absence from the Doab indicates that the extension of the Harappa culture in its first phase was confined to the west of Yamuna (westerly course) in the North and seem to have been motivated by political considerations.

#### 4. The Late Harappa Culture (c. 1700 B.C. - 1500 B.C.) :

Mitathal IIB is marked by a gradual decline in the material culture of the Harappans and corresponds to Lothal B, <sup>*Rangpur*</sup> and IIC, Alamgirpur I and Baragaon. The classical Harappan shapes

like the goblet, beaker, perforated jar, saucepan handle, dish with nail-headed rim, etc., were rare and fell out of use. The dishes-on-stand, storage jars, vases and basins were considerably modified in forms. The common types included tall dish-on stand with insipient drum and prominent flange; sturdy dish-on-stand with drooping rim; deep dish or basin with a pedestal base and projected undercut rim; storage jar with wide or narrow mouth and thick projected, triangular or collared rim; small vase with *beaded rim*, raised neck and flat base; globular vase with flanged rim; bowl like lid<sup>s</sup> with a central knob, and fine flasks. The ware shows a general decadence in fabric, potting and treatment of surface. The incised decoration on the exterior of vases and painted linear and geometric designs become popular.

The Siswal B ceramic tradition survives all through the sub-period though it has largely lost its distinctive character because of the use of better fabric, potting and treatment of surface now. The common shapes include the lots-shaped vase; globular vase with flanged rim; bowls with tapering, convex or carinated sides; basin with flaring rim; trough with shallow grooves on the interior and sherds with rusticated exterior. The richness and variety of the painted designs suggest an almost resurgence of the Kalibangan I style of pottery-painting though the other features of the culture, viz., architecture, household objects, toys and ornaments are predominantly of Harappan derivation.

#### (1) Affinities with the Bara ware:

A comparative study of the Bara Pottery with the Mitathal IIB Ware shows close affinities of the two assemblages.



The common shapes and designs include the storage jar with collared rim and tapering shoulder; vase with flanged rim, high neck and globular body; small vase with raised neck and globular body; squat vase with flaring rim, ribbed shoulder, and rusticated lower surface <sup>and</sup> decorated with incised designs at the shoulder; dishes-on-stand with an undercut or raised projected or drooping rim and tall flanged or thick sturdy stem; basin with undercut projected rim; bowl with concave and carinated profile; bowl like lid; the incised designs comprising horizontal, oblique or flowing lines on the exterior and the painted designs such as horizontal, zig-zig or flowing lines; block band; lattice design; double loops; hatched fish; hatched chain; cross-hatched triangles and diamonds, and flying kite. Besides, there is <sup>seen</sup> the survival of a few classical Harappan shapes, viz., goblet, beaker, perforated jar, dish-on-stand, etc.

The conspicuous incised decoration on the Bara vases such as the horizontal, oblique and flowing lines, occurs in the Mitathal IIB Ware. The concept of this seems to go back to the Kalibangan I Ware as evidenced by a vase decorated with sharp incised horizontal and flowing lines on the exterior in Siswal A (Fig. 3-1) and the incised troughs of Fabric D. Thus the over-all complex of the ceramic industry at Bara for its typology and composite character, deriving elements both from the Harappan and Kalibangan I wares betrays unmistakable affinities with the Mitathal IIB (Late Harappa ware) and not with the classical pre-Harappan wares of the Sarasvati or the Indus Valleys, recently suggested by Y.D. Sharma.

T            The similarities pointed out between certain Bara types and designs and the Cemetery H pottery<sup>10</sup> do not represent any unique feature of the former site alone as similar types and designs form part and parcel of the Late Harappan ceramic complex of the whole Indo-Gangetic Divide, and are evidenced at Mitathal IIB, Dher Majra,<sup>11</sup> Daulatpur I,<sup>12</sup> Sanghol I<sup>12</sup> and Chandigarh.<sup>13</sup> At Mitathal the shapes bearing similarities with those of Cemetery H pottery, however, occur generally in the late levels of Period IIB. The circular pits known from the Cemetery H<sup>14</sup> culture also have their counterparts in Mitathal IIB. The affinities between the muzzle headed animal painted on Cemetery H pottery<sup>14a</sup> and the Kalibangan I<sup>15</sup> trough on the one hand, and the Harappan inspired dish-on-stand, squatish 'S'-shaped jar and ring-stand in the Cemetery H ceramic complex<sup>16</sup> as also the burial customs perhaps reflect the composite character of the Cemetery H culture, resulting from the comingling of the surviving pre-Harappan and Harappan elements, a phenomenon not unsimilar to that of Mitathal IIB, manifested in a different but geographically contiguous region of Bahawalpur-West Panjab Zone.

Thus the dwindling number of the classical Harappan shapes, the occurrence of shapes and designs derivable from the Harappan or late Siswal ceramic traditions, the incised decoration on the exterior of vases and the Cemetery H types and designs prove Mitathal IIB affinities of the Bara Pottery. But the occurrence of more evolved shapes<sup>17</sup> like the vase with flanged rim, the dish-on-stand with beaded undercut rim, rusticated vase and storage jar with collared rim etc., and the paucity of antiquities and brick constructions suggests a further transformation of the Mitathal IIB Ware culture complex at Bara.

Much water has flown since the discovery at Hastinapur of the ill-preserved, pale red ware, of medium to fine fabric, seemingly wheel-turned and called the Ochre-Coloured Ware or OCP.<sup>18</sup> The pottery bearing family likeness to Lal's OCP has been reported from nearly 90 sites in the Ganga-Yamuna Doab and from Noh near Bharatpur in Rajasthan. More than half a dozen of these sites have been excavated, including Bahadrabad, Ambkheri, Atranjikhara, Ahichchhtra and Saipai. These excavations have expanded our horizon on the nature of deposit, the ceramic complexes and the associated finds. The sporadic occurrence of the OCP in yellow brown sandy deposit devoid of any sign of habitation, and imperceptibly merging into the natural soil is significant.<sup>19</sup> The discovery of a burnt brick at Bahadrabad, an ovaloid oven dug in the ground and lined with hand-made mud bricks at Ambkheri, perhaps used for manufacturing gur and another at Ahichchhtra, and a terracotta bull at Ambkheri only emphasise the extreme paucity of antiquities and structural remains in the culture. However, the discovery of the Copper Hoards from Rajpur Parsu, Bisauli, Bahadrabad, Nasirpur and Saipai indicate the richness of the OCP culture in copper implements. The tools include the typical harpoon, anthropomorph, hooked spearhead, flat celt and ring.

Where preserved, the pots show a thick red slip, which is rarely painted with black bands. At Atranjikhara, the incised decoration on the exterior of pots marks a distinct note. The main pottery shapes of OCP, as illustrated by K.Deva and P.C.Gaur<sup>21</sup> includes

1. vase with out-curved rim and ledged neck (Gaur),
2. vase with flaring rim (Deva, no.1; Gaur),
3. vase with flanged rim (Deva, no.1b; Gaur),
4. bowl-like lid with a central knob (Deva, no.14),
5. bowl-with convex profile and blunted rim (Deva, no.13),
6. bowl with flaring rim (Gaur),
7. bowl with flanged rim (Gaur),
8. bowl with convex profile (Gaur),
9. basin with beaded undercut rim (Deva, no.22),
10. dish-on-stand with short drooping rim (Deva, no.9),
11. dish-on-stand with long drooping rim (Deva, no.8),
12. dish-on-stand with hooked rim (Deva, no.7c),
13. squat stem of dish-on-stand (Deva, A),
14. loop-handle vase (Gaur),
15. channel spout (Gaur),
16. tubular spout (Gaur),
17. ring-footed bowl or vase (Gaur),
18. flask (Ambkheri, fig.2 no.11)<sup>21a</sup>

As to the authorship of the OCP there exist mainly two shades of opinion among Indian scholars. The first view expressed by Y.D.Sharma,<sup>22</sup> though later modified<sup>23</sup> and subsequently supported by A. Ghosh<sup>24</sup> and others,<sup>25</sup> identified the OCP with a degenerate Harappa culture carried to the Doab by refugees. The recently growing second view that the ware is essentially non-Harappan with only marginal Harappan influences at sites like Ambkheri and showing regional features in incised decorations at Atranjikhara is held by M.N.Deshpande,<sup>26</sup> K.Deva,<sup>27</sup> K.N.Dikshit<sup>28</sup> and R.C.Gaur.<sup>29</sup> In the absence of published reports on the excavated OCP sites, one is greatly handicapped in examining the problem with any amount of

thoroughness. At least a detailed catalogue of OCP types, is an outstanding need to facilitate a serious study.

Although the OCP sites of the Doab show certain common features, the ceramic assemblages suggest their classification into two broad groups, A and B. The OCP of Group A is characterised by a composite ceramic tradition suggesting the commingling of the (i) surviving Harappan, (ii) Cemetery-H, and (iii) non-Harappan and non-Cemetery-H elements, as at Ambkheri. Group B is distinguished by predominance of the last category of elements and is almost free from the other two categories of wares, i.e., the Harappan and Cemetery-H, as at Atranjikhara, Saipai, Bahadarabad, etc. The Group A includes almost all the shapes enumerated earlier, except nos. 5, 14, 15, 16 and 17 in the above list, while Group B is distinguished by the absence of nos. 9, 10, 11, 12 and 18 occurring in Group A. The prevalence of type nos. 5, 14, 15, 16, and 17, unknown to Group A, is a conspicuous feature of Group B. The incised decoration on the external surface met on the vessels of Group B is absent from Group A. These typological differences in the two groups of the OCP are not blurred by the occurrence of some common shapes for their simple and elementary nature. The use of the wheel and the absence of any stratigraphical evidence of its gradual evolution precludes the possibility of an independent local origin of the so-called OCP.

A comparative study of the pottery types of both the groups of the OCP throws significant hints on their genesis. The Group A ware shows close affinities with the Baragaon and Alamgirpur wares in most of the types. In fact, the Group A is nothing more than the Baragaon ware minus the <sup>classical</sup> Harappan shapes,

if we overlook the state of preservation of the o.c.p. All the three ceramic traditions of OCP comprising Group A are present at Bargaon and Alamgirpur. It is for this reason perhaps that M.N. Deshpande<sup>30</sup> and Krishna Deva<sup>31</sup> te-associate the OCP at both the sites with the Harappan complex Ambkheri undoubtedly represents a decadent state with limited Harappan traits.

The ceramic industry noticed at Bargaon and Alamgirpur is a widely distributed late Harappan ceramic tradition of north India representing a composite phase of culture.<sup>32</sup> This pottery has been discovered as far west as Katpalon near Jullundur<sup>33</sup> and as far south as Mitathal. In the north, it extends to the Siwalik hills<sup>34</sup> at Bara,<sup>35</sup> Dher Majra, etc., and in the east to Manpur and Bhatpura.<sup>36</sup> A stratigraphical context to this ware has been provided by the excavation at Mitathal which throws a new light on its genesis.

The ceramic industry of Baragaon and Alamgirpur topologically corresponds to the pottery of Mitathal IIB. This sub-period is marked by a gradual decline in the ceramic traditions of the previous period. The classical Harappan shapes like the beaker, perforated jar and dish with nail-headed rim gradually become less popular. Squattish and sturdy dish-on-stand with under-cut or drooping rim, vase with beaked or beaded rim and basins with undercut rim are the common shapes of Harappan derivation. Besides, the loop handle of vase; vase with flaring or flanged rim(Bara type) and bowls with convex or tapering or carinated profile and featureless, thick, blunted, flattish, everted or out-curved rims and basins with flaring, thickened or projected rims contain the Siswal ceramic tradition in this phase. A few shapes simulating the Cemetery-H types, such as dish-on-stand with flaring rim and sharp carinated shoulder and/or a ridge below the base of the dish; jar with collared rim; flask; dish-

on-stand with beaded and under-cut rim are also obtained from the site. The incised decoration on the external surface of the pots similar to that at Bara also occurs. The phase is marked by an exuberance of shapes and painted designs suggesting an almost resurgence of Siswal tradition. But the other cultural traits are predominantly Harappan, *in origin*.

Thus, we have seen that the Bargaon ceramic industry, and for that reason the OCP of Group A, evolved from the fusion of the Harappan and the Kalibangan I (Pre-Harappan) or Siswal traditions, a process, stratigraphically evidenced at Mitathal and already underway in Mitathal IIA. The horizontal expansion of this vertically emerging Harappa-dominated composite culture gradually shed off the classical Harappan elements till it was rendered destitute as in the OCP period of Group A.

The OCP of Group B, on the other hand, shows a fair amount of typological similarity with the late Siswal ware. The OCP types, nos. 1, 2, 3, 4, 5, 6, 7, 8, 13, 14 and 16 are either similar to the late Siswal ware at Mitathal, Sarangpur and other sites in the Sarasvati basin or are derivable from it. The excavations at Siswal and Mitathal have proved beyond doubt the independent evolution of Kalibangan I in Siswal B or Mitathal I and later on, in a subservient form along with the Harappan. The horizontal extension of Siswal B ware, as known from the explorations in the Sarasvati basin, shows that the ware extended from Sarangpur near Chandigarh in the north to Tigrana near Bhiwani in the south, and from Bani on the right bank of the Ghaggar near Rajasthan border in the west to Rukhi near Gohana and Baliana near Rohtak. The explorations also revealed a concentration of Kalibangan I or Late Siswal ware sites in the lower Drisadvati and Yamuna Valleys (old

bed near Mitathal), as well as a lesser classical Harappan influence in this part. Thus the probability has arisen about the continuous evolution of the Siswal ware with a limited Harappan influence in the south-eastern parts of Haryana and further east in the lower Doab, which has been called the OCP for no better reason than its state of preservation in the Lower Doab. The examples of ill-preserved and rolled late Siswal ware like the OCP are not wanting in the Sarasvati basin. The late date for Group B of OCP is suggested by the occurrence of evolved types like the vase with a flanged rim (no.3) and bowl with blunted (no.5) or flaring rim (no.6) recalling the Mitathal IIB types, and the occurrence of a harpoon at Mitathal almost identical with that of Saipai.

(iii) Affinities with the Copper Hoards

Related to the question of OCP is the problem of the 'Copper Hoards', discovered all over North India from time to time since 1928 A.D. On techno-typological grounds, B.B.Lal distinguished the 'Copper Hoards' of the Ganga-Yamuna Doab from those of North-Western India and the Indus Valley. The hoard tools of the Doab were further distinguished from the simpler types of eastern Indian <sup>37</sup> 'Hoards' by S.P.Gupta. It is with these <sup>38</sup> *of Doab* that we are concerned here. They include harpoon, anthropomorph, antennae sword, double-edged axe, hooked spear-head, celt, bar celt and ring.

A cultural context to the 'Copper Hoards' was first suggested <sup>39</sup> by Lal on the 'circumstantial association of the former with OCP at Rajpur Parsu and Bisauli, who assigned to it a date pre-1200 B.C. on the basis of the stratigraphical position of the O.C.P. which <sup>39a</sup> precedes the P.G.Ware at Hastinapur. His contention was



supported by the work of Y.D.Sharma at Bahadrabad.<sup>40</sup> But the latter identified the OCP with the Harappa ware on typological grounds and also for that reason with the 'Copper Hoards'. He further supported his contention by the occurrence of a copper ring and an anthropomorph at Bargaon and Lothal respectively in Late Harappan contexts. But on reappraisal, he denied any relationship between the Bahadrabad OCP and the Harappan ceramic tradition,<sup>41</sup> which undermined his own hypothesis of the association of the 'Copper Hoards' with the Harappan Culture.

The recovery of a new evidence from the Sarasvati basin and further east in the Doab demands a fresh examination of the 'Copper Hoard' problem. The excavations at Rajpur Parsu, Bisauli and Bahadrabad had provided the circumstantial evidence to suggest the association of the 'Copper Hoards' with the OCP. But the recovery of a harpoon, an anthropomorph and a sword of the 'Hoard's variety from the excavations at Saipal<sup>42</sup> has established that association stratigraphically. The clear-cut typological evidence for the association of the OCP with the Mitathal IIB Ware conclusively proves the association of the Copper Hoards with the Late Harappa culture. This is further corroborated by the recovery of certain implements including a Pondi type ring, a celt, and a Saipai type harpoon, from the upper-levels of Mitathal IIB in the Sarasvati basin. The discovery in the later Harappan contexts of a ring at Bargaon and an unmistakable anthropomorph fragment from Lothal B, as stated by Sharma earlier is also significant in this connection. Further-more these tools are not confined to the peripheral Harappan

Zone alone. The short swords showing a diamond sections of their blades, found from the late levels of Mohenjodaro,<sup>42a</sup> have their counterparts in the Sarthauli swords.<sup>43</sup> The recovery of an unfinished variety at Mohenjodaro suggests a local manufacture of these swords as pointed out by D.P. Aggarwal.<sup>44</sup> A fragment of a double-edged axe from Mohen-jo-daro<sup>45</sup> and a large number of Pondi type rings and plain celts recovered from the Harappan sites in the Indus valley and elsewhere, too, are not without significance and carry weight in this context.

The metallurgical studies show that 70% of the tools at Harappa and at Mohenjodaro were made of unalloyed copper.<sup>46</sup> On the other hand, the use of bronze has been reported by Smith<sup>47</sup> in the case of two harpoons undoubtedly of the 'Hoard' affiliations. The chemical analysis of Mitathal tools<sup>48</sup> from all the Periods reveals the use of above 98% of pure copper, which comes closest to that of the anthropomorph from Bisauli Copper-Hoard.<sup>49</sup> The close affinities of the Mitathal harpoon and ring with their counterparts at Saipai and Pondi respectively are also relevant in this connection.

The above evidence undoubtedly suggests a common metallurgical and technotypological traditions between the Harappa culture and the 'Copper Hoards'. Besides, the total metal in the 'Copper Hoards' compares well with that of the Harappa culture. In metal forging technology the 'Copper Hoards' closely followed the Harappans who appear to have been the most advanced in

the sub-continent.<sup>50</sup> This *cuts* at the very basis of the postulation of D.P. Aggarwal<sup>51</sup> who calls the Copper Hoards as 'unique' and 'isolated phenomenon' and suggests their independent genesis among the Mundas in the East or as a result of inspiration from South-East Asian metallurgical traditions. The association of the 'Copper Hoard' tool types with Mitathal IIB, Lothal B, Bargaon and the upper levels of Mohenjodaro, the occurrence of more evolved types in the Gangetic Hoards than those of the Harappan sites, and the advanced techno-metallurgical tradition of the Hoards following closely the Harappa culture, suggest the plausibility of a genetic relationship between the Harappa/<sup>culture</sup> and the Copper Hoards. The typological innovations were adopted and adapted to meet the ecological demands in the new regions. While the parasu was a useful implement at Mitathal in the semiarid zone, long spear-heads, harpoons and swords became popular in the Doab, infested with beasts. It is interesting to note that the Parasu type implement is still used in Haryana and Rajasthan, while the long spears are more popular with the present population of the Gangetic-Valley. The harpoons seem to have been adapted from the bone proto-types in the Neolithic culture.<sup>52</sup> The vestiges of the Neolithic culture have been attested in Kangra valley<sup>53</sup> and around Pinjore<sup>54</sup> nearer home. Their contact with Harappans in the Sarasvati basin is indicated by the discovery of a ring-stone at Mitathal and a polished celt at Kalibangan.<sup>55</sup> The relationship between the Copper Hoards of the Madhya Desa and Eastern India seems to be that of <sup>further</sup> devolution and not of evolution as postulated by S.P. Gupta<sup>56</sup> and D.P. Aggarwal.<sup>57</sup>

(iv) Extent

The expansion of the Mitathal IIB or Late Harappan ware (the so-called Bara and OCP complex of the Doab inclusive) thus becomes a wide-spread cultural phenomenon of North India. It extended in the north to the Siwalik foothills, in the West to the Sutlej-Beas Doab and in the east to the Gangetic Valley. But the absence of the Late Harappan ware from North Rajasthan<sup>57a</sup> and the adjoining regions of Haryana (down of Vanawali, No.2, near Fatehabad in the Sarasvati Valley, and Alipur Kharar, No.26, near Hansi in the Drisadvati Valley) suggests that the Harappa culture survived in our region (as also in the North-Eastern Panjab and Western U.P.) for a longer time after it had come to an end in the lower and middle zones of the Sarasvati Basin, <sup>and in the Indus Valley.</sup> The desertion of the semi-arid zone of North Rajasthan and Bahawalpur by Harappans and their kindred folks, and their subsequent expansion further east seems to have been forced by the growing desiccation of the Sarasvati Basin. It was this second phase of the Harappan expansion which was largely responsible for the colonization of the ancient Madhya Desh. It seems to have ensued with the settlements of Daulatpur I, Alamgirpur I, etc., towards the close of Mitathal IIA, and survived Mitathal IIB at least in the Ganga-Yamuna Doab. With more than 90 OCP or late degenerate Harappan sites reported from the Doab, it would be difficult to agree with D.P. Agrawal<sup>58</sup> that the Doab was first colonized by the iron-using P.G. Ware people.

The sequence of the region is further continued at Daulatpur. The excavation revealed four cultural Periods, I to IV. The period I at Daulatpur corresponds with Mitathal IIB. The sequence is continued after a break in Period II, characterized by the Painted Grey Ware Culture which is precluded from the scope of the present work.

(v) In the Sequel

No evidence of flood, fire or external invasion has been recorded from either of the excavated Harappan sites which could throw light on the end of the Harappan Culture in our region, nor any overlap between the Harappa Culture and succeeding P.G.Ware Culture is encountered at Daulatpur. Absence of such an evidence from the other Harappan sites<sup>59</sup> except Mohenjodaro,<sup>60</sup> the stratigraphical position of which too is not certain,<sup>61</sup> makes the problem all the more complicated.

The distribution of the Harappan sites in the Sarasvati and Drisadvati Valleys reveals that the Harappa Culture falls into two zones, A and B, the former comprising North Rajasthan and the adjoining districts of Hissar, Rohtak and Jind in Haryana, and was contained in the East by the (old west<sup>-erly</sup> course of) Yamuna river. The zone B included the Late Harappan sites above of Vanawali (No.2) in the Sarasvati Valley and Alipur Kharar(No.26) in the Drisadvati Valley, both in Hissar District. The latter zone extended into the Siwalik hills in the North and over to the Ganga-Yamuna Doab in the East. The two zones, however, overlapped in parts of Hissar, Rohtak and Jind districts.

It is surprising that the Harappa Culture came to an end in its mature stage in about 1700 B.C. in North Rajasthan and parts of

Harappan of the zone A, while it survived and expanded in the zone B till about 1500 B.C. The presence of late mature Harappan remains in the lowest levels of Daulatpur and at sites like Chandigarh, Alamgirpur etc. shows that while the mature Harappan sites were being deserted in the lower parts of zone A, new settlements had begun to spring up in the zone B. The further expansion of the Late Harappa Culture seems to have been a gradual process in the subsequent period.

It is, therefore, evident that the Harappa Culture did not come to an end simultaneously all over the Indo-Gangetic Divide.

Now the question arises, what factors could have been responsible for the desertion of the Harappan sites of Zone 'A' and the new colonisation by the Harappan, further north-east in the zone 'B'. There is no evidence to suggest that the human factor was responsible for the exodus of the Harappans from Zone 'A' because no *clear* contact between the Harappan and post Harappan Cultures has been attested so far in this region.

A. Ghosh, on archaeological grounds, suggested 'desiccation' to be the cause of the end of Harappa Culture in the Sarasvati Valley and held the development of unfavourable climatic conditions to be responsible for the drying up of the Sarasvati. The desiccation of the Sarasvati or the Ghaggar basin has been elaborately discussed by a host of Geographers who have suggested among the various causes the deterioration of climate, changes in the courses of Yamuna, Sutlej and the other affluents of the Sarasvati, and the obstruction of the <sup>upper</sup> course of the Ghaggar by the rise of a mountain range and consequent diversion of the upper waters of the river to Yamuna.

Recently, on the basis of hydrographical studies of the Ghaggar or

Sarasvati near Kalibangan, R.L.Raikes has opined that untill sub-recent times the Sarasvati was fed by the Yamuna and that the latter was alternately captured by the Indus and the Ganges systems.<sup>68</sup> According to him, the eastward drift in the course of Yamuna which took place about 1700 B.C. resulted in the desiccation of the Sarasvati Valley and culminated in the desertion of the Harappan site of Kalibangan.

The present field-work, however, adduces the following evidence for the desiccation of the Sarasvati basin about 1700 B.C. We know that the Sarasvati basin was anciently watered by the Sarasvati, Drisadvati and the Yamuna rivers, and their valleys remained occupied during the Kalibangan I, Late Siswal and the mature Harappan times in Zone 'A'. But the non-occurrence of the Late Harappan remains in the lower parts of the Zone 'A' and the presence of the P.G.Ware in the flood plain of the Sarasvati conclusively prove that this region had been desiccated about 1700 B.C. This is also corroborated by the absence of P.G.Ware sites in the lower Drisadvati and Yamuna Valleys.

There is little evidence to show that deterioration in the climatic conditions of the region during the period of our study could have been <sup>the</sup> cause of this desiccation. Because, on archaeological and Physiographical grounds, it is reasonable to surmise that the Yamuna, Sarasvati and the Drisadvati changed their courses in prehistoric times (See Chap I).

The Yamuna seems to have started shifting eastwards about the end of Mitathal IIA as is indicated by the desertion of the Harappan sites in Zone A and the progressive deterioration in the material culture of the Harappans in Zone B. The occurrence of a chain of ancient sites beginning with the P.G.Ware Period and the absence of pre P.G. Ware sites along the easterly course of Yamuna <sup>through the Khordar,</sup> past Panipat, Delhi etc. indicate that the river had acquired the new course by the P.G. Ware times. The Sarasvati and Drisadvati also seem to have changed their courses about the same time as is evident from the absence of Late Harappan sites in Rajasthan and lower Hissar, in these valleys and the occurrence of P.G.Ware sites only in the Sarasvati Valley in Zone A and that too within the flood plain. The Somb and the Patharala streams which join the Yamuna to-day below the hills, perhaps represent the former upper courses of the Sarasvati and the Drisadvati rivers respectively, later on caught by Yamuna. It is significant that Somb and the Sarasvati have a common gorge in the outer Siwaliks near Ad Badri in the Ambala district, while Patharala, the easterly affluent of the Somb is synonymous with Drisadvati. The occurrence of a P.G.Ware site at Ban Santaur on the joint easterly course of the Somb and the Patharala shows that these affluents had already joined the Yamuna by the P.G.Ware Period.

These changes in the river courses seem to have desiccated the large tracts of land in our region and rendered them desolate. The absence of Late Harappan and P.G.Ware sites in the lower Drisadvati and Yamuna Valleys and of the former in the Sarasvati Valley in the same Zone corroborates the above contention. The survival and decline of the material culture and the drift of the Harappan population in Zone B, perhaps in search of better irrigated land, seem to have



resulted from the above hydrological changes. The references to the Kurujangal and the Khandava forests <sup>70</sup> in the <sup>a</sup> ~~Mahbharata~~ <sup>seem to corroborate</sup> the occurrence of <sup>the</sup> above phenomenon in Zone A.

What was the ultimate fate of the Harappa Culture, which survived for about a couple of centuries longer in our region in Zone B, is difficult to say. The wholesale desertion of this extensive region of the Sarasvati Basin seems inexplicable, when we find the same region being occupied by the P.G.Ware people subsequently. The excavation at Daulatpur has revealed a clear break between the Late Harappa and the P.G.Ware Cultures. But the <sup>occurrence</sup> ~~prevalence~~ of the Late Harappa and P.G.Wares together at sites (No. 3, 17, 38, 39, 40, 43, 45, 50, 54, 55, 57) ~~yielding~~ assumes importance and might explain their relationship on excavation. The occurrence of terracotta arecanut-shaped beads both in Mitathal IIB and the P.G.Ware cultures, too, is significant <sup>suggesting</sup> ~~in~~ the possibility of their relationship.

The author does not claim to offer a final solution to any of the prehistoric archaeological problems of the region. But the present thesis has thrown some new light on certain important aspects of the problems which may be summed up ~~are~~ as follows:

- i) More than ninety new prehistoric sites have been placed on the map of Indian archaeology.
- ii) A continuous regional sequence from Kalibangan I Culture to Late Harappa Culture (ranging between c. 2300 and 1500 B.C.) has been established which has helped in narrowing the gulf of the dark age in North India.
- iii) Stratigraphical evidence regarding the survival of the Kalibangan I and the Harappa culture in North India has been furnished for the first time.
- iv) The northern and eastern extent of the Kalibangan I and

Late Siswal Cultures, the eastern extent of the mature Harappa Culture, and the southern limit of the Late Harappa Culture too have been determined for the first time.

- v) A new light has been thrown on the relationship between the Kalibangan I and the Harappa Cultures <sup>or</sup> ~~and~~ their derivatives.
- vi) Further evidence on the nature and character of the Kalibangan I and the Harappa Culture and their derivatives in the region has been brought forward.
- vii) More light has been thrown on the end of the Harappa Culture in the Sarasvati Basin.
- viii) The enigmatic problems of the Bara ware, the OCP and the Copper Hoards in North India have been put in their proper perspective.
- ix) The exploration of the lost courses of the Yamuna, Drisadvati and Sarasvati has added a new chapter on the hydrology of the Indo-Gangetic Divide.

Besides, the present <sup>work</sup> points to the direction <sup>The</sup> ~~of~~ future work ~~in this region, it is expected that -~~ <sup>should proceed:</sup>

- (a) Vertical excavation at selected sites yielding the Late Harappan and P.G.Wares in Zone B may help to bridge the gap ~~in~~ the pre-historic dark age of Northern India.
- (b) The excavation at the most outstanding Harappan site of Rakhigarhi might throw additional light on the nature and character of the mature Harappa Culture of the region and its relationship with Kalibangan I Culture.

- (c) The horizontal digging at the Late Siswal & the Late Harappa sites may throw light on the material *culture* of the two cultures.
- (d) The determination of C14 dates would establish the absolute chronology of the various prehistoric cultures of the region.

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