CONCLUSION

In this thesis, we have attempted to study the role of craft production within the Harappan economy. Rather than concentrating on technology, the aim has been to explore the socioeconomic structure within which Harappan craft production matured. We have seen in Chapter I that Harappan agriculture is still little understood, as agricultural activities are largely archaeologically undetectable. Tools which would be an indicator of production have rarely survived in Harappan contexts. Non-subsistence production on the other hand provides us with most of our archaeological data.

In the Introduction, we noted that Harappan craft production has been dealt with in varying detail by different scholars. The references to craft production made by the early excavators of Harappan sites form some of our primary data in this thesis. Further work on various crafts have enhanced our knowledge of Harappan productive capacities. However, the majority of such work has been done within limited parameters.

Most ethnographic information on production focuses on agricultural production. Craft activities on the other hand are often summarily dealt with and it is largely the techniques utilized that are considered more important than the organization of such production and the aim of
manufacture of non-utilitarian objects. Moreover aspects such as division of labour, location of production and scale of production which may give us important clues to understand our archaeological data are often lacking. We have been able to collect ethnographic data for various aspects such as part-time or full-time craft working, division of labour and subspecialization, regional specialization, itinerancy, procurement of raw material, location of production, the scale and nature of product requirement and the payment of craftsmen. The aim was to deduce aspects of craft production that were likely to leave archaeological indicators. These indicators in turn were tested in relation to the Harappan data. Only in a few cases do we find that archaeological indicators are applicable to the Harappan context. We find evidence of subspecialization (separate processes of bead making found from different loci within settlements such as Chanhu-daro and Mohenjodaro, for example); regional specialization in the case of shell working and lapis lazuli bead making; the location of production within architectural contexts, within settlements and between different settlements. Yet the ethnographic data informs us about aspects which would leave no archaeological indicators. The division of labour between skilled and unskilled members of a household working at a craft, the seasonality of production, all can be inferred taking ethnographic data into consideration.
Harappan craft technology was studied in Chapter III. The entire data regarding processes and tools utilized, amount of labour and time and space required for various crafts were collected. This body of data provided us with particular evidence. First we were able to understand better the configuration of archaeological material and make inferences about the contexts of craft activities in terms of space and organization. However, in a number of cases, the exact activity being performed was not clear, as craft tools were found unassociated with production debris. Few craft tools are unambiguous in their functions, while a number like chisels and saws can be used for multiple purposes.

A detailed study of Harappan technology also, illustrated the sophistication of Harappan crafts and the 'considerable' investment of labour that must have been involved. Examples of crafts requiring extensive time and skilled labour are the production of etched carnelian beads, carved steatite beads, faience miniature jars and objects produced by cire perdue and the carving of seal designs.

Spatial requirements for Harappan crafts are also noted to vary: shell cutting, seal carving, weight and bead making can be easily undertaken in a room, while metallurgy, pottery and faience production would require
more space due to the installation of furnaces and working areas for other processes. Some craft processes such as pottery firing and the initial processing of shell need to be undertaken at a distance from habitation areas to prevent pollution.

Harappan craft production also makes clear the multiple uses of raw materials for a varied range of objects. Ornaments and utensils were made out of faience, steatite and silver; and ornaments, tools and utensils out of shell and copper/bronze.

A comparative study of craft production in the Mature Harappan, as well as in the Early and the Late Harappan periods highlighted the differences between the cultures. Both the Early and Late Harappans utilized a far smaller range of raw materials than that exploited by the Mature Harappans; rarely were non-local materials utilized. The expansion of craft production in the Mature Harappan period embraced a far greater range of craft technologies. The result was an extensive range of products, for diverse purposes and the use of exotic materials for many crafts.

The Early Harappans appear to have been satisfied with simple crafts, changing a raw material into a required object with none too complex technologies involved. The Mature Harappan period however revealed the
practice of a number of crafts which totally transformed the raw material into a different object. This is clearly illustrated by the use of silica and alkali ingredients to produce faience, the etching of carnelian beads and the production of decorated steatite beads.

One other issue arising out of the use of non-local materials by the Mature Harappans is significant here. The Mature Harappans appear to have ensured the regular availability of certain raw materials by the settling of Harappan communities at source areas. Examples of these are Shortughai, Nageshwar and Balakot. We know that shell was little used by the Early Harappans, but the widespread use of shell in the Mature Harappan period is explained by the establishment of communities at Nageshwar and Balakot. In Bactria, colonies were probably set up to exploit the locally available lapis lazuli. It appears that access to lapis lazuli was not left to chance (Ratnagar 1981).

A survey of craft products within the Harappan region as a whole was undertaken in Chapter IV. The aim was to understand the relation of production centres to sites where products were finally consumed. Apart from this, sources of various inputs such as raw materials and fuel were also outlined to enable us to relate between these and production centres.

Production centres have largely not been located near
raw material sources. Only where shell working is concerned do we note that a number of shell cutting centres were located in proximity to the coast. Craft centres have also not been located near fuel sources. The picture that emerges from our survey hints rather at the location of production near consumption points. The transporting of raw materials and other inputs was preferred to locating craftsmen near input sources.

In some cases such as seal carving, weight making, production of etched carnelian beads and faience miniature jars, the nature of the finished goods must have dictated that production be undertaken near the consumers who may have been a small proportion of the entire population. Restrictions on the use of particular goods would also have been maintained by fewer production centres for these goods. Thus, seal carving was noted at only four centres while weights were produced at only three centres and etched carnelian beads at two centres. The value embedded in certain objects would have negated costs of transportation of raw materials and other inputs.

We have delineated objects that were rare or complex to make and those which had imitations in cheaper materials as luxuries or wealth goods. That certain goods must have been valuables or used only by specialized individuals also appears so from the number and location of findspots of such goods. Weights, etched carnelian
beads, faience miniature jars, long barrel-cylinder beads are found at very few settlements.

On the other hand, the extensive requirements for other goods such as regular stone beads and shell bangles is inferred from the number of production centres for such goods and their ubiquity over the Harappan region. A far larger proportion of the Harappan population appears to have been able to afford stone beads and shell bangles unlike etched carnelian and long barrel-cylinder beads and faience miniature jars.

Technology is not such a reliable factor for ascertaining the value embedded in certain objects. It is the function of objects which is more important. For example, weights which were not difficult to make were in fact produced at very few centres, so as to assure the uniformity and accuracy that must have been functionally necessary for such objects. The high level of literacy required for the production of steatite seals must also have limited the number of production centres. The number of skilled literate craftsmen in the Harappan culture as a whole must not have been so many as to be dispersed over a number of settlements.

To cohere our data on production and findspots of finished goods, we have gone into the means of distribution of craft objects. We have noted that market
forces and the use of money would not have governed production and distribution of Harappan craft goods. Production and distribution in organised guild fashion would also not apply for the Harappan period.

Exchanges could have taken place through itinerant craftsmen or full-time traders but these means are again difficult to accept for our period as regular interactions with outsiders purely for the purpose of profit may not have been viable in the Harappan culture. Periodic 'markets' may have existed but these would have mainly dealt with utilitarian goods. The movement of elite artifacts relied on other means.

Gift exchange may have been a significant means of product distribution. Exchanges between kin may still have been prevalent in this period, but more formalized gift exchange in the form of ceremonial prestations between elites probably accounted for much of the transfer of Harappan 'luxuries'. Valuables may also have been given by rulers to subordinates which may explain the widespread finds of luxuries in Mohenjodaro. Such exchanges, as also those between high-ranking kin groups may account for the presences of valuables in smaller Harappan settlements. Finds of Harappan craft objects such as long barrel-cylinder and etched carnelian beads outside the Harappan region may also have reached their
destinations through gift exchanges between ruling elites of different cultures.

Organized transportation networks bringing raw materials to craft centers and distributing finished goods to consumption points must have existed. The organization of these must have been in the hands of the Harappan ruling elite. It is difficult to imagine that settlements such as Lothal and Chanhudaro would have been established without any networks to transport finished goods to other settlements. The transfer of objects used in administration and exchange, such as weights and seals, also must have been in the hands of the ruling elite, to prevent unauthorized use of such objects.

Our survey of craft activities across the Harappan region resulted from an analysis of the archaeological data from each excavated Harappan site. The presence of indicators such as raw materials, unfinished objects, tools, debitage, and objects kept for reuse indicated that production activities were undertaken at particular settlements. The discussion in Chapter V focused on three settlements which from our initial study were noted to be craft centers. Our aim was to study primarily the reasons for craft production at these centers. All the three settlements revealed the production of a number of crafts, which was the primary reason for studying them. Settlements such as Nageshwar would have given data
regarding only one craft. The organization and economy of centres undertaking multiple production activities were bound to differ from settlements practising a single craft.

A contextual analysis of craft indicators within the settlements of Mohenjodaro, Chanhudaro and Lothal was undertaken. This analysis revealed the following points. Crafts in most cases appear to have been practised in domestic contexts: rooms or courtyards of residential structures reveal craft indicators. In very few cases do we note workshop production. One example is the Lothal bead workshop. The identification of non-residential workshops from the other two settlements was not evident. At Chanhudaro, room 215 could have been a workshop but could also have been a storage area for craftsmen working with different materials. At Mohenjodaro we have speculated that the Moneer southeast area could have functioned on the lines of a workshop. This is conjectural as the area has not yet been excavated. Craft production in all other cases was undertaken in domestic contexts. Thus it appears that the Mature Harappan craftsmen worked primarily in their homes, with only rare instances of workshop production. It should be significant that so far only bead making has given evidence of being practised in workshops. This fact, allied with the number of bead making centres for the
entire Harappan region must indicate the large requirements for stone beads among the Harappans.

The study of craft indicators from their findspots within Harappan craft centres also indicates a measure of subspecialization. Different craftsmen specialized at separate processes within each craft as indicated by the distribution of craft indicators for each craft. This is especially clear from the evidence of bead making. The craftsmen flaking or shaping the initial roughouts were different from the drillers and from those who ground and polished beads. The distribution of indicators for different processes of other crafts is not as clear. For most other crafts, we find mainly unfinished objects as craft indicators and finds of raw material in other cases. But the lack of association of production debris and facilities wherever required makes the identification of different processes difficult.

Chanhudaro and Lothal were primarily craft centres, established for specific purposes. At Lothal, the impetus for the location of Harappans here must originally have been to arrange for the transportation of local raw materials. Craft production was added to the functions of the settlement. Production of various goods, such as seals and metal objects, beads and shell objects appears to have been in excess of local requirements. Chanhudaro
seems to have entirely focused on craft production. Its location near Mohenjodaro must have been intentional and strategic. Raw materials were brought to this settlement, worked here and sent to other settlements across the Indus and further. This centre also must have sent on raw materials to other craft centres such as Mohenjodaro. Production at both Lothal and Chanhudaro have been speculated as probably having been in excess of local requirements. This must indicate that production was primarily for non-local consumers.

We also have evidence that some manufactured goods were used at Chanhudaro. Thus production at Chanhudaro was also aimed towards the needs of local inhabitants, but a far larger quantity of manufactured goods were transported out of the settlement.

Chanhudaro by itself was not located close to raw material sources. It is only in comparison to Mohenjodaro that it is closer to raw material sources. Production at this centre must have been significant if raw materials and fuel were being transported considerable distances. Thus, the role of Chanhudaro as a centre manufacturing a number of Harappan 'luxuries' such as etched carnelian beads and long barrel-cylinder beads becomes significant. Chanhudaro is also one of the very few centres producing seals and weights.
Mohenjodaro in contrast is not primarily a craft centre. A number of diverse crafts were practised here but all these craft activities appear to have been part of the myriad functions of the ancient city. Production seems to have been geared to the needs of local inhabitants and in some cases (such as metallurgy) may not even have satisfied local needs. Bead making undertaken in the Moneer southeast area may have accounted for the requirements of the local inhabitants. However, we know that special beads such as etched carnelian beads and long barrel-cylinder beads were not made at Mohenjodaro. These were probably brought from Chanhudaro. The few artifacts found made of lapis lazuli could be accounted for by the limited indicators for this craft. The evidence for steatite working is however difficult to explain in view of the vast quantities of steatite objects found in the excavations. Stoneware bangles were made at Mohenjodaro which have so far been found at few Harappan settlements. Thus in most cases production appears to have been just enough or less for the needs of the Mohenjodaro populace. However, chert drill making attested to in the Moneer southeast area must have been in excess of the needs of local craftsmen and may have been sent to other bead making centres. Thus Mohenjodaro in contrast to Chanhudaro and Lothal was a consuming settlement, an urban centre where craft production was only one out of various economic functions.
Thus, on the whole it would seem that the status of separate Harappan settlements must have differed considerably. Settlements where no crafts were practised must have been in a dependent position as all manufactured products would have to be transported to them. Such settlements may have been composed of a population which was economically and socially homogeneous unlike settlements where specialized craftsmen were based. Settlements without craftsmen may have revealed a lack of division of labour among the populace unless there was a specific function or purpose for the location of the settlement. This may have been so in the case of Kalibangan. Here we have no evidence of craft production, apart from some pottery production. Kalibangan in spite of not revealing any craft activities, has reported a vast quantity of crafted objects. Kalibangan may have served as a regional centre for the Harappan culture. The vast quantities of metal artifacts found at the site could indicate its proximity to a metal working centre as is also apparent its relative proximity to metal ore sources in Rajasthan.

The status of craft centres must also have differed as noted from the evidence in Chapter V. Centres such as Chanhudaro and Lothal which manufactured for outside consumers must have been in a more dependent position than
a craft centre such as Mohenjodaro which produced mainly for its own consumption and moreover availed of products from other craft centres. On the other hand, craft centres such as Chanhudaro and Lothal may have occupied a more prominent place in the Harappan economy than Nageshwar or Balakot. The latter two settlements were specifically established for exploitation of a local raw material while transportation costs of most inputs were outweighed for production at Chanhudaro.

Yet another aspect arises from the above points. Here we note the context of craft production in a settlement such as Mohenjodaro. Mohenjodaro as noted earlier was primarily a consuming settlement. Craft production was probably one among many other activities in this ancient city. Here we enter into a discussion on the phenomenon of urbanism. We have considered the structure of the population of a settlement as more important than the size of the population (though size cannot be entirely negated). In the case of the Harappan culture, we have also studied various architectural elements and provision of civic amenities to assess the role of a governing or ruling elite in Harappan settlements. The disassociation of a certain proportion of the population from primary food-producing activities is of particular significance in an urban society. The multiplicity of economic functions will make for socioeconomic differentiation of the
We assume that in rural settlements too there will be some amount of division of labour and occupational differentiation. However, in urban contexts, the proportion of a non-food producing population will be far greater, more formally organized and will have a widespread rather than local impact. The role of a ruling group in urban settlements will have more far-reaching power and influence than the element of leadership in rural centres. Urban settlements comprising a dense, concentrated population will provide political elites with 'considerable' control over labour. The attraction of occupation specialists to urban settlements and perhaps the bringing in of other production specialists will increase the stature of the urban centres. The degree to which these diverse strands of the population will be controlled and woven together will depend on the political stability of the rulers.

With this background of the role of political elites in urban centres, craft production acquires new dimensions. In an urban context, craft production must expand with the requirements of a dense, nucleated population. Moreover, the existence of different social groups will necessitate the production of a wide variety of crafted objects. Political interest in craft production is of primary value in the context of this
thesis. In the period with which we are concerned, commoditization of land has not yet occurred. In such a situation, craft objects occupy a primary position in the society and economy as valuables or luxuries. It is these objects which stratify individuals and groups into separate hierarchical levels. The position of individuals at the apex of the hierarchy will depend on their ability to restrict consumption of valuables. Maintaining control over sources of raw materials and distribution, and primarily over production, will ensure the restriction of these goods.

We have been careful also to delineate between wealth goods and other goods which may have had a restricted use due to other reasons. Distribution of objects such as the Surkotada bangles and the Tivela bangles from Balakot signify regional styles and preferences rather than socially instituted restrictions.

The significance of urban centres for craft production arises as urban settlements will be the loci of the political elites. The production of valuables and the working of complex technologies requiring skilled craftsmen will be necessary in urban centres; production will hence be in close proximity to the elite consumers. The access of the urban centre to a large area (the hinterland) will enable the procurement of a wide range of
raw materials. The transportation of raw materials and other inputs would have been organized by the ruling elite. The resulting expenditures would be outweighed by the uses to which finished goods would be put.

It is not easy to distinguish between what is urban and what is rural in the Harappan case. Typical Harappan artifacts are found in settlements which identify these sites as Harappan. Settlements like Nageshwar and Balakot did not evolve as rural settlements. These were settlements of craftsmen or procurers of raw material. Nageshwar was not urban from what can be made out of the remains of this settlement. However its role in the Harappan economy as a producer of a category of goods with extensive requirements would raise its status above that of a village. True villages would perhaps only be those within the hinterland of a city, depicting more or less unilineal means of subsistence strategies. Finds of Harappan objects in such settlements (which would identify them as Harappan) could have reached there through kin exchanges or movement of peoples. However, local production of pottery according to Harappan specifications in small settlements will indicate specific preferences for products by the Harappans.

Conclusion

One of the primary requirements for Harappan craft
production is skill. With the question of skill is associated the concept of specialization. Various criteria have been laid down to identify a craft specialist: a person having a skill not available to other (Evans 1978:115), of at least part-time dedication to a task (Arnold 1987: 20; Muller 1984: 491), of a craftsman producing well is excess of local needs (Arnold 1987: 20), of the existence of a subsistence surplus necessary to support a specialist, of specialists attached to the elite or to a patron (Earle 1982: 8; Santley & Arnold 1986; Earle & Brumfiel 1987) and an association with standardization and homogeneity, suggesting proficiency (Rice 1981: 220; Earle, Costin & Russel 1986: 4; Arnold 1987: 59; Santley & Arnold 1986: 5).

We have considered a specialist as one who obtains the major portion of his livelihood from one particular activity. This can be inferred taking various aspects into consideration. Archaeological evidence such as the amount of debitage resulting from a particular craft process may not be very useful in the absence of a sound chronological sequence. It is not likely that one will get a continuous sequence of debitage suggesting full-time craft production. An artisans' workshop or work area like any other activity locus will be regularly cleaned and swept out (Vidale 1990) and hence such debitage will not
remain in situ. Evidence of full-time craft production can be inferred in other ways.

The time required for the practice of various crafts may not have allowed subsistence procurement activities. Seasonal scheduling of different activities may have been possible, but for the operation of other factors. Certain crafts may have been performed on a full-time basis. The carving of seals, requiring a high degree of literacy could not have been performed by part-time craftsmen. This is because the number of such craftsmen, combining literacy with artistic ability, could not have been large for the Harappan culture as a whole. Certain other crafts on the basis of their technology may have been performed on a part-time basis, but the contexts in which they were practised and the requirements they were fulfilling may have necessitated a full-time craft. Activities engaged in in cities will largely be performed by full-time specialists, due to the division of labour and the social support of specialists. Crafts practised in a workshop are also more likely to have been undertaken by full-time specialists, unlike crafts practised in residences.

Harappan evidence for subspecialization and the location of craft production in urban centres must have entailed strict division of labour. In smaller settlements, this degree of division of labour may be less apparent. Specialists must have been at work in small
settlements such as Nageshwar and Balakot. Craftsmen may have had families involved in food production, but the scale of work undertaken at Nageshwar, evidently for outside consumption, would have largely precluded part-time craft working.

Uniformity and standardization have also been considered as a result of the work of specialists. In the Harappan case, it cannot be denied that there is a high degree of uniformity in crafted objects. It is Harappan craft products and their uniform nature that have helped to delineate the Harappan nature of settlements. Specific pottery types, seal forms, weights, long chert blades, long barrel-cylinder beads are the artefactual indicators of the Mature Harappan. However, despite this uniformity there are variations within the Harappan culture, local preferences over material, designs and types of products which cannot be ignored.

Harappan craft production does not appear to have been geared towards mass production. Production was not engaged in with the aim of producing the maximum number of objects. Mass production is relevant only to a money economy where goods are produced for sale and profit; in the Harappan case, craft products were manufactured largely for specific requirements and little stock was maintained.
Uniformity in Harappan products was probably not a result of the number of production centres involved. Rather, uniformity in particular craft products such as seals and weights was a result of specific consumer requirements.

The political interest in craft production must be reiterated as this seems to have been the fulcrum for Harappan craft activities. We have noted the role of Harappan authorities in the establishment of settlements in resource zones to ensure regular access to raw materials. In the case of metallurgy, sporadic mining expeditions may have been organized. Where shell and lapis lazuli were concerned, we note the founding of Harappan settlements. Here, not only was the raw material procured and collected, but also worked. This must have been done to reduce transportation costs.

In other cases, transportation costs may have been outweighed by the values of goods manufactured—thus craft objects were produced in areas distant from raw material sources. Weights, seals, faience and metal objects were manufactured near consumption points.

Typical Harappan objects are noted at a number of settlements but production is noted at few centres. The scope of craft activities too differed between separate settlements. However, settlements where valuables and
objects needed for administration were produced must have been of considerable significance within a region. The picture drawn of Harappan craft production gives a good indication of the power centres within the Harappan culture.

The distribution of valuables as mentioned earlier must have been in the hands of the political elite. The distribution of utilitarian goods is however not easy to explain. On one hand, we know that the Harappans established settlements such as Nageshwar near the coast to exploit shell resources; however shell bangles do not appear to have functioned as valuables. As another example, we find that Harappan long chert blades were distributed from limited production centres in the Sukkur-Rohri region to widely dispersed Harappan settlements. Both these examples indicate that the Harappan internal networks of product distribution extended over a large area even in the case of utilitarian objects. These goods probably were distributed in spheres different from that of elite goods. There thus appears to have been a close relation between craft production and the political structure of Harappan society. It is the finds of craft objects (whether valuables or utilitarian goods) that indicate the control of the Harappan centre over the entire Harappan region.
The production and distribution of craft objects provide us with invaluable evidence for the organization and functioning of Harappan society and economy. Through craft production, we are able to discern the relationships between Harappan settlements and the hierarchisation of settlements within the Harappan region. Craft production and the utilization of craft products had their precise role in and impact on increasing societal complexities, economic differentiation and political development and centralization.