Secondary state formation during the early iron age on the island of Sri Lanka: the evolution of a periphery

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Secondary State Formation During the Early Iron Age on the Island of Sri Lanka: The Evolution of a Periphery

A dissertation submitted in partial satisfaction of the requirements for the degree Doctor of Philosophy

in

Anthropology

by

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Professor Guillermo Algaze
Professor Richard Cohen
Professor Ross Frank
Professor Thomas Levy

2010
The Dissertation of Priyantha Padmalal Karunaratne is approved, and it is acceptable in quality and form for publication on microfilm and electronically:

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Chair

University of California, San Diego

2010
DEDICATION

To my parents
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<td>Anuradhapura Salgaha Watta</td>
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<tr>
<td>BRW</td>
<td>Black and Red Ware</td>
</tr>
<tr>
<td>CCF</td>
<td>Central Cultural Fund</td>
</tr>
<tr>
<td>EB</td>
<td>Early Brahmi</td>
</tr>
<tr>
<td>EHP</td>
<td>Early Historic Phase</td>
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<tr>
<td>GW</td>
<td>Gray Ware</td>
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<tr>
<td>IBB</td>
<td>Ibbankatuwa</td>
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<tr>
<td>NBPW</td>
<td>Northern Black Polished Ware</td>
</tr>
<tr>
<td>MHP</td>
<td>Middle Historic Phase</td>
</tr>
<tr>
<td>PGIAR</td>
<td>Postgraduate Institute of Archaeology</td>
</tr>
<tr>
<td>PH/EH</td>
<td>Proto-historic/Early Historic</td>
</tr>
<tr>
<td>PHP</td>
<td>Proto-historic Phase</td>
</tr>
<tr>
<td>PGW</td>
<td>Painted Gray Ware</td>
</tr>
<tr>
<td>RW</td>
<td>Red Ware</td>
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<tr>
<td>SARCP</td>
<td>Settlement Archaeology Research Collaboration Project</td>
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SEMINARY PRESENTATIONS


ABSTRACT OF THE DISSERTATION

Secondary State Formation During the Early Iron Age on the Island of Sri Lanka: The Evolution of a Periphery

by

Priyantha Padmalal Karunaratne

Doctor of Philosophy in Anthropology
University of California, San Diego, 2010
Professor Paul Goldstein, Chair

This study focuses on the problem of state formation on the island of Sri Lanka during the second half of the first millennium B.C. Conventional wisdom on the peopling of the Island and the emergence of complex social formations were shaped by the chronicle episodes that allude to a migration. These episodes suggest that emigration waves stemming from the core regions of north India played a key role in the development of new socio-political formations on the Island. Contrary to this stand, I propose that initial state formation on the island of Sri Lanka was an endogenous development stimulated by a sudden surge in a long-distance cross-cultural exchange in South Asia. A surge in demand for exotics in the emerging states in the Gangetic core
region intensified long-distance trade interactions within and beyond the subcontinent penetrating core influence into the tribal interaction spheres operated away from the core areas of north India. Megalithic or Pandukal cultural complex of southern regions of peninsular India and Sri Lanka was one such tribal sphere operated away from the direct influence of the early states of north. However, from around the beginning of 400 B.C. (along with the rise of mahajanapada polities in the north), northern Indian trade networks began to steadily penetrate into the southern tribal sphere. This trend instigated a major socio-political dislocation leading to a massive structural reorganization process in the dominant tribal areas of the south.

The inevitable outcome of the above process was the formation of state level societies in the southern regions of the subcontinent. Initial Sri Lankan states thus were part of this secondary urban process. Two successive processes are key to the formation of state level societies in Sri Lanka. First, a surge in long-distance trade instigated drastic changes in the existing socio-political and economic system, leading to the emergence of a new, highly complex political economy that led to the integration of urban production and hinterland resources. Second, strategic intervention to undermine social mechanisms important for the sustenance of traditional tribal social structures and introduction of a new state ideology based on Buddhist religious principles played a vital role in the consolidation and expansion of the initial state. In this process materialization of ideology, i.e. creating monumental symbols and sacred spaces, both in the center and in the hinterland, was a key strategy on the part of the newly emerged state in bringing semi-autonomous hinterland populations under state control.
CHAPTER 1. INTRODUCTION

The second half of the first millennium B.C. was marked by a massive socio-political change among the communities living in the Dry Zone plains of Sri Lanka. Fortified cities, complex irrigation systems, unprecedented monumental symbols etc. had sprung up in two main core areas in quick succession. Many scholars rightly agree that these evidences highlight a highly complex socio-political process comparable to the formation of state-level societies. This was not an isolated process limited to Sri Lanka alone. A closer view on the Indian peninsular indicates that larger regional scale changes were taking place in the entire southern regions of the subcontinent as well. Nevertheless, despite the presence of a rich tradition of textual records, there is a plethora of unresolved issues surrounding this complex socio-political process.

Therefore, this study is an attempt to address the problem of state formation in the north central Dry Zone plain (Fig. 35) of Sri Lanka during the early Iron Age. The main focus is to gain insights into the initial catalyst of this complex social transformation process, the integration of hinterland communities into the socio-political and economic orbit of emerging states, and the consolidation process of the newly emerged state apparatus. In addressing the above discussed issues - while employing a top down - bottom up approach in which data are evaluated both from the perspective of the emerging centers as well as from the hinterland - my analyses take an investigative look mainly from the angle of the hinterland. The principle focus is to explain how political expansion of emerging polities into hinterland regions would affect the socio-political and cultural milieu of previously independent tribal communities and the way in which
the emerging state apparatus consolidates its power among newly integrated hinterland communities. Therefore, special attention is paid to gain insights into the proto-historic social organization of the hinterland societies prior to the onset of social change. While challenging the chronicle version of Sri Lankan civilization, which attested to a migration from north India, I offer a new indigenous (internal) growth model mainly based on archaeological investigations in the Sigiriya-Dambulla region (Fig. 2), the southern extreme of the core areas of the north central Dry Zone plain. However, since the stimulation for transformation had received from state level societies of the Gangetic valley (Fig. 30) through long distance trade interactions, the process of state formation I envisioned for Sri Lanka is a secondary process.

1.1 Conventional wisdom on Sri Lankan civilization

Conventional wisdom on the rise of civilization in Sri Lanka was concretely shaped by the chronicle (Deepavamsa; Mahavamsa) episodes written respectively in the 4th and 5th centuries A.D. Chronicles indicate that emigration waves stemming from north India around the mid first millennium B.C. were the initial catalysts for the emergence of Sri Lankan civilization. The chronicle legends on Sinhala ethno genesis claim that Sri Lanka was first populated by a group of north Indians led by a prince named Vijaya. The genesis episode contains a mythical genealogy surrounding Vijaya’s ancestry. According to Mahavamsa (chapter vi), Vijaya’s maternal great grand farther was the king of Vanga, a state near Bengal on the east coast. When the young princess was traveling from Vanga to Magadha, a lion attacked the caravans and she became a
captive of this beast. As a result of the cohabitation with the lion, she gave birth to twins. They were named Sinhabahu and Sinhaseevali.

After attaining maturity, Sinhabahu rescued his mother and sister from his father. Later he founded the city of Sinhapura. Vijaya was one of the sons born to the union between Sinhabahu and Sinhaseevali. Due to his youthful misadventures, Vijaya was banished from Sinhapura along with his companions. Consequently they sailed southwards along the coast of India until unexpectedly landed on the shores of Sri Lanka where they decided to settle in.

Chronicle accounts on the natives of Sri Lanka at the time of Vijaya’s arrival are also containing significant mythical episodes. According to *Deepavamsa* (ch.1: 19-21, Law 1959) the inhabitants of the Island prior to Vijaya were nonhuman sprits and demons. *Mahavamsa* implies that the inhabitants of the island were with super natural powers. According to chronicles Vijaya first united with a native woman. Later he separated from this union and married the daughter of the king of Madura (South India). Despite marriage alliances with south-Indian polity, north Indian settlers continued to maintain close ties with Sinhapura. After Vijaya’s death (since there was no descendent from the royal bloodline on the island) north Indian settlers in Sri Lanka sent messengers to Sinhapura (Vijaya’s hometown) to find a suitable ruler. As a consequence Vijaya’s nephew was brought down from Sinhapura to become the next king.

Chroniclers further suggest that in the period immediately after Vijaya’s rule, the island consisted of a number of small independent polities. However, during the time of Vijaya’s great nephew, king Panduka Abhaya, all the polities were unified and the Anurdhapura settlement was made the capital city. Panduka Abhaya constructed
fortifications around the settlement and established new suburban settlements, a reservoir, and cemeteries for different social groups. He appointed his uncle as the city keeper and made further arrangements by naming certain caste group (*chandalas*) to maintain the city services.

One of the most important events depicted in the chronicles was the introduction of Buddhism to the Island during the rule of Devanampiya Tissa, who is the grandson of Panduka Abhaya. Devanampiya Tissa was said to have received a Buddhist mission led by Mahinda, the son of the Maurayan emperor Asoka in the 3rd century B.C. The chronicles give elaborate accounts on the establishment of Buddhism in the island, the patronage it received from the rulers, and construction of sacred monuments in the Anuradhapura city. In *Mahavamsa*, the construction of *mahatupa* (the great stupa) in the Anuradhapura city by the warrior king Dutugamunu in the second century B.C. was given prominence by allocating ten chapters for this issue. Without doubt *mahatupa* was one of the largest monumental religious symbols in the world at the time. The location of the stupa happened to be the center of the Mahavihara sector, the center of Theravada Buddhism at Anuradhapura city. Although *Mahavamsa* allocates a considerable space to describe the genesis myth of Sinhla ethnic identity, the underlying motive of the text seems to be to highlight the orthodoxy and the legitimacy of the Mahavihara Buddhist sector and its traditions.

The above-mentioned two Pali chronicles, the *Deepavamsa* (Law 1959) and the *Mahavamsa* (Geiger 1950), are the most prominent and earliest known surviving literature among many such works. These two chronicles were written roughly a millennium after the supposed “Aryan migration” described to have occurred in the fifth
century B.C. Much of our present knowledge on the proto-historic period is based on these two works. Other surviving texts are: *Vamsatthappakkasini* (Malalasekera 1935), *Rajavali* (Suraweera 1976), and *Pujavali* (Jinaratana 1937), which give important historical accounts but were written in later periods than the above two classics. When referring to history before the time of these two chronicles, both Deepavamsa (Law 1959) and the *Mahavamsa* (Geiger 1950) authors relied on earlier texts. The initial work of *Mahavamsa* covers historical episodes extending from the mid first millennium B.C. until the 3rd century A.D. Subsequently added sections known as the *Culavamsa* (Geiger 1925), were a compilation of a sequence of historical episodes and events that were written from time to time by various authors. Another source known as *Vamsatthappakkasini* (Malalasekera 1935) written either between the 8th-9th or between the 11th-13th centuries A.D., gives insight into the initial sources available for the chroniclers of the *Deepavamsa* and *Mahavamsa*. Through *Vamsatthappakkasini* it comes to light that the *Mahavamsa* was initially based on a work known as *Sihalatthakatha* or *Sihalatthakatha Mahavamsa*, which is now lost. Since *Sihalatthakatha* is a Sinhalese commentary on the Pali Buddhist canon, it is assumed that the early historiography of Sri Lanka was closely linked to the literature associated with Buddhist commentaries (Kiribamune 1978: 127). Nevertheless, both of the earliest surviving chronicles were done by the same school of Buddhist ideological thought, the Mahavihara sector, which represented the teachings of the Theravada tradition. Similar literature from the Abhayagiri sector, which followed the Mahayana tradition, had been lost, thus missing the opportunity to know the perspectives of the rival school on the socio-political history of Sri Lanka. The contents of the chronicles indicate that there was a strong animosity
between the two schools of thought (Theravada and Mahayana) and this has largely influenced the way in which the Sri Lankan history was written. It is clear that mythical episodes, Buddhist *Jathaka* stories, and historical accounts have been cleverly interwoven and tailored to fit the agenda of the Mahavihara school of thought. To claim legitimacy (as the dominant school of Theravada thought) the Mahavihara sector depicts itself as the chosen group (by Buddha himself) to protect the future of the Theravada doctrine. According to the chronicles, having seen the future (through his powers) that the island of Sri Lanka holds for the pristine form of Buddhism to prevail, Buddha himself visited the Island long before the arrival of Vijaya. As mentioned in *Deepavamsa*, Buddha saw the suitability of the island of Sri Lanka for future north Indian settlers, who would be converted to Buddhism a few generations after their arrival in the Island. Since the suitable region of the Island for human settlement, *Lanka-thala* (the flat landscape) was already occupied by Yakshas (devils), Bhutha (spirits), and Rakkhshasa (demons) Buddha had to create a region known as Girideepa, a region or an island consisting of mountains, merging it with Lankatala (the plains) and pronouncing that mountain region should be the home for Yakshas, Rakkhshasas, and Bhuthas, while the flat region should be the area for humans (the future north Indian settlers). Thus north Indian settlers too are depicted as a group that was blessed with the responsibility for protecting orthodoxy of Buddhism in the years to come. The chronicles are filled with such mythological histories associated with peopling of the island and initial socio-political history in the sections that cover the pre 3rd century B.C. era, which predates the arrival of Buddhism.

However, the post 3rd century B.C. era is another matter. Inscriptional evidence from the post 3rd century B. C. era authenticates the contents of the chronicle accounts for
the most part. Many early historical monumental constructions, such as massive stupas, irrigation canals, reservoirs, ramparts, cities, as mentioned in the chronicles, have now been archaeologically verified. Even the names of important elites, rulers, commanders of the army mentioned in the chronicles have been identified from the Brahmi inscriptions written in the last few centuries of the late first millennium B.C., confirming the chronicle accounts of such important figures. Therefore, despite the mythical aspects surrounding the origin legends, the chronicles highlight specific factual developments in the socio-political and ideological arena, such as the events of warfare, construction of fortified cities, international relations with core regions in the mainland, and introduction of Buddhism. As a consequence up until recent times many considered chronicles as the ultimate source of socio-political history of the island.

1.2 Archaeological research and culture historical approach

Owing to the strong tradition of literary history, the archaeological investigation on the early socio-political process of Sri Lanka was considerably limited to the culture-historical approach. Despite unearthing a plethora of proto-historic archaeological data about which we know nothing through historical sources, in our archaeological tradition developed in the past century and a half, there is a strong tendency to rely excessively on the ancient texts. This is not to state that text based archaeological research is inadequate. In fact, the chronicles have been extremely useful in solving difficult archaeological issues on the early historic socio-political development on the Island. However, as mentioned above, there is a significant disparity between the archaeological record of the proto-historic period and the accounts of chronicle chapters that refer to the events of this
period. Especially in the sections that contain early settlement history and political centralization, indigenous societies were overlooked or perhaps purposely omitted.

Nevertheless, in the last couple of decades, with a new wave of archaeological interest on the proto-historic cemetery sites and settlement studies (Deraniyagala 1990, Bandaranayake 1992, Begley et al 1981, Coningham 1999, Ragupathy 1987, Seneviratne 1984, Sitrampalam 1980, Karunaratne 1994, Karunaratne and Weerasinghe 1999) a number of scholars have realized that there is more to the story of the early social process of the island than what is stated in the chronicles. Contrary to the chronicle episodes, archaeologically, the iron- using populations were present on the island from around the beginning of the first millennium B.C. (Coningham 1999, Deraniyagala 1990, Karunaratne and Adhikari 1994, Somadeva 2006), nearly half a millennium before the supposed north Indian migration was highlighted in the chronicles. These populations were part of the large regional cultural complex spread in the southern regions of the peninsular India and Sri Lanka and are generally known as the communities of “megalithic” culture. Contrary to the chronicle chapters they do not reflect characteristics of an emerging north Indian urban material culture. If the peopling of the Island and a complex socio-political formation were triggered by the migrations stemming from the north Indian urban context, then the earliest Iron Age settlement deposits and the proto-historical material record of Sri Lanka should be reflective of the presence of populations with north Indian urban cultural characteristics, e.g. early Iron Age north Indian urban complexes of the first millennium B.C. are generally known for material realms dominated firstly by Painted Gray Ware (PGW) and subsequently by Northern Black Polished Ware (NBPW). Instead, the material culture of the proto-historic period of Sri
Lanka contains a complete cultural package linked to the ‘megalithic cultural tradition’ spread in the southern regions of India. Except for a few intrusive sherds of the north Indian urban categories such as NBPW, no settlement evidence indicating the presence of migratory communities from the northern regions is available. It was during the consolidation phase of initial states around the 3rd century B.C. that strong north Indian links began to appear in the archaeological record for the first time. Although the Prakrit language and the Brahmi script along with evidence of a few intrusive communities such as Kabojas appear in the early Brahmi monastic inscriptions, these evidences are not conclusive enough to claim large-scale migrations. North Indian cultural and linguistic traits could have been acquired through contact and not necessarily by a large-scale shift of people.

According to the archaeological record (Coningham 1999: 52-56) a noticeable change in the socio-political organization took place for the first time in the 4th century B.C. at Anuradhapura, and this is marked by the evidence of constructions of fortifications, reservoirs and canal-based irrigation agriculture, intensification of local craft production, and international maritime trade. These events indicate a major socio-economic and political process that is associated with internal growth. Despite this significant growth in the socio-political and economic arena, the basic material culture continued to retain traditional proto-historic characteristics of early Iron Age communities of South India.

This archaeological record highlights a clear disparity between the chronicle accounts of north Indian migration and the early Iron Age material realms. Despite this contradiction in the material record and the chronicle accounts in the early periods of
socio-political history, up until the final decade of the last century, no major attempts on hypothesis-oriented archaeological research have been employed. Proto-historic archaeological records were largely neglected in the study of early periods of the Sri Lankan society. This lack in the utility of the proto-historic archaeological data to understand the early socio-political formation in Sri Lanka, prompted Senake Bandaranayake (1992: 15), one of the foremost scholars in Sri Lankan archaeology, to write the following:

Only recent years have Sri Lankan archaeologists placed the investigation of the country’s relatively brief protohistoric period as an important item on the agenda of national research. This research, I must emphasize, is still at a very early and inconclusive stage. Unlike the subcontinent, we know almost nothing about the transitions and transformation of this period in Sri Lanka.

Subsequent to this statement, within the last seventeen years, three important research works were conducted by Seneviratne (1996), Coningham (1999), and Somadeva (2006) addressing the issue of PHEH socio-political transition. Seneviratne’s (1996) research took place in the southern boundary of the north central plains at the foothills of the northern edge of the central hills of the Island. Coningham’s (1999) research was at Anuradhapura ancient citadel site located in the center of the north central plains of the Dry Zone. Somadeva’s (2006) research, on the other hand, was in the Lower Kirindi-oya Basin (LKB) in the southeastern coastal region of Sri Lanka. Both the north central Dry Zone plain and the southeastern coastal regions are equally important areas in the study of early Iron Age socio-political transformation, because it is in these two areas that the earliest known urban societies in Sri Lanka were formed.
Seneviratne’s (1996) work was focused on explaining the process of alternative polity formation in the “periphery” of the emerging centers of Dry Zone alluvium. Considering the locations of megalithic cemeteries in the upper Kala Oya region in association with the areas of certain important mineral resources in the foothills and central highlands, Seneviratne (1996: 284) argues that control of mineral resource extraction and trade played a key role in the new independent polity formation after the 3rd century B.C. in this region, which he recognizes as the periphery of the core areas of the Dry Zone plain. He emphasizes that even the initial population movement into the upper Kala Oya region during early phases of the proto-historic period itself was to search for mineral resources. He sees these developments taking place in this region from around 700 B.C. The post third century independent chiefdom-level polity formation that he alludes to was seen as a response to an increase in the long-distance trade in the Indian Ocean. Seneviratne’s work will be discussed in detail in chapter two.

Coningham (1999) proposes a model explaining the emergence of initial social complexity in Sri Lanka; it is mainly based on his analysis of data from excavations at the ancient settlement at Anuradhapura. He concludes that the rise of Sri Lankan civilization should be seen neither as an internal development nor as a result of external influence, instead it should be seen as a model which builds on internal development but acknowledges the role of external contacts (Coningham 1999: 139). Pointing to the parallelism in Renfrew’s early state module (ESM) and northern south Asian early Iron Age political centers, Coningham suggests that exchange of ideas between interacting ESMs in the region led to the mechanization of the concept of kingship. This in turn provided a new currency of competition allowing the north Indian polities to exceed their
low threshold for social mobilization (Coningham 1999: 140). For Coningham, long distance trade was not a triggering factor. It was only a vehicle for the formulation of ideas of ‘kingship,’ which he sees as a turning point towards the growth of greater complexity through developing mechanisms for social mobilization required for massive undertakings. In this background of northern south Asian state formation during the early Iron Age, Coningham suggests that Sri Lanka should not be viewed as a recipient of culture. Instead, pointing to the centralized location of Sri Lanka in the south Asian maritime trade network and its involvement in trade with emerging north Indian polities, Coningham considers Sri Lanka as a main player by itself, like the other ESMs of the north. In the same way in which northern ESMs developed the idea of kingship, Sri Lanka too had developed the idea by its involvement in the interaction with northern ESMs, which led to the development of state level complexity. By this view Coningham not only places the rise of civilization in Sri Lanka parallel with Gangetic polities but also suggests an incipient growth.

Somadeva’s (2006: 44) hypothesis on the rise of urbanisms in Sri Lanka suggests an urban process resulted from a combination of internal and external factors operating simultaneously. Internal dynamism, according to Somadeva, was a process associated with a longstanding practice of agriculture, cattle herding, exchange of resources among micro eco-zones, and efficiency of agriculture increased by the use of iron. Somadeva suggests that interaction between the local farmers, the cattle herders, the craftsman, and the traders had a profound impact on the transformation from a subsistence economy to an economy of wealth in the Lower Kirindi Oya Basin of southeastern coastal Sri Lanka. External factors on the other hand were migration and long-distance trade. According to
Somadeva, migration from north and middle India to the Island around the 4th century B.C. was decisive in the ensuing change in the Sri Lankan social domain. Thus he concludes that his research supports the contents of the ancient chronicles compiled in the 4th and 5th centuries A.D. Above approaches clearly indicate that all of them are treading beyond the pages of the chronicles in order to seek the threshold of socio-political change in the development towards complexity. All three scholars make important contributions to the study of the emergence of social complexity in Sri Lanka and all are in agreement that long-distance trade was an important factor associated with the triggering of socio-political change. However, by giving prominence to the development of the concept of ‘kingship’ (Coningham 1999) or emphasizing ‘migration’ in combination with several other factors (Somadeva 2006), the capacity of long-distance trade by itself, not only as a triggering mechanism but also as a dynamic force that could stimulate a social evolutionary process was somewhat overlooked. Only Seneviratne, who focuses on explaining alternative polity formation in the periphery, concentrates on explaining an internal process directly associated with external trade. However, he too uses a broad brush relying on the arbitrary locations of mineral resource areas in relation to the locations of the megalithic cemetery site distribution, without having clear evidence of trade-oriented mineral resource extraction by proto-historic communities of the upper Kala Oya region. Despite the presence of exotic finished goods in the mortuary context, there is no archaeological evidence in the hinterland to suggest that the proto-historic populations were extracting resources such as gold, copper, and precious stones locally in order to involve in raw mineral resource trade from the upper Kala Oya region until the beginning of the early historic period. Also the claim that proto-historic population
movement from the Dry Zone alluvium into upper Kala Oya area (Sigiriya-Dambulla region) itself solely in search of mineral resources is highly debatable. As pointed out in chapter 5, my excavations and surveys carried out in Sigiriya- Dambulla area suggest that proto-historic habitation in this area were present due to different reasons.

Therefore, I have taken a different approach from the research work of above scholars to gain an in-depth understanding of the social organization of proto-historic societies in the hinterland regions. I am asking specific anthropological questions such as how traditional tribal structures of hinterland communities were disintegrated in the advent of state formation, and how the process and strategies in which socio-political integration was achieved by the emerging state societies. Utilizing both settlement and mortuary data, firstly, I have focused on gaining insights into the social scale of early Iron Age communities of north central Dry Zone plain prior to the integration. Secondly, I focused on understanding and explaining how the state formation process reflects on the socio-political, economic and ideological spheres of hinterland communities.

### 1.3 Formation of state level societies in Sri Lanka: an alternative hypothesis

Based on the archaeological data discussed in chapters five and six, I propose that the emergence of state level socio-political complexity and the consolidation of state during the early Iron Age Sri Lanka were a relatively a quick process. Out of many possible scenarios, I see two successive processes as salient issues: 1. A sudden surge in long distance trade in the Indian Ocean around the 4th century B.C. involving polities as far as north India, is seen as the key factor that was responsible for the initiation of this complex socio-political process and impact of this process had strong repercussions on
the socio-political and economic organization of the dominant tribal areas leading to the formation of centralized polities; 2. A strategic intervention (to undermine existing proto-historic socio-political structures) and ideological manipulation (by the new centralized polities) played a key role in the socio-political integration and consolidation of the emerging state power.

1. As highlighted above I want to specify that a sudden surge in interregional level trade interactions in the Indian Ocean around the late 5th early 4th century B.C. was the key force, which generated a massive regional-level socio-political and economic reorganization process. Particularly, effects of this process was felt strongly in the areas of important cross roads of communication and resource regions in the peninsular India and Sri Lanka. As a consequence a second wave of state level societies began to surface in the southern regions of Peninsular India and Sri Lanka simultaneously as a group, following the initial wave of the Gengetic valley state system. Anuradhapura polity in the north central plains of Sri Lanka was such a community.

Thus it is implied here that a sudden surge in the flow of exotics and high value bulk goods in the Indian Ocean around the 4th century B.C. was directly linked to the expansion of the states belonging to the first wave of state societies in the Gangetic valley of north India. According to classical sources, around the mid first millennium B. C. there were sixteen great polities (*maha-yanapada*) in the north. The communication networks between these *maha-yanapada* polities led to the formation of their own interaction sphere centered in the Gangetic valley regions (The locations of many of these important political centers are identified and their antiquity has been archaeological verified).
It is clear that an increase in the demand for exotics by burgeoning elite classes in these emerging states in the core areas of the Gangetic valley system had far reaching repercussions for the communities living both within and beyond the Gangetic valley-centered interaction sphere. It sparked a chain of events, causing irreversible socio-political repercussions leading to a widespread socio-political reorganization process among a plethora of tribal communities.

Increased demand for exotics increased the competition for resource regions and control of trade networks within the polities of the Gangetic valley. As a consequence, hegemonic polities of the Gangetic valley began to expand within and beyond the boundaries of the Gangetic valley-centered interaction sphere. The culmination of this initial socio-political process was the rise of the Magadha empire in the mid fourth-century B.C. Particularly, if the accounts on classical texts (puranas, and various Buddhist and Jain literature) on the expansion of Nanda dynastic hegemony of Magadha (343?-321 B.C.) into Kalinga, Godavari River valley, and certain areas of Mysore in the south are correct, then it is plausible that Gangetic valley trade networks have expanded further south (beyond the boundaries of their political influence) permanently, penetrating deep into the early Iron Age southern interaction sphere consisting of vastly spread tribal societies who have already been involved in communication with initial state level polities of the north. This politico-economic expansion of hegemonic empires seemed to have led to the development of a sustained communication network far into the south. It not only linked up with the polities of distant regional spheres (that had already been influenced by the initial contacts with north and begun the process of initial political centralization in their dominant tribal areas), but also began to leave lasting socio-
political and economic impressions by instigating a massive structural reorganization process leading towards states.

Region associated with communities of megalithic tradition (pandukkal cultural complex) of southern regions of peninsular India and Sri Lanka were one such early Iron Age interaction sphere (Fig. 29) of its own. This southern region is known for its exotic resources such as gold, pearl, precious stones, conch shell, turtle shells, ivory, spices, and medicinal herbs, which seem to have been highly sought-after items by northern elites. Therefore, without doubt we could hypothesize that the southward expansion of political and economic influence stemming from the Gangetic valley hegemonic polities led to the further intensification of long-distance trade. Sustained penetration of communication into the southern regional interaction sphere from the north seemed to have caused a profound impact on the existing socio-political and economic organization of the tribal communities of the southern sphere. By the time of the expansion of hegemonic empires into the southern interaction sphere the political centralization process of the dominant tribal area of the Dry Zone plain of Sri Lanka had already been started. However, it is with the penetration of hegemonic empires that socio-political process towards state formation accelerated.

Thus my regional model for early Iron Age social process for south Asia is not a single direction influence flow stemming from core region towards the peripheries. It implies an interregional process where core spheres and peripheral tribal interaction spheres go through their own cycles of evolution impacting each other with influences stemming from changes in each interaction sphere. Communication with initial states of
Gangetic valley system sparked an initial political centralization process in the dominant tribal areas in the southern interaction sphere. The consequence of such process would be a steady flow of exotic raw materials into the core-sphere from the periphery sparking a competition for access to such resources among core polities. In this process while subjugating competitors within its own sphere, control of frontier points of resource access where trade networks merge becomes priority for the hegemonic polities of the core sphere. Expansion of Nanda Dynastic hegemony towards south in to Kalinga in the second half of the 4th century B.C. should be viewed with this perspective. Impacts of such expansions into frontier points of core areas in turn feeds back on the emerging centralized polities in the distant peripheries causing them to rapidly transform into state societies. Transformation of Anuradhapura polity into a state level society in the third century B.C. should be viewed in this perspective.

2. Stimulated by the wealth and power earned through a new form of trade interactions (that overshadowed previous social transaction based exchange), local elites in the dominant areas of the north central plains of Sri Lanka began to flex their muscles to control the lucrative long-distance trade, which led to massive socio-political changes in the main tribal areas by the mid forth century B.C. Crystallization of centralized polities in the main tribal areas had irreversible impact on the independent tribes in the adjoining hinterland areas. Through strategies of intervention, emerging dominant polities have undermined the local tribal structures of hinterlands communities, causing them to disintegrate. From around the mid third century B.C. promotion of a new state ideology played a key role in the socio-political integration and consolidation of state apparatus, in which previously independent tribal communities were absorbed
permanently into the orbit of the emerging state of the north central plains of Sri Lanka (the Anuradhapura polity). Thus I suggest that the integration of hinterland communities and the socio-political consolidation of the Anuradhapura state was achieved by implementing two key strategies that will be discussed below. It is an accepted fact that initial states, whether they are incipient or secondary, consist of fragile structures, and socio-political integration is relatively weak. Thus emerging states are actively involved in finding solutions for permanent integration, particularly to integrate the hinterland communities and to consolidation of state power. Anuradhapura officials were no different. In a political economy, in which long-distance trade plays an important contribution to the state coffers, hinterland resources need to be taped efficiently and permanently to earn exotics coming through long distance channels. The challenge on the bureaucrats of the newly emerging Anuradhapura polity was integrating the strictly independent tribal communities of the hinterland into the state orbit. Since constant militaristic interventions were costly, states have to look for other strategic means of integration and consolidation. Having sustained long-distance contacts with fully functional states in the southern frontiers of northern interaction spheres at least from the mid fourth century B.C., eventually Anuradhapura bureaucrats were able to develop savvy political strategies to achieve these tasks. As mentioned above I see two archaeologically visible interrelated strategies of socio-political integration and political consolidation from the data retrieved from my fieldwork in the north central Dry Zone plain: I. Strategic undermining of the traditional social structure of hinterland communities. II. Promotion of a new state ideology based on the principles of the Buddhist philosophy.
I. Strategic undermining of the traditional social structure of hinterland communities

As pointed out above, an early Iron Age archaeological record in the southern regions of peninsular India reflects a remarkable cross-cultural similarity. Particularly ritual discarding of certain kinds of exotics such as carnelian, agate and gold during mortuary practices was a universal trend among proto-historic Iron Age communities of peninsular India that practiced megalithic tradition. The fact that these rare exotic items were removed from circulation, as part of the mortuary record, there is no doubt that there was a constant demand to replenish such exotics for future use. By the same token, we can assume that a mortuary arena may not be the only social context where such exotics played an important symbolic role. They may have been instrumental in other types of social transactions such as bride wealth, initiation gifts, ritual payments, blood money, etc. and had elaborate life histories before ending up in a mortuary context. Thus there is a high possibility that carnelian, agate, gold, and other exotic flow played a key symbolic role in the social reproduction among proto-historic communities. Therefore, to undermine a social organization that is precariously specialized in extremely rare exotics arriving from far-away places, a sensible state strategy would be to gain control of such exotic flow or curb the flow completely.

Without undermining traditional social structure, integrating fiercely independent hinterland communities into the state orbit would be a daunting task. Based on the archaeological record presented in chapter five and six, I suggest that bureaucrats of initial states of Anuradhapura did just that. Therefore, the sudden collapse or
abandonment of a megalithic mortuary tradition parallel to the rise of state level social complexity cannot be an accident.

II. Promotion of a new state ideology

I agree with Coningham (1999: 141) and other scholars who view that Buddhist ideology played a powerful integrative role in the consolidation process of state power in Sri Lanka. I suggest that initially the Anuradhapura polity began to display its complex political configurations comparable to state structure from around the late 4th - early 3rd century B.C., before Buddhism was introduced to the Island. However, the marginal or hinterland regions were loosely integrated into the emerging early state of Anuradhapura. I argue that these communities continued to maintain their segmentary lineage structure into the late third century B.C. until Buddhist ideology replaced local belief systems. I propose that Buddhism played a role in providing the ideology to establish a more stable cohesive state structure that could prevent fission. By mid third century B.C., north Indian influence was strongly felt in the southern regions of peninsula when the Mauryan Empire began to expand its economic and ideological dissemination activities in the south beyond the regions of its political dominance. The key strategy was to make a concerted effort towards materialization of Buddhist ideology through construction of monumental symbols. Construction of stupas (tuparama), and planting of sacred Bo trees are initial Buddhist symbols that rulers created for public consumption. The accumulation of monumental symbols in the state capital at Anuradhapura not only reflected the state’s political power and the ability to muster resources that could be utilized for any purpose, it also transformed the space of a political center into a sacred space, thus legitimizing the political dominance and rights to rule from a distant (the capital). For this purpose,
Anuradhapura elites, while creating a tradition of monumental constructions concentrated in the political capital, similar monumental constructions were encouraged in the hinterland, although relatively smaller in scale. This practice not only devoted state patronage for Buddhism but also encouraged hinterland communities to convert to Buddhism. Thus without doubt we can argue that Buddhism played a vital role in the process of consolidation and expansion of the power of already centralized state level polities by the 3rd century B.C.

1.4 Secondary state formation: Possible scenarios

My hypothesis for state formation and a subsequent consolidation process of the early Sri Lankan state clearly highlights a secondary process that consists of a self-regulatory mechanism that could generate its own internal growth. This model conveys a considerable level of agency to the periphery in the process of structural reorganization as opposed to the colonial models of secondary state formation that assume total dominance and forceful imposition of core structures upon subjugated communities. Nevertheless I have considered different scenarios of secondary state formation against the proto and early historic archaeological record of Sri Lanka, including colonial and migration models. I have also considered a third alternative scenario, which is a mutually inclusive process where both direct and indirect stimulation processes operate simultaneously.

The colonial or the direct stimulation category belongs with polities that reach complexity due to colonial imposition or large-scale migrations from core areas with state level complexity. Under the circumstances of a massive scale migration from core areas, colonial governments would develop state structures identical to those of their home
countries. The internal growth category, (which I attest for Sri Lanka) receives stimulation from core areas indirectly. Steady communication between core areas and the periphery can stimulate positive growth in the periphery without the intervention or presence of core agents. The third category receives direct external influence and intervention from core areas to a considerable extent while having the capacity for their own internal growth. Such societies are not totally dominated by core areas, but considerably influenced by the presence of core agents such as diplomats, missionaries, trade diasporas, craft guilds, mercenaries, etc. Presence of core agents itself is a major factor that could contribute to the formation of new institutions that could take the shape of core structures.

1.5 Methodology: hinterland vs city/center

In most of the research that deals with the issues of interregional level interactions that involve multiple polities, many scholars take a core-centric perspective, which often emphasizes the dominance of core areas over peripheral polities. Lately, inadequacy of the core-centric view has been pointed out and scholars are beginning to evaluate such relations from the perspective of the periphery as well. The view from the periphery has helped understanding not only the process of domination by core areas but also other alternative ways in which peripheries respond or are impacted by their interactions with core areas. A similar dichotomy (core vs periphery) is used in explaining more localized interrelations, particularly between the communities living in the city/center and the hinterland of a transforming polity. Similar to the popular trend in the studies of core-periphery relations where core-centric bias is involved, in the studies that focus on the
relations between city and the hinterland there is a city centric bias. The data collected from the city were given prominence, while hinterland databases were usually used with a broad brush. Particularly, subtle anthropological issues pertaining to the hinterland communities that are at the cross roads of social transformation, have often been overlooked. As highlighted throughout this chapter, in the study of socio-political transformation towards state societies, one of the important aspects to understand is the way in which previously autonomous hinterland communities are integrated and state power is consolidated among hinterland communities. Part of this process involves disintegration of traditional socio-political structures and cultural systems of the hinterland communities. Thus disintegration of previous traditional structures of hinterland communities and integration into the orbit of the state power goes hand in hand. Therefore, understanding the ways in which emerging states consolidate their power in the hinterland (i.e. the strategies implemented to undermine traditional structures, and ideological manipulations made to establish legitimacy to dominate hinterland, etc.) could be done with success by utilizing data collected from the hinterland.

Therefore, viewing from the hinterland, one can expect to see a clearer view on the impact of the processes of socio-political and economic integration, and consolidation of state apparatus. Such focus also has the ability to explain whether the hinterland communities initially lost agency completely to emerging hegemonic centers or entered into more honorable integration such as heterarchical relations (Crumley 1979) or segmentary states (Southall 1988), before the consolidation process was complete. If answers for such issues could be squeezed out from the data collected from hinterland
more logical conclusions could be reached than viewing data from the perspective of the city alone. However, my emphasis of having a view from the hinterland angle does not reject methods that employ from the angle of the city. If time and funds were available, it would be ideal to employ both top down and bottom up approaches, which utilizes data from the city as well as from the hinterland. My hypothesis on state formation in Sri Lanka presented above is tested more with a bottom up – top down view, which utilizes data both from the hinterland and the city. Nevertheless, bulk of the data utilized is from the hinterland itself, and it focuses on gaining an understanding on the way in which the expansion of emerging hegemonic states impact on the previously independent communities in the hinterland.

Over a century of archaeological research carried out in the north central plains of Sri Lanka has proved the fact that the ancient city at Anuradhapura was the earliest city or the first state capital of Dry Zone Sri Lanka. Distribution of early Brahmi inscriptive sites in the north central plains clearly shows the spatial patterning of early historic monastic sites surrounding Anuradhapura. Distribution of Early Brahmi inscriptions themselves is an indication of the boundary of the immediate hinterland of the city (Figure 33). Similarly proto-historic megalithic cemetery sites are overlapping more or less within the same boundary where monastic inscription sites are located. The Sigiriya-Dambulla region, which is located about 35 miles south of the city of Anuradhapura is a region situated within this landscape that surrounds the city of Anuradhapura. Beyond this region, to the south, begin the foothills of the central mountains, beyond which evidence for proto-historic period habitation is virtually none. Therefore, in the initial period of social transformation towards early states during the PH-EH social
transformation, the Sigiriya-Dambulla region could be considered as the hinterland of Anuradhapura. This region had access to a number of resources from the uninhabited central mountains, which were the source of a number of minerals and other sources, which had a high demand in the Anuradhapura center (Seneviratne 1996). Also this region is archaeologically well known for its potential for iron production (Mogren 1999). Thus integrating this region into the emerging Anuradhapura state orbit must have been crucial for the political capital for its external trade economy. Thus to understand the state level socio-economic and political integration from the perspective of the hinterland, the Sigiriya-Dambulla Region is a good sample region that represents the boundary of the Anuradhapura hinterland. To gain the hinterland point of view on the socio-economic and political integration associated with state formation, I have focused my investigation: 1) settlement survey data from Sigiriya-Dambulla region. 2) proto-historic mortuary record and the settlement excavation data from Ibbankatuwa near Dambulla, 3) excavation data from my ASW3 test excavations and published data from Anuradhapura citadel (ASW2) excavations by Coningham (1999, 2006), and Deraniyagala’s (1972 & 1990) Anuradhapura (Gedige and AMP 88) excavations.

This research on the early Iron Age social transformation in the north central Dry Zone plain of Sri Lanka is presented in six chapters. Chapter 2 focuses on an in-depth discussion of previous work on the subject of state formation, including more recent works of Coningham (1999) and Seneviratne (1996) highlighted above in chapter one. In Chapter 3, three alternative scenarios of secondary state formation are presented, while explaining how long-distance trade could operate not only as an economic force but also as a mechanism of social political change towards increased complexity and greater
political centralization. Chapter 4 explains the geography, environmental factors, and human population history of the Island from prehistoric times that directly and indirectly had a tremendous impact on the locations and boundaries of initial urban polities. Chapter 5 focuses on presenting data from the field surveys and settlement excavations carried out in the Sigiriya-Dambulla region (the hinterland) and Anuradhapura citadel (ASW3). Chapter 6 presents a lengthy discussion of data from the IBB megalithic cemetery in the light of ethnographic mortuary behaviors of tribal communities of mainland India who practices burial traditions comparable to early Iron Age megalithic communities. It provides an interpretation on the social scale of the proto-historic period tribal communities based on their mortuary record. Chapter 7 provides a synthesis of the results of my investigation on the state formation process in the Dry Zone Sri Lanka with a conclusion highlighting that a sudden surge in long-distance trade was the key factor that triggered a second wave of urbanism in the extreme south of the Indian subcontinent. Sri Lanka’s early states were a part of this regional process.
CHAPTER 2. MODELS AND CONCEPTS ON EARLY IRON AGE SOCIO-
POLITICAL TRANSFORMATION IN SRI LANKA

During colonial era, Henry Parker (1909) was the first to suggest that the island was initially populated by a group of people from southern regions of the mainland. However, influenced by the chronicle accounts, and the fact that the islanders speak a tongue derived from Indo-European language group, many western scholars of the colonial era accepted the north Indian migration episode as a plausible explanation for the initial settlement and eventual rise of the early Iron Age civilization in the island. Up until today north Indian migration is seen as the triggering factor that stimulated the civilization process in the Island. However, as pointed out briefly in chapter one, in the last two to three decades influenced by new archaeological discoveries (along with absolute dates obtained for settlement and mortuary deposits of proto-historic period), a new wave of interest on the rise of complex societies in Sri Lanka has come to fore.

In this endeavor works of a few scholars such as Coningham (1999), Deraniyagala (1992), Gunawardena (1981), Seneviratne (1996), are directly relevant to this study because these scholars mainly address the issues of initial social complexity and political centralization in the north central Dry Zone plain of Sri Lanka. Some agree that culmination of this process was around 4-2 century B.C. when certain Sri Lankan polities were able to formulate state level societies, while others see further development three centuries later between 1\textsuperscript{st} century B.C. and second century A.D. As a consequence numerous hypotheses have been put forth and a number of triggering factors have been highlighted. Some of these factors are tested against the archaeological data, some are yet
to be tested. Below I will summarize these hypotheses with a critical eye underscoring the necessity of further expansion of research on the subject.

2.1 Warfare and irrigation technology model: State formation

According to Gunawardena (1981), state formation in Sri Lanka was a lengthy process that developed in two stages. The initial states appear in the second century B.C. with the military endeavors of Dutu Gamunu, which led to the capture of the Anuradhapura center, while the second phase of state development is associated with a new wave of massive irrigation projects, especially after the invention of cistern sluice, which Gunawardena claims to have led to the formation of “mature states.”

Gunawardena argues that the chronicle episode associated with king Dutu Gamunu, who is hailing from the port town of Mahagama of southeastern Sri Lanka, and who ran a successful military campaign for the Anuradhapura center, was a turning point in the Sri Lankan socio-political history. According to chronicles, Dutu Gamunu, on his march to final battle at Anuradhapura subjugated a plethora of smaller polities. Up until this point in history, Gunawardena (1981: 148) argues, that much of the polities on the island were “simple” chiefdoms, which reflects…

…not a pattern of centralization but one of coordination among village communities,

…whose economic base depended on wet rice cultivation supported by small-scale irrigation projects. Chiefs sometimes took part in directing the construction of irrigation works but their participation was not essential for the construction of unsophisticated small-scale irrigation projects where a village-level peasant organization
was sufficient. In these small polities, according to Gunawardena, chiefs brought several villages together within a system of political coordination where diversity in the productive capacity encouraged economic integration. Villagers who had access to irrigated water were able to do intensive agriculture and exchanged rice in return for the services provided by less well off villages. Gunawardena suggests that an element of power may have been required to maintain such privileged positions held by affluent villages. According to Gunawardena (1981) this kind of chiefdoms, consist of…

…a political arrangement by which the affluent and densely populated village communities perpetuated the subordination of an economically dependent minority.

The subsequent initial state or what emerged after Dutu Gamunu’s campaign is considered as an intermediate stage of development between the simple “chiefdoms” and the “mature states.” According to Gunawardena, except for the construction of large religious buildings in Anuradhapura, the initial period of this phase continued with most of the same political features of the previous period. Gunawardena further suggest that the socio-political integration during this period was limited to the area around Anuradhapura. Until the invention of cistern sluice sometime before second century A.D. even the irrigation works of this period were relatively smaller in scale. Thus, as Gunawardena suggests, the initial stage of state level society operated from the second century B.C. to the beginning of the second century A.D. During this stage the internal complexity was minimal and bureaucratic function was limited to the areas in and around the center.

Nevertheless, in the beginning of the second century A.D., through utilization of cistern sluice technology, regulation of the massive outflow pressure from water sources
became controllable and reduced the endangerment to the weirs, thereby permitting the construction of large-scale reservoirs and interrelated irrigation systems. With this change, according to Gunawardena, a decisive intervention of the ruler on irrigation enterprise took place leading to a massive expansion in the construction of complex irrigation projects in the ensuing period. This process had major socio-economic and political repercussions on the society. It allowed private ownership of irrigation works and land in the hands of monasteries and peasants. Massive irrigation projects became the loci of aggregation. Control of such locations was key to the maintenance of the power bases of leaders who wanted to further expand their hold over the entire island. Thus invention of a new irrigation technology had far reaching repercussions, in that motivated rulers could intervene and increase surplus production and allow massive aggregations in the areas under their control. This in turn gave them more power to expand their power bases leading to the formation of ‘mature state structure.’

Although Gunawardena emphasizes that small-scale irrigation construction did not require a ruler’s intervention, there is a high possibility for self-aggrandizing chiefs in the initial polities (simple chiefdoms) to play a pivotal role in the irrigation constructions. As we observe from the evidence stemming from early urban centers like Anuradhapura, village level tanks did play a significant economic role in the surplus production and such settlements surely had the initial advantage towards political centralization. In the same way Gunawardena’s mature state model describes, it is possible that power-seeking elites in such early settlements understood the importance of participation in the works associated with economic surplus, and the control of which further enhanced the ability of wielding power, thus surplus would have been reinvested not only for warfare but also
for the development of irrigation creating economic nodal points that enticed aggregation. These locations could surely be used as power bases of self-aggrandizing individuals of initial expansive polities. Gunawardena suggests that by the second century B.C. the mechanisms necessary for administrative control of peripheral areas had not yet been developed. Only in the regions around Anuradhapura that administrative titles associated with state bureaucracy were present and the economy was not conducive for an island-wide integration. I disagree with this position for a number of factors and argue that the Dutu Gamunu episode highlights the culmination of the process of stable/cohesive state formation in Sri Lanka, and not an episode that highlights the process of initial state formation. Elsewhere I proposed that emergence of initial states in Anuradhapura took place slightly before the mid third century B.C. prior to the arrival of Buddhism due to events that unfolded following a massive explosion in long-distance trade in the Indian Ocean. I proposed that after the mid 3rd century B.C. with the arrival of Buddhism, Anuradhapura leaders were actively involved in utilizing ideology as a unifying tool to bring various populations under the umbrella of the state apparatus. Towards this goal while encouraging masses to convert to Buddhism, one of the strategies employed by the state was creating a sacred landscape in the state capital. I suggest that creating monumental symbols was a major part of this strategy, because monumental sacred symbols had the power to elevate the legitimacy of the space of the capital city as the power center. Thus, in turn the ruler who governed from such a sacred space gained the legitimacy and righteousness to throne. Therefore, by the end of third century B.C. the norm was that the king, who controlled the sacred capital, had the legitimate right to rule the entire island. Thus it is plausible that the war between Magama center and
Anuradhapura in the second century B.C. was a struggle to control Anuradhapura, which has achieved the status of sacred capital of the whole Island by that time. This is probably the main reason why the warrior king hailed from Magama decided to shift his government to Anuradhapura when he conquered the city. The chronicles indicate that during the time of Dutugamunu, monumental religious constructions including massive stupas, temples, and related infrastructure were created to facilitate religious activities. Thus my position is that the Dutu Gamunu episode symbolizes the culmination of the state formation process where initial states expanded to encompass independent distant peripheries while subjugating competing centers. Construction of massive monumental religious structures in the north central plains is surely an indication of consolidation of state power, and can be viewed as direct evidence associated with the characteristics of a cohesive state structure. Therefore, contrary to Gunawardena’s position that mature states were a second century A.D. phenomenon, I argue that a well-integrated or mature state society had already been formed by the mid second century B.C. at least two centuries before the invention of cistern sluice.

On the other hand I agree with Gunawardena’s observation that there was a major socio-economic transformation in the post first century A.D. era. However, this change can be considered as a reflection of a massive economic leap associated with a combination of factors. Particularly, intensification of an international trade linking up with Roman trade networks that were stretching up to southern India, and massive grain production supported by complex irrigation projects as highlighted by Gunawardena, are salient to this growth. Therefore, I have no qualms that post first century A.D. era affairs led to qualitative improvements in the already existing well-integrated state structure.
However, in what follows, I propose that the transition to a well-integrated statehood occurred much earlier and for different reasons.

Focusing on his hypothesis on the second stage of state formation, the rise of “mature states,” Gunawardena raises important socio-economic and political consequences associated with the construction, organization, and maintenance of larger irrigation works and resultant massive surplus accumulation materialized through constant three-crop rice harvests. He argues that only when large-scale irrigation works are developed the private ownership of ‘irrigation works’ surfaced, and with this, a new class of landowners emerged. However, Gunawardena does not explain how private ownership sprung out when large-scale irrigation works of this time were in fact strictly a state sponsored venture. On the contrary, when looking at the donations made to the Buddhist institutions in the post 3rd century B.C. era as reflected in early Brahmi inscriptions, and evidence of trade in the form of a plethora of seals and sealing with personal names and guilds, it is highly plausible to assume that private ownership of land or movable possessions was a much earlier phenomenon than the second century A.D. economic leap. Possibly it would be fruitful to investigate if private ownership sprung out much earlier when ‘segmented social structure’ collapsed in dominant tribal areas at the onset of intensive trade relations stemming from the northern Indian interaction sphere as highlighted in chapter 5.

Gunawardena’s (1978, 1982, 1985) irrigation hypothesis for mature state formation clearly has parallels to Wittfogel’s (1957) model on irrigation society. Simply put, Gunawardena proposes that massive irrigation works preceded “mature state” structure. However, the process as I argue in this analysis, is clearly the opposite. I
suggest that larger irrigation systems are a strategy for expansive states rather than a mechanism that led to the formation of the mature state. Thus I suggest that it was in the 2nd century B.C. that fully developed cohesive states have been formulated and that such endeavors are reflected in the monumental undertaking at the Anuradhapura city.

In addition to the technological breakthrough in the irrigation field, Gunawardena also addressed the impact of external trade and religion. However, the new archaeological data that have surfaced in the last two decades provides insights into the emergence of class differentiation based on economic transactions long before the beginning of 2nd century A.D. Coins and seals issued by various trade guilds from around the third century B.C. (Bopearachchi 1998) until the end of the millennium clearly show the existence of a healthy economic environment where competition between well established trade guilds was clearly in action. Function of such operations surely needed an overarching central political control equivalent to a state structure, whether it was a confederation or a monarchy. These data show a new picture, different from that of the early interpretations of both the chronicle accounts and the archaeological record. With these new data at hand it is feasible to have a fresh look at the issue of state formation. Despite the disagreements registered above, it should be mentioned that Gunawardena paved the first step towards an in depth analysis on the Island’s state formation process. Gunawardena’s pioneering work (1981) on state formation was an excellent attempt in a time when the PH/EH archaeological record was still not adequately explored. Thus his work without doubt was a steppingstone for research on formation of state society in early historic Sri Lanka.
2.2 An urban offshoot from south India.

Among recent archaeological works relevant to the study of the early socio-political history of Sri Lanka, Deraniyagala’s work stands out for number of reasons. Influenced by the analysis of his data revealed from the Anuradhapura citadel, Deraniyagala not only concluded that the initial movements of iron-using populations to the island was from south India (not from north as chronicle chapters suggest) but also was stemming from an urban setup that was developed elsewhere. Since 1969, Deraniyagala (1990b: 252) conducted more than a dozen test excavations at the Anuradhapura citadel reaching the bedrock cutting through 9-10m deep occupational deposits. His fieldwork made a number of key contributions to the progress so far made in the study of early Iron Age socio-political formations in Sri Lanka. Deraniyagala’s (1972) excavations at Anuradhapura citadel was the first to unravel a long sequence of occupational deposits predating 5th century B.C. Furthermore, his test pits, conducted in various parts of the citadel mound, allowed him to estimate the settlement size through different periods. Deraniyagala’s meticulous stratigraphic excavations gave insights into the material culture change through time from the beginning of the proto-historic period till late medieval period. While acknowledging his pioneering stratigraphic excavations at the citadel, which are immensely useful and contributed considerably to the enhancement of the knowledge on proto-and early historic periods in a study that focused on early socio-political formations and the emergence of state level polities, theoretical aspects of some of Deraniyagala’s interpretations need thorough evaluation.

Based on his work at Anuradhapura, Deraniyagala estimated that the earliest proto-historic settlement at Anuradhapura extended over 10ha by 800 B.C. By ca. 700-
600 B.C., after 100-200 years of occupation, the Anuradhapura settlement size increased dramatically, extending over 50ha. This calculation allowed him to designate the Anuradhapura settlement as a town by the 7th century B.C. (Deraniyagala 1990b: 253). After identifying the distinct parallels between the proto-historic material culture at the Anuradhapura citadel and the archaeological record of peninsular India, Deraniyagala suggested that there was an initial migration wave stemming from south India. He further suggested that these people do not reflect signs of an organic growth from a humble village level existence (Deraniyagala 1990b: 254), but depict from the inception a social context comparable to a urban community.

Although it is highly plausible to assume that populations that belong to an early Iron Age “megalithic” cultural complex in Sri Lanka, are from an early migration wave from the southern regions of the subcontinent, to claim that they originated from an urban context with centralized political order at such an early stage of the south Asian Iron Age needs substantial archaeological backing. Such evidence is yet to be found from the peninsular India or from Sri Lanka for this period. On the other hand the data from the initial Iron Age deposits at Anuradhapura ASW3 (chapter 5 part II) do not in any way suggest that the initial iron using occupants were from an urban context. As I have pointed out in chapter 5 the settlement data reflected in the archaeological record of the initial occupants of the Anuradhapura citadel was an economy simply based on pastoral activities supported by floodplain agriculture as well as seasonal hunting and gathering, rather than a socio-economic offshoot stemming from an urban context.

Deraniyagala (1990b: 253) further suggests that, from the beginning, the selection of the site location at the Anuradhapura settlement was made by a centralized authority
that was aware of the issues such as access to important raw materials, foreign threats from across the ocean and access to ports on both western and eastern coasts of the Island. This notion implies that from around 800 B.C., the placement of the Anuradhapura settlement in a central location inland with a similar distance both from the western and the eastern see board, was a calculated move on the part of initial settlers. I agree that the strategic geographical importance of Anuradhapura may have been highly relevant to the political conditions of later periods when Anuradhapura became the capital city of a state society around 3rd-century B.C., but it is debatable whether similar strategic issues were at play initially at an early stage of proto-historic period several centuries before, when socio-economic and political circumstances were completely different from those of a state society. This issue of an initial proto-historic settlement establishment is discussed in detail in chapter 5, and a new interpretation on the settlement pattern and the subsistence strategy is provided, based on the archaeological data from the ASW3 excavation and the analysis of a proto-historic topographic setting at Anuradhapura.

Furthermore, going by Deraniyagala’s estimation that this site grew to be a 50ha urban center between 700-600 B.C. (taking a fivefold leap within a century), the emergence of Anuradhapura becomes parallel with the rise of other Gangetic valley centers in the north and not as a part of the second urban wave that took place in the south. Thus the question arises whether Anuradhapura could have been developed into such a major center in an earlier wave of social evolution along with Gangetic centers despite being located hundreds of miles away from the closest Gangetic system urban center. Although Coningham (1996) seem to be of supportive of a parallel growth along
with Gangetic valley centers, it is debatable whether an urban society could remain singularly by itself for a couple of centuries without stimulating nearby interacting polities at the opposite coast in Indian Peninsular. If Anuradhapura was a major center in the southern regions from 7th to 5th century B.C., then there should be evidence for other parallel urban centers in the south.

In the case of north Indian socio-political growth in the Gangetic valley there is an overwhelming evidence of political centralization long before the mid first millennium B.C. The process took place within a systemic context that involved many chiefdom-level societies during the first half of the first millennium B.C. before transforming into interacting city-states or janapada/mahajanpada in the mid first millennium B.C. (Erdorsy 1995). Such systemic growth of multiple polities was not recorded in the southern regions of the subcontinent until the fourth/third centuries B.C. Then the challenge is to explain the growth of the Anuradhapura site size to such an extent, at a very early stage, larger than many of the centers of that time even at Gangetic valley standards. It is questionable whether this growth was a consequence of a true urban process or a reflection of an adaptation to a particular ecological condition. This issue is addressed in chapter 5.

Focus on the settlement size as a category for urban and non-urban or town/village differentiation can be problematic. Especially in cases where pastoral adaptations play a key role in the local subsistence economy, (particularly in places where annual or seasonal aggregations took place), ceramic scatterings can be found in large areas beyond one time camp or village site. Based on data revealed from my work at IBB settlement and ASW3 at Anuradhapura in chapters 5, 6, & 7, I argue that pastoral
activities played a key role in the proto-historic economy. Thus large site size in early habitation areas such as IBB and Anuradhpura could be attributed to aggregation into certain sites during a particular season of the year. Within a few decades of annual migrations, camping areas can reflect exaggerated occupation areas leaving ceramic scatter in an unusually wide area beyond the actual settlement area of a given season. As we know from many ethnographic examples, pastoral annual migrations tend to concentrate into a certain locus during a certain time of the year, particularly in places where plenty of vegetation is available for their flocks. This argument will be pursued in more detail in chapter 5.

2.3 The mineral flow model: parallel political centralization in the periphery

In his paper titled ‘Peripheral Regions’ and ‘Marginal Communities’: Towards an Alternative Explanation of Early Iron Age Material and Social Formations in Sri Lanka, Seneviratne (1996: 284) argues that control of mineral resource flow played a key role in the new social formations in the foothills (away from the Dry Zone core regions) during the early historic period. This, according to Seneviratne, is a process that led to the formation of an independent chiefdom level polity in the periphery, an alternative to the political centralization process that occurred in the core areas in the Dry Zone plain.

The periphery, which Seneviratne (1996) terms as lower montane sub-plain comprises the region of upper Kala Oya system along with Matale hills. This region contains the area concerned in the present study including the Sigiriya and Dambulla region where Ibbankatuwa (IBB) and other “megalithic” cemeteries and settlement sites are located. Seneviratne’s model suggests three stages of development in the periphery as
depicted in the table. According to Seneviratne’s (1996: 280) mineral resource model for alternative polity formation in the foothill region, earliest Iron Age (700-500 B.C.) communities of Proto-historic Sri Lanka show a settlement pattern that reflects adaptation to ‘micro-eco-zones.’ These ‘micro-eco-zones’ are confined within habitats associated with localities possessing strategic resources, a broad spectrum of subsistence pattern coinciding with functional technology in the hands of the resident communities. Such proto-historic ‘micro-eco-zone’ habitats, according to Seneviratne, were distributed in variable ecological settings such as the littoral zone, along fertile pockets of the alluvium, and mineral bearing locations in the plains.

Seneviratne suggests that the presence of such a diverse ecological setup in the Iron Age micro-eco-zone habitats - not necessarily within agrarian eco-zone and in a time period before the invention of irrigation agriculture - is an indication of the presence of one or more alternative sources necessary for the sustenance of early Iron Age social and material base. Thus, according to Seneviratne (1996: 284), …

…mineral resources may have been such a source providing the material base for localized specialization by the beginning of the early historic period, and sustaining social formations away from the Dry Zone plain.

Seneviratne suggests that in the lower montane sub-plain region, gemstones may have been such a primary mineral source along with metallic ores and other minerals such as mica. Thus Seneviratne argues that the initial movement of early Iron Age techno-cultural groups to the foothill regions of the central montane zones of Sri Lanka was mainly in search of mineral resources found in this region. He suggests that from around 700 B.C. the lower montane region was visited by semi-sedentary populations looking for raw mineral resources that are in demand in the core areas of Dry Zone settlements.
<table>
<thead>
<tr>
<th>Period</th>
<th>General settlement pattern</th>
<th>Upper Kala Oya region: The periphery</th>
<th>Core areas in the Dry Zone plain:</th>
</tr>
</thead>
</table>
| **Early Proto-Historic Period**  
* (EPHP) (700-500 B.C.) | Micro eco-zones (coincidence between the technocultural zone and physical zone): developed in diverse ecological setting (littoral zone, alluvium, & mineral bearing locations in the plains) | Sporadic intrusion of semi-sedentary populations in search of raw mineral resources needed in the Dry Zone plain. Movement into foothills of the central mountains by 600 B.C. | Industrial production of beads at Anuradhapura by 600 B.C. Imported raw minerals (carnelian) transformed to finished goods and redistribution into other areas including upper Kala Oya region |
| **Late Proto-Historic Period**  
* (LPHP)/PHEH transition phase (500-300 B.C.) | Macro eco-zones: expansion technocultural zone beyond original micro ecological niches incorporating several micro eco-zones, | Greater sedentation conditioned by a regular demand for raw materials from the populations in the plains. Formation of a link zone: between mineral resource region in the central highlands and the centers in the plains. | Demand for wider range of important minerals became regular. Chiefdom formation by 300 B.C. |
| **EHP**  
* (300-100 B.C.) | Expansion of settlements into Matale hills, | Emergence of independent chiefdoms, expanding dominance into the resource sources in the central hills, transformation into a major production-distribution zone & sending out products into port sites and other inland habitation sites. | Well-developed states 100 B.C. |
During the PH-EH social transformation the communities that were adapted to micro-eco zones in the Dry Zone plain witnessed an *expansion of techno-cultural zone beyond original micro ecological niche*, forming macro zones that incorporated several micro eco-zones (Seneviratne 1996: 282-283). During this phase, in the last two centuries of the proto-historic period (from around 500-300 B.C.) demand for important minerals became regular in the core settlements in the Dry Zone. As a consequence permanent settlements appeared in the upper Kala Oya region (Senviratne 1996: 291) where IBB and other proto-historic sites are located. He suggests that during this period lower montane sub-plane in the upper Kala Oya played an important role as a “link zone” between mineral resource rich regions in the Matale hills and settlements in the alluvium in the plains and littoral zones (Seneviratne 1996: 285). This notion indicates that the appearance of permanent settlements in the upper Kala Oya region was resulted solely in response to the demand for mineral resources elsewhere in the plains and littoral zones.

Seneviratne (1996: 298) suggests further changes in the socio-political and economic process during early historic period after 300 B.C. in the lower montane region. This time settlements expanded deep into the terrain of central hills parallel to an increase in the demography. Descendents of the lineage chiefs of link zones expanded their dominance up to the central hills. Through controlling extraction and outflow of large volumes of mineral resources (raw materials, semi-finished and finished goods), chieftains managed to expand their power bases. Seneviratne suggests that these new changes in the lower montane region required new institutions including better-organized production units of specialization and socio-economic infrastructure to sustain the new development. Thus, as a consequence, certain proto-historic lineage chieftains, who lived
in the upper Kala Oya region, managed to form a large independent polity (chiefdom) alternative to the polities in the core regions in the Dry Zone plain (Seneviratne 1996: 293-298).

Seneviratne’s study is directly relevant to the present research for number of reasons. It not only focuses on explaining political centralization process in the periphery (southern borderlands of north central Dry Zone plain) but also provides an explanation for the socio-political change during the PH/EH social transformation, which is partly the main focus of my analysis. Although Seneviratne’s mineral resource hypothesis contains a plausible model for alternative polity formation in the periphery, his interpretations are inadequately supported by material data. Particularly, his hypothesis on initial population movement into upper Kala Oya region and subsequent role as a link zone, (which facilitated the flow of mineral resources) begs further scrutiny. As highlighted above, if Seneviratne’s (1996: 287-289) hypothesis that the initial proto-historic population movement into the Dry Zone ecological boundary of proto-historic period was solely to search for mineral resources found in the Matale hills and beyond is correct, then there should be adequate material evidence for concentration on the mineral extraction by the initial communities. The only evidence supporting Seneviratne’s notion is the proximity of settlements and cemetery sites to the resource areas. However, ninety percent of the precious mineral products from IBB proto-historic cemetery are exotics. Only local materials extracted from the surrounding area are mica (a sheet found placed under a pot in a tomb at IBB) and a few quarts beads. These evidences are not adequate to make such a strong claim on the establishment of settlements by populations looking for mineral resources. Thus it is debatable whether the spread of the initial population into marginal
zones near lower montane regions was determined by the presence of mineral resources or due to some other factor. Based on the data from the excavations at the IBB cemetery, the settlement, and the surveys carried out in the Sigiriya-Dambulla region, I argue that although initial proto-historic communities may have had the advantage of being in a proximate area capable to extract certain mineral resources, the settlement or cemetery distribution pattern of the inner Dry Zone plain proto-historic ecological boundary near the foothills is for different reasons. It is surely not due to a particular interest in mineral resources. This issue is addressed in detail in chapters 5 and 6 and it is suggested that the settlement pattern in the marginal or ecological boundary of the north central plains during proto-historic period is due to the subsistence strategy associated with simple floodplain agriculture and pastoral economy that is supplemented by hunting. This pattern is reflected in many proto-historic habitation areas in the Dry Zone, including the patterns depicted in initial proto-historic habitation at Anuradhapura and not one that is determined by the availability of mineral resources in the central hills.

Furthermore, Seneviratne’s theory on the new independent chiefdom level polity formation in the upper Kala Oya during the early historic period is highly debatable on a theoretical basis. His analysis, for the most part, treats periphery in isolation, as a separate entity at least on the basis of political development. The main problem is that there is no discussion on the possible scenarios of reactionary responses associated with the impact of such “independent” polity formation in the periphery on the rulers in the centers of the Dry Zone plain. As highlighted by Seneviratne, the centers in the Dry Zone alluvium not only operated as centers of craft specialization and redistribution hubs of finished goods as early as 600 B.C., but they also depended heavily on the supply of strategic raw
resources from the foothill region for their socio-political existence. Given that the distance between upper Kala Oya and Anuradhapura center is less than 35 miles, the emergence of new “independent” polities, through controlling mineral resource areas and resource flow into the Dry Zone plain - which Seneviratne emphasizes as consisting of a range of key minerals that had demand in the centers in the plains – would be counter productive for the growth of the Anuradhapura polity. Such situations should then not only lead to tension between these newly emerging polities and the core regions located a few dozen miles away but also should reflect on the economy of the centers in the aluvium. If Seneviratne’s parallel political growth process in the periphery scenario is correct then tensions (which should be the logical outcome of such situations) between centers and emerging independent polities should be reflected in the archaeological record. Nevertheless the concept of a post three hundred B.C. “independent polity formation” in the lower montane region fits well with Gunawardena’s position that the post Dutu Gamunu state at Anuradhapura (late second century B.C.) did not have an administrative capacity stretching beyond the immediate regions close to the center, a position with which I vehemently disagree. This issue is addressed in chapter 5.

On the other hand if the alluvium centers are relatively powerful in terms of producing an agricultural surplus, then such developments can lead to attract aggregation that include skilled craftsmen into the alluvium. Aggregation into the centers generally happens at the expense of the hinterland (Algaze 2001). Knowing that Anuradhapura center operated as a center where raw materials were transformed to finished goods and redirected as early as 500 B.C. - which would surely have created a positive feed-back effect since it gave a head start in the increase of complexity at Anuradhapura – it is
highly debatable that the leaders of such centers would allow growth of independent polities in the very regions where they depended for exotic raw materials for status objects (especially on their door step just 35-50 miles south, knowing the adverse repercussions of such developments on their polity). Such scenarios of independent polity formation in the periphery, as suggested by Seneviratne, are possible but then need adequate material evidence with explanation how the emergence of such alternative power centers could be possible adjacent to already existing crafts centers with more resources at hand. Inscriptional data containing the title of Pocunika raja as highlighted by Senviratne could be an evidence for the presence of a regional ruler but it is debatable whether such titleholders acted with total independence from Anuradhapura.

Furthermore, the data I have presented in chapter 5 suggest that Anuradhapura (the alluvium center) expanding its grip on this territory during the early historic period. The evidence does not support a model for an independent alternative polity formation as suggested by Seneviratne. The inscriptional evidence suggests that rather than a rise of a new social order consisting of centralized political authority in the periphery, what we witness is that during the immediate post 300 B.C. era, there was a pan island phenomenon that highlights competition for social status between individuals from variable lineages holding titles such as parumaks, gapatis, gamikas, and batas. These groups were surely trying to establish new social positions and identities within the newly emerging class structure, a process that highlights a major dislocation in the old social order and a class struggle for the establishment of new status identities and rank within a new socio-political setup. This kind of class struggle to elevate social position can happen when old social order is undermined and new opportunities are presented to previously
infringed groups to accumulate wealth. Donations mentioned in the early Brahmi inscription suggest a new wealthy class in operation, at least by the mid third century B.C., which indicates a major socio-political transformation process during the times immediately before mid third century B.C. The presence of an unrelated elite class emerging from various social segments/clans throughout the island indicates the presence of a socio-political structure beyond chiefdoms at least by the beginning of the third century B.C. in the core areas. It also indicates a rise of cohesive or mature states by the beginning of the second century B.C. Thus I am in disagreement with Seneviratne’s independent polity formation in the lower montane periphery and the position that a well-developed state structure was not in operation prior to the first century B.C. Instead I argue that by the late fourth - early third century B.C. - Dry Zone political centers, particularly the rulers of the Anuradhapura center, expanded their hegemony on the populations in the upper Kala Oya region. By the mid 3rd century B.C. the process of initial state formation was complete in places such as Anuradhapura and within a century or so (in the early second century B.C.), major ideological transformations associated with the Buddhist religion allowed the rise of cohesive states.

2.4 The Kingship model

Coningham (1999) suggests that the rise of complexity and initial urbanism in Sri Lanka was neither resulted from Mauryan imperial expansion - as previously highlighted by Allchin (1989; 1990) in explaining urbanism in the southern regions - nor was it an internally generated process. Quoting Renfrew and Cherry (1996) Coningham (1999:
suggests that while abandoning indigenous or diffusionist paradigms, it is possible
to propose a model, …

…which builds on internal development but acknowledges the role of
external contacts.

Relying on Renfrew’s (1986) early state modules, Coningham (1999: 140) argues
that close interaction (trade in combination with exchange of ideas) between centers
within the Gangetic valley and beyond led to the introduction of the social concept of
kingship,

…and thus by providing a new currency of competition allowing
Janapadas to exceed their low thresholds for social mobilization.

Coningham suggests that in the case of the island of Sri Lanka, it should not
necessarily be perceived as a recipient of culture from civilized areas in the north. It
could be seen as a pivotal point in one of the major maritime routes in south Asia that
possessed a singularly central location. Thus Coningham indicates that Sri Lanka too
received the concept of ‘kingship’ through its external interactions, which ultimately led
to a major socio-political transformation in the 4th century B.C.

According to Coningham the concept of ‘kingship,’ which was introduced to the
island in the forth fourth century B.C. contained the key social mechanism required for
monumental undertakings towards the rise of urbanism. Coningham (1999: 139) argues
that this novel social mechanism ...

… allowed the previous low threshold level of social mobilization, barely
extending beyond that of kinship ties, to be exceeded as illustrated by the
construction of major communal works…

...such as building cities with monumental ramparts and irrigation works. The
Concept of “kingship,” according to Coningham (1999: 139), consisted of …
…an office from which a powerful leader could, with a necessary support and resources, mobilize and manifest the will of the people.

It is not difficult to accept Coningham’s position that long distance trade brought new ideas and values so that interacting societies could go through tremendous change that increased their complexities. But what is lacking in his analysis is that his model does not explain the internal social dynamics associated with social transformation towards a greater complexity.

There is a lacuna in the social process, which Coningham terms as a change from ‘kinship’ (or extended family level structure) to a ‘kingship’ level structure, which he claims to contain social mechanisms that had the capacity for massive, monumental scale undertakings. It is particularly important to focus on explaining how a ‘kin’ based structure was able to adapt to a new complex structure associated with ‘kingship,’ because we know that a successful adaptation to more complex structures requires a certain level of readiness by the receiving community. On the other hand it would have been more useful if Coningham’s ‘kingship’ model could explain how traditional clan/tribe based structures could be replaced by a new overarching hierarchy and had addressed the question why people who had previously organized into independent clan units would simply give up their independence to get involved in a structure that is hierarchically ordered and coercive in nature. Although to direct massive communal level mobilizations beyond tribes may need overarching power sources such as ”kingship,” it needs to be emphasized how and why suddenly a role of “king” or “absolute ruler” was necessary and possible. It needs clarification why certain tribes would give up their
traditions and customs and decide to sacrifice their labor for larger endeavors beyond their immediate clan/tribal level concerns.

Coningham seems to imply that the introduction of a “kingship” structure in Sri Lanka was peaceful. He suggests that Sri Lankan “kingship” (at least until the introduction of Buddhism) is flexible and unstable where a king/ruler could easily be removed. The applicability of this notion during the formative period, where previously independent communities were forced to come under the political arm of emerging centers is debatable. Usually tension within and between communities peaks during state formation. Particularly if the previous social setup was based on a tribal structure situation could become much more tense as tribal groups are generally known to be extremely independent. Perhaps the requirement of a massive rampart around Anuradhapura center as early as the fourth century B.C. is a clear indication of such conflicts.

Although Coningham (1999) leaves out long distance trade as a viable alternative that triggered change, based on the data retrieved from the excavations at Anuradhapura excavations discussed in chapter 5, it would be fruitful to evaluate the role of long-distance trade as a triggering factor, particularly during the periods associated with the expansion of Nanda dynasties. During that time Maghada expanded its political hegemony far south into Andrapradesh. Growth at Anuradhapura clearly coincides with this period, and Coningham’s data from ASW2 itself show that there was a sudden surge in long distance trade during this time. Thus I strongly suggest that surge in long distance trade c. 4th century B.C. played a key role in the PHEH social transformation.
2.5 Synthesis

What is significant in the above models is that all of them show a significant departure from the chronicle episodes on the initial period of Iron Age socio-political formations. These models surely give an in-depth insight into the early Iron Age social process. Deraniyagala’s analysis suggests a major south-Indian connection in the initial stages of early Iron Age migration and the subsequent settlement history. Nevertheless, evidence for north-Indian interaction in the strata dated to 600 B.C. (Deraniyagala 1990b 255-256) prompts Deraniyagala (1990a: 160) to explain his temptation to see parallels between chronicle episodes (especially Vijaya migration), and archaeological record. On the contrary Senviratne sees a greater south Indian influence in the internal social processes at least until the 3rd century B.C. On the other hand Seneviratne’s mineral resource hypothesis on alternative polity formation in the upper Kala Oya depends considerably on Deraniyagala’s findings where some of the minerals that Seneviratne highlights as originating from Matale hills appear at the Anuradhapura settlement as early as the seventh century B.C. Seneviratne’s analysis suggests that around 300 B.C. independent chiefdoms appeared in the periphery for the first time and fully developed states appeared in the island after 100 B.C. This time frame parallels the time line suggested by Gunawardena for the emergence of early states on the island. As pointed out elsewhere Gunawardena is of the opinion that ‘early states’ emerged in the island around the 2nd century B.C. while mature states were a post second century A.D. phenomenon. Coningham on the other hand highlights that state level societies at Anuradhapura occurred for the first time in the 4th century B.C. and by the 3rd century
B.C. with the introduction of Buddhism, a fully developed state society appeared on the island for the first time. Although not specifically focusing on explaining the formation of a state level institution or an initial political centralization, Deraniyagala’s observations indicate that early urban processes postdate the mid first millennium B.C. Based on the C14 dates receive for an IBB settlement site and the published data and material record of Anuradhapura, as I have highlighted elsewhere, my timeline for the formation of initial states and the subsequent formation of a mature state parallels mainly with Coningham’s framework. Given that Anuradhapura fortifications are dated to 4\(^{th}\) century B.C. and a status conscious competing elite group is reflected by third century B.C. cave inscriptions, I would prefer the late fourth/ early third century date for the formation of an initial state society as it is during this period that Ibbanakatuwa (IBB) populations first begin to reflect external interference, and the second century B.C. for fully developed cohesive states.

Alternative to the models presented by above scholars, I prefer to isolate long distance trade, specifically, a sudden surge in long distance trade in the mid fourth century B.C. as the most salient factor that instigated the mechanisms of increased complexity and political centralization. It initiated in Anuradhapura because, at that time, it was the main agrarian hub that had the economic basis and political power to utilize hinterland resources in order to be active in the newly intensified long distance trade in the Indian Ocean.
CHAPTER 3. THEORY AND MODELS: SECONDARY STATE FORMATION IN THE PERIPHERY

3.1 Phenomena of state: Importance of the archaeological analysis

The problem of the origins and development of state institutions is a fascinating phenomenon explored by scholars in the social sciences. The nature of the state as a centralized political apparatus, its ability to wield power over diverse communities in vast expanses through space (unlike any form of pre-state socio-political order), its capacity to sustain itself as a single overarching political entity, and its constant struggle to remain as a ‘unified whole’ (while being contested within and on its borders) are some of the key issues that social scientists are grappling with. Scholars agree that there is a remarkable cross-cultural similarity in the ways in which states are organized and the role they play as a centralized power structure. However, despite the overall similarity, historically the ways in which state societies have formed and operated are extremely complex. Thus the focus on each and every society is important because it gives new insights into the phenomenon of state as an apparatus of socio-political control, bringing enormous changes not only to human societies, their socio-political, economic, and ideological realms, but also in their physical landscape and material spheres.

With the realization that state societies emerged for the first time six thousand years ago in the Mesopotamian alluvium (and that many early societies, that transformed to statehood have left scant literary evidence or un-deciphered script), many scholars agree that understanding ancient state societies depends considerably on the analysis of the material spheres of past societies including the spatial organization of built landscape. As a consequence archaeological investigation has become central to the study of ancient
states. Archaeologists, as experts in decoding material realms of ancient societies, have formulated their own methodologies and theories to research the important issues of ancient states based on the remnants of physical data. This becomes clear when looking at the plethora of work done on ancient civilizations throughout the world focusing on various socio-political economic and religious phenomena by archaeologists such as Adams (1966); Algaze (1989), (2001); Allchin 1991; Childe (1925); Earle (1989); Goldstein (2005); Kenoyer (1995), (1998); Lamberg-Karlovsky (1989); Smith (1923); Smith (1998); Stein (1994), Wright (1994). Such research has demonstrated that even if textual sources are readily available and provide important insights into the social process towards state formation, material realms of such societies are capable of revealing extremely important but untold aspects of state process in the text.

This is true as well for the process of early Iron Age state formation on the island of Sri Lanka. Despite having detailed chronicles that illuminate early social process of the Island, there is much to learn from the analysis of material record. As pointed out in Chapter 1 and 2, only in the last couple of decades it was realized that the archaeological record reveals an important endogenous social process that was not highlighted in the ancient textual sources. Due to growing databases on proto-historic archaeological record, now more than ever, compels us to draw from the material record as an alternative source of early civilization history of the Island.

3.2 The concept of “State,” a working hypothesis

Although there are many ways to emphasize the concept of “state,” in general states consist of a collection of specialized institutions and hierarchically structured
bureaucratic apparatuses. This includes administrative and political offices controlled by an overarching central authority that has the right to implement coercive power over its subjects. States have their own political economies that depend mainly on the integration of hinterland production forces - such as energy, skills, raw materials, and finished or semi finished products - into the economic orbit of the centers where administrative headquarters and ruling elite classes are located. Thus economic integration and political centralization go hand in hand in the emerging states, and urban centers are the spaces where political and economic power is concentrated. Steady function of state apparatus mainly depends on efficient socio-political integration of hinterland populations and their economic products and a flow of uninterrupted services into centers/cities. For this purpose, a state requires important institutions like judiciary systems to maintain law and order, efficient system of taxation to cover expenses, infrastructure to facilitate passage between hinterlands and centers, and standing armies to protect from enemies and to maintain political control in the hinterlands. States also require maintaining public services for the benefit of the masses in order to mask its coercive nature, to justify its existence, and to win legitimacy.

During formative stages state structure is considered to consist of relatively weak integrative mechanisms. Most often at the initial stages of state formation considerable level of violence and subjugation is involved and many segments of the society that newly come under state authority are previously independent groups, thus reluctant participants. Having to obey rules laid by a higher order and to give up traditional structure and considerable amount of the products and services as taxes at a regular basis, freshly dominated communities are highly likely to resist state dominance. Therefore, key
to the sustenance of emergent state structure is to develop efficient strategies of centralization and preventive mechanisms to curb resistance and counter tendencies prone to fission. However, having institutions associated with judiciary systems, standing armies, efficient bureaucratic apparatuses alone do not guarantee the stability and longevity of state institution unless other means of efficient unification and consolidation methods are employed. In the process of the consolidation of state apparatus, promotion of new (state) ideology is key to the legitimation of the existence of state and to the unification of numerous communities that were previously independent. Although at formative stages state societies can be extremely fragile, if states have efficient mechanisms and strategies to promote their ideology and to infiltrate the socio-cultural spheres of newly subjugated communities, ideology has the power to dislodge traditional ideas, values, belief systems, and practices of such groups, and unify under larger overarching single socio-political structure. Thus through manipulation of ideology, the state institution can be consolidated and in turn the threat of fission could be alleviated considerably. In this analysis the term “initial states” is used to refer to certain state societies, which are still weak in their integration and prone to fission although such political organizations reflect a considerably complex order in the administrative and political functions they can be fragmented or altogether collapse or revert to less complex socio-political organizations with relatively weak power structures (Marcus 1998: 59-84). These latter societies do not have strong state ideology or stable military means to tie distant populations permanently into the political and economic orbit of the center, or other efficient mechanisms to tie populations under a central authority for a lengthy period. Even if they expand from time to time, soon they can face threat of fission.
Societies consisting of strong segmentary structures such as certain pastoral societies, which consist of considerably independent socio-political segments, belong to this category. Independent tribes in the margins of state can resist dominance by maintaining traditional structures. Thus can retain tendencies leading to fission even if such societies have been through successive evolutionary stages towards states. Therefore, integration of minorities and tribes is an important part of the socio-political evolution towards strong state structure.

The term “cohesive states” will be used to refer to the political structures that consist of considerable stability in their socio-political and economic integration in the sense Cohen (1981: 87) describes, i.e. a polity that has its own organizational and cultural features which can prevent fission. Such polities can have efficient mechanisms beyond military means to maintain integration and undermine the ambitious local authorities and communities that strive for fission. Thus as pointed out above one way to guarantee long-term sustenance of emergent state apparatus is through formulation and promotion of state ideology as well as having mechanisms to undermine the traditional structures of local communities. Such conditions allow unification of diverse communities previously segmented along clan/tribal level social boundaries. Once this stage is reached there is no falling back into less complex social order unless there was a major systemic collapse.

In my research on the formation of state level complexity - contrary to the positions that “fully developed states” were not in operation before 1st century B.C. (Seneviratne 1996) or “mature states” was a post 2nd century A.D. phenomenon (Gunawardena 1982) – in the subsequent chapters I will show how core regions of Dry Zone (stimulated by new long distance trade extending up to Gangetic valley) formulated
initial state level societies in late 4th-early 3rd centuries B.C. and cohesive states were formed by late 3rd–early 2nd centuries B.C. In this process, Buddhism was introduced as a new state ideology and utilized as a unifying tool to bring independent tribal communities under state’s control. During the same time, tribal resistance to state control was curbed by undermining traditional tribal structures. In this case, I argue that state’s interference and control of the flow of exotics such as carnelian, agate, and gold was an important consolidation strategy, because as I pointed out in chapters five and six, such exotics played an important role in the social reproduction. Implementation of such strategies by the state not only undermined traditional tribal structures but also allowed solid unification of communities through promoting a new state ideology. Such strategies of political centralization were key to the consolidation of initial state apparatus, which eventually led to the formation of a cohesive state.

3.3 The problem of secondary state formation: three scenarios

The general problem of pristine state formation, i.e. understanding the sources of unequal social relations and their role in the process of socio-economic integration and political centralization is also relevant to the study of secondary state formation. Although the concept of pristine state formation indicates more or less an endogenous socio-political trend associated with long term local historical process, a secondary state formation indicates a socio-political process stimulated by influences stemming from elsewhere or deriving from preexisting forms (Fried 1967). As Price (1978: 161) puts this into perspective, the underlying generality behind every secondary state formation is that either it derives historically from previously existing forms or diffuses through space
from dominant centers to marginal communities. Thus, it is arguable that in the secondary state formation process where the structures are borrowed or imposed, the transformation could be swifter than in an incipient process. From this may follow that the structures can be much weaker and fragile, at least in the initial stages.

In the case of state formation on the island of Sri Lanka, although there were no pre-existing states in the entire southern region of peninsular India and on the Island before the PH/EH social transformation, the socio-political evolution towards states seems to be swifter and externally driven. But this does not necessarily mean forceful imposition of structures by a distant core on the people in the periphery. It could be the result of an internal response to a new wave of external influences stemming from a complex cultural sphere with which previously there was no regular interaction. Since a PH/EH archaeological record from Anuradhapura urban center (Coningham and Allchin 1995) indicates increased communication with centers of Gangetic valley in north India at least from around 4th century B.C. (and a massive socio-political reorganization ensued in the next few generations), the most applicable approach to understanding the process of state formation on the island would be to follow a secondary state formation model that explains a swift internal process triggered by a catalyst stemming from an external source.

More specifically, I propose that social change in the southern regions of the subcontinent and in Sri Lanka was a process that resulted from an amalgamation of two interacting spheres previously operating independently, i.e. mid first millennium B.C. Gangetic valley city state system and the early Iron Age southern tribal interaction sphere generally known as communities consisting of a megalithic tradition cultural complex.
Therefore, to test the data on the evolution of the first state society in Sri Lanka I present three competing models (three scenarios of secondary state formation), which include two polar categories and one mutually inclusive scenario of the two polar categories:

1) the “direct stimulation hypothesis,” where local communities are subjugated and totally dominated by core agents. The new social process associated with the development of social complexity was due to the presence of colonial agents.

2) the mutually inclusive model, which explains a scenario where both direct and indirect stimulation processes operate at the same time. Initial growth results from direct core interference but indigenous structures were complex enough to develop on its own. Thus core dominance play a role in the socio-political evolution to a certain extent and agents are present, nevertheless in the long run local elites or hybrids take control challenging core hegemony.

3) the “indirect stimulation hypothesis,” which alludes to an endogenous growth process triggered in response to external influences, i.e. through dissemination of ideas, materials, and not necessarily due to the presence of core agents, due to distance or due to strategic location such societies while evolving towards states mange to remain independent from core dominance.

3.3.1 The “direct stimulation hypothesis” for secondary state formation

In general, a number of models including colonial and imperial models of secondary state formation indicate that colonized societies are influenced by culture flow from dominant to dominated. As van den Brink and Levy (2002) summarized, in early
archaeological investigations such as the works of Smith (1923), Childe (1925), Rouse (1958), diffusion models have been popular and used as an important tool to explain the social change in societies that are secondary or peripheral to pristine state societies of the Nile Valley and the Near East. Similar views are projected in the world systems theory (Wallerstein 1974) and core periphery interaction models, where change in marginal regions can occur due to the expansion of political hegemony of the core region or empires (Kohl 1996). Although initially when the world system theory was presented, the essence of the world system process was the asymmetry of power relations between the core and periphery, more recent formulations of core periphery relations argue a number of different scenarios. For example Stein (1998:229) argues that the core’s ability to exercise hegemonic power reduces with distance, thereby leading to an increasing symmetry in economic and political relations.

Similarly Smith (1998: 261) points out two different ways that a periphery could respond to the core influence: 1) If the periphery consist of simple or less complex societies such societies are unable to meet the demand of the centers to produce trade goods. Thus it is in the interest of the center to encourage complexity at the periphery in order to develop the necessary infrastructure to extract or produce the desired products, 2) if the periphery is already complex, such peripheries could become hegemonic empires utilizing the existing infrastructures to meet imperial requirements.

What Smith (1998) outlines here are two different outcomes of “direct stimulation” resulting from core-periphery relations. However, if the periphery is complex enough to develop its own structures and can challenge core dominance the scenario changes from being a receiver of ideas to indigenous innovator that highlights a
mutually inclusive process of social transformation towards secondary states. This scenario is discussed below separately as another process of secondary state formation.

However, if the periphery was originally less complex and consisted of a structure imposed by the core for its own benefit, then most probably in the long run survival of such structures are uncertain, because the core induced structures would not generate conditions favorable to its own internal growth; rather they would become a place of raw material production for industries in the center. As Algaze (1989: 572) points out such an asymmetrical economic exchange would lead peripheries to go through initial vigorous socio-political growth followed by a significant weakening of the socio-economic systems and finally become susceptible to collapse. According to Algaze, due to over specialization and dependence on a limited number of export goods, which are mostly unprocessed raw resources, in the long run protracted economic spin offs in the less developed societies would be negligible. Thus a long-term consequence is not employment in processing jobs or administrative complexity but an environment devoid of raw resources due to over exploitation for export. Sustenance of such societies depends on maintenance of relations with core societies.

3.3.2 Mutually inclusive model where both direct and indirect forces are in operation at the same time

An alternative to the above process discussed by Algaze, would be to produce positive growth in the socio-political system of the periphery leading to powerful states that would ultimately become independent from core hegemony. As Smith’s second alternative suggests, if the peripheries are already complex, such peripheries have the
capacity to become hegemonic empires utilizing the existing infrastructures to meet imperial requirements (Smith 1998). The process could become much faster if such already complex communities in the periphery are infiltrated by core agents. When peripheries are sufficiently infiltrated by core communities like migrant groups, diplomats, craftsman, engineers, and planers, administrative officers who possesses the knowledge of certain advanced technologies prevalent in the core and when such societies are internally prepared to undergo its own change, peripheries can transform rapidly. Particularly, “colonial frontiers,” as described by Rice (1998: 52), from a pericentric view consist of situations ideal for innovations and growth. Because frontiers consist of important unexplored resources as well as unused fertile land, these resources are open to efficient exploitation if innovative hybrid mechanisms are employed. Contrary to what core periphery models of modern capitalist economic relations would describe Rice (1998: 52) points to the transformative qualities of a colonial frontier as follows:

…the “hybrid vigor” of interactions and negotiated agency among colonists, indigenous peoples, and a new environment stimulates creative solutions to problems, as well as demand for new products.

According to this view colonial frontiers are considered as points of dynamic economic growth. Similar situations can be expected from politically autonomous peripheral communities with a certain complexity in their socio-political organization that can attract communities such as trade diasporas from core regions due to their location in important junctions of long distance trade routes or due to the availability of valuable raw resources. Under such circumstances peripheries can begin to accumulate their own
surplus when core agents make alliances with natives while severing ties with the home and becoming part of the peripheral communities.

Somewhat similar to such colonial frontiers are the Hellenistic colonies in northwestern India, which became independent city-states after initial colonization. Peripheral accumulation of surplus and consolidation of political control by local elites or hybrids can instigate extremely dynamic situations where both native and residential external communities may undergo rapid social transformation. Such situations can develop into more complex institutions consisting of more stable and larger integrative political control at a much fast pace than many other peripheral societies that would be locked in long-term interactions with core societies.

In this situation change can come from a combination of forces, i.e. both from direct and indirect sources at the same time leading to a social evolutionary process consisting of both indigenous and exogenous characteristics. This process is somewhat similar to Smith’s second scenario discussed above under direct stimulation, where peripheries transform rapidly to replace core political dominance and become core areas. However, under circumstances where both direct and indirect forces operate simultaneously, we can further allude to a situation where core political dominance is completely lacking, but yet core agents are present in the form of diplomats, missionaries, trade diasporas, craft guilds, mercenaries, etc. Such situations can occur in instances where maintenance of core political dominance is extremely difficult due to distance or local polities are located in areas with impenetrable defensive positions. Since maintaining political dominance over such areas is difficult and costly, maintaining cordial relations can be beneficial for the core. Such peripheries may contain extremely
important resources or luxuries that core elites heavily depend on or may be located in areas that are geopolitically or economically important for core regions. In situations like this core regions need support and collaboration of certain polities in the periphery to ensure the function of trade networks or to keep an eye on the activities of other polities or tribal areas that are unstable and not conductive towards the interests of the core areas.

On the other hand the fact that the core agents presence is in neutral terms indicates that such societies do not have a political vacuum or weak political structure. They do possess certain level of political centralization and local structure capable of forming alliances and resist external threat but lacks institutional structure to develop state level complexity. What the presence of neutral core agents in such areas does is influencing on local structure to develop into state societies, because having a strong alley in a distant hostile area of strategically importance would be in the interest of the core. This would ensure the flow of strategic local resources, exotics, and the function of trade routes smoothly in the direction of the core.

Consolidation process of early states in Sri Lanka can be seen as a process that can come under this category. Sending a Buddhist missionary into the island by Mauryan ruler and its consequence (as argued throughout in this research), i.e. providing means for socio-political integration of tribal communities in the hinterland permanently into the emerging state center can be explained under this mutually inclusive scenario. Although in the case of Sri Lanka, when Buddhism was introduced the initial states have been already formed, this scenario is applicable to the social transformation of chiefdoms or polities consisting of tribal confederations, which are not developed into states until neutral core agents become residents.
3.3.3 The “Indirect stimulation model” for secondary state development

The third category receives certain level of external influence from core areas while having the capacity for their own internal growth. Such societies never dominated politically by the core agents, but considerably influenced by the presence of small groups of influential agents such as diplomats, missionaries, trade diasporas, craft guilds, mercenaries, etc. Nevertheless, such societies are complex enough and have means to reorganize and evolve indigenous structures mixing with ideas and strategies borrowed from the core areas through the resident agents without sacrificing their independence. This differs from first (the direct stimulation process) and second (mutually inclusive) scenarios because peripheral elites mange to maintain agency.

The process I hypothesize for initial state formation in Sri Lanka is one of “indirect stimulation” of endogenous state development. Despite receiving stimuli from elsewhere, certain peripheral societies are able to undergo their own internal social transformation process (Cherry 1978: 415). Such peripheral societies - given their past developmental history and cultural perceptions that allow flexibility for structural reorganization which in turn can stimulate economic growth, social transformation, and political expansion - are equipped to adapt to changing conditions efficiently and quickly. They not only can internally develop complex structures comparable to state level societies but also have the ability to transform into powerful cores in the long run, a scenario somewhat similar to Smith’s (1998) alternative outcome as described above under “mutually inclusive” hypothesis. But this type of social evolution takes place without lengthy presence of core agents such as political agents and diplomats from the core societies in the periphery, thus void of direct interference from core societies. This is
not to say that peripheries act on “indirect stimulation” totally devoid of individual presence from the core regions. Surely there could be regular contacts through visiting traders, religious figures, etc. but such presence does not cause direct interference by core agents as it would in the case of “direct stimulation” or “mutually inclusive scenario.” The interaction would be at a minimum level where only trade goods and information, can take place, which would in turn, can stimulate an endogenous social growth, not a core imposed structural re-organization as core centric views predict.

The possibility of self-regulated growth processes in the marginal regions is pointed out in the works of Rice (1998: 48) and Kohl (1996: 150). According to Rice (1998: 48) although core centric views see peripheries as stagnant, backward, and belated recipients of core innovations, peripheries are not monolithic undifferentiated units. They too are dynamic, considerably complex, and consist of significant variation in their spatial, political and economic dimensions. Thus certain peripheral communities would develop institutional infrastructure not to fulfill core requirements but to produce structures that would be beneficial for its own growth. The same notion is put forth by Kohl (1996: 150) pointing to the fact that certain marginal or peripheral societies possess the ability to develop new techniques or apply nearly universal skills in “progressive” fashion leading to considerable socio-political consequences. These positions surely agree that when exposed to external influences stemming from dominant cores, certain peripheries that possess the qualities necessary to undergo internal development can accelerate their own social-political transformation leading to a positive growth, a direction of development different from that of ‘core exploitation models’ or my “direct
stimulation model” predict. Nevertheless, as mentioned above, the distance factor from core societies is a key issue in the independent growth of such peripheries.

3.4 Long distance trade as an indirect trigger mechanism

Long distance trade is considered as one of the key sources of socio-political change in the process of social transformation towards state level complexity. According to formalist approach shifting of large amounts of exotics and high-value bulk goods between distant places was central to many ancient economies (Ekholm and Friedman 1979, Rowlands 1987), and such economic engagement can create major dislocations in the traditional socio-economic structures replacing them with new structures suitable to deal with new issues and conditions arising with change within involved communities. According to Algaze (1989: 572) positive spin-offs can come from economic contacts between societies at different levels of socio-political integration. He further suggests that in such situations, although certain amount of institutional restructuring could be seen on both sides, the impact of contact is much higher in a less complex society, if that society is internally equipped to undergo change and on the verge of social transformation. This position implies that the influence of long distance trade operates differently in the periphery depending on the level of internal complexity of each society. I can rephrase this position by suggesting that when indigenous populations begin sustained relations with complex societies through entering into the trade spheres dominated by core regions, they are destined to undergo considerable internal restructuring. However, due to differential levels of internal structuring of such societies, the extent and the speed of change among them may be variable. This is one reason why we see a wide range in the
level of internal complexity in societies in a given region even after they are exposed to the same network of communication. Therefore, when less complex societies are brought into the economic orbit of complex societies through long distance trade relations, one could expect to see differential rates of socio-economic and political growth in the indigenous communities. This differential growth in the internal restructuring process itself can operate as a cause for difference in socio-political complexity, setting the stage for an initial rise of hierarchical spatial relations between settlements in the periphery or within smaller spheres located beyond the immediate periphery of core spheres. Through utilizing an initial advantage gained through developing relatively more complex socio-political systems, certain peripheral classes can form exploitative exchange relations with their neighbors.

Thus involvement in trade spheres along with core societies can become important stimuli for social change in the marginal zones. Innovations are applied unequally within each community and spatially between settlements, through which a certain class in the periphery becomes advantaged. New status and benefits that come along with internal restructuring cause emerging elites in the marginal regions to become dependent on involvement in larger regional scale trade spheres. Elites in the marginal zones become dependent not only on certain status goods and symbolic objects but also on certain luxuries and other high value bulk goods circulated in cross cultural trade spheres. To earn such external products, elites in the transforming distant marginal zones need to find ways to intensify the surplus of certain key products that have high demand within long distance trade networks. This can be achieved by using coercive power or threat of force, imposing taxes and tributes on its own hinterland populations and
obtaining payment in kind. Such specialization in the production process on the one hand can lead to the dislocation of traditional economies and social structures both in towns and previously autonomous villages in the marginal zones. For example, dislocation of traditional economies can disrupt or alter the flow of products that is needed for social reproduction such as goods and animals necessary for sacrifice, redistribution, bride wealth, blood money, gift exchange, etc. On the other hand specialization and surplus production resulting from local elite coercion or encouragement to produce products of a particular kind can disrupt the self-sufficient village economies, forcing them to rely on the products of other local polities, and settlements. Such local level disruptions can create conditions conducive for regional scale socio-economic integration connecting economies of villages and towns that form larger more complex patterns of production, distribution, and consumption in the periphery. Through controlling surplus produced in the hinterland villages and retaining a majority of the overseas export earnings, towns can go through their own economic expansion, multiplying conditions conducive for the operation of craft production, storage, and distribution.

As pointed out above long distance trade itself has its own intrinsic quality that could generate dynamic conditions within involved communities if those societies are complex enough to utilize the advantage that it presents towards further growth. It facilitates the flow of resources originating from different regions and provides access to involved societies utilizing them for internal production process, which, in turn, creates diversity in the production economies. Although it focuses on explaining the process of primary state formation/urban growth, the trade hypothesis put forward by Jacobs (2000) and Algaze (2001) on initial social complexity is applicable to the conditions described in
my “indirect stimulation” model for secondary state formation. According to Jacobs (2000) and Algaze (2001) a settlement can grow through utilizing exogenous resources for export. Initially, external energy was captured through increasing local production utilizing local material and labor, which Jacobs calls “starter resources.” Subsequently, part of the external resources earned in return for “starter resources” were combined with human capital and redirected as exports, increasing the settlements’ ability to obtain more imports (Jacobs: 2000:56). Thus this process creates positive feedback effects leading not only to economic diversity but also, through earning more imports, to produce more exports and vice versa. This process can create co-development in terms of a large diverse workforce and create further development by adding new types of work (Jacobs 2000: 19-47, Algaze 2001: 205).

Both Jacobs and Algaze point out that when settlements go through economic expansion, they increase in population density, and they do this at the expense of hinterland populations. Similarly we can suggest that when polities in a periphery pick up their economic growth and begin to expand through capturing and using external energy increasing production for external markets, certain urban centers can become magnets for artisans from hinterland and other peripheral polities. Their expanding economies lead to increase in the population through new waves of migration, creating further asymmetries among the peripheral polities or settlements. The “Mesopotamian advantage” hypothesis (Algaze 2001) suggest that urban centers with strong agrarian bases of their own (not having to rely on external grain flow, which can be unreliable at times) are more likely to attract hinterland resources, artisans, and pilgrims. When towns become the centers of accumulation where activities of storage, reproduction and redistribution take place, they
become advantaged relative to villages that possess only sources of unprocessed raw materials, thus creating “new relations of regional inequality” within the periphery itself. As stated above, according to Jacobs (2000: 56) a settlements’ ability to grow can be determined by its capacity to combine external resources (imports) with the human capital and redirect them through the same conduits as exports. Initially, external energy was captured through increasing local production utilizing local resources, which Jacobs calls “starter resources.” Subsequently, part of external resources earned in place of “starter resources” were combined with human capital and redirected as exports, increasing the settlements’ ability to earn more imports (Jacobs: 2000:56). Such situations can lead to obvious expansion in the economies of competing towns.

The growth and expansion of urban economies can be maintained through establishing mechanisms to maintain their advantaged socio-economic and political relations with the hinterland villages and marginal regions. Under such circumstances, towns need to achieve political integration, which would facilitate connecting hinterland villages, resource sources, and labor permanently into the economic and political orbit of towns. This is where the operation of an efficient administrative apparatus both in the spheres of economic and political organization beyond urban towns is needed. When urban societies form stable administrative mechanisms to integrate village economies, larger more centralized polities can be surfaced. Thus indirect linkage with core economies through long distance trade, certain polities in the peripheral zones can undergo significant socio-political and economic change requiring new institutional apparatuses capable of efficient socio-political control and integration. As a consequence certain peripheral polities with considerable complexity can expand to encompass small
polities and settlements around them, leading to political centralization that form state level structures.

**3.5 Formation of cohesive states: the role of state ideology**

In previous sections of this chapter I highlighted the problem of fission. It implies the fragile nature of ‘initial states’ and their inherent tendency to fragment and revert to much less socio-political complexity. Opposite direction of this development is consolidation. In the long run initial state societies go through further evolution utilizing strategies of centralization, which produces a more stable socio-political order supported by a new state ideology and much stronger economic bases. Some scholars call this stage as “mature states” (Gunawardena 1981), or “cohesive state” (Cohen 1981). Cohesive states occur when firm integration is feasible, not simply through threat of force but through other strategic means of unification and integration. One way to achieve such strategic consolidation is through the creation and promotion of new forms of state/national ideology.

The role of ideology in complex societies has been scrutinized by many archaeologists (Demarrais et al 1996; Earle 1991; Miller and Tilly 1984) resulting in characterizing it in a number of different ways. In this research I pursue the path taken by Demarrais et al (1996), i.e. to understand the role of ideology as a source of social power. Demarrais et al (1996: 16) point out that *strategic control of ideology contributes to the centralization and consolidation of political power*. Thus it is not an exaggeration to state that in the process of building a cohesive state apparatus the state requires to form a new
ideology to legitimize its existence and create common ground among its subjects who have variable social and cultural backgrounds.

Although the Marxist position considers that the state ideology is the ideology of the dominant class (Engels 1884), states or ruling classes can be strategic enough to capture and manipulate the belief systems of the majority that may not very well be the ideology of the dominant class. States also can emulate ideas, belief systems, and symbols totally alien to the local cultures but have their roots linked to a core society or high culture elsewhere, thus having the capacity to capture the hearts and minds of local communities. For example, early Islamic caliphs adopted various monuments of Sasanian and Byzantine royal symbolism (Donner 1986:290) in their attempts to promote Islamic religious values and belief systems as a new state ideology in the emerging Islamic states of western Asia. This kind of emulation does not require continued subjugation and imposition of the values and ideas of core societies on less dominant societies. Ideology of “high cultures” can be adopted through indirect means, i.e. rulers of peripheral polities can gain access to ideology through the same long distance networks where they receive trade goods, without direct core political intervention.

This position is central to my argument on the formation of cohesive state in the island of Sri Lanka around 3rd–2nd centuries B.C. where ‘initial states’ seem to have captured ideas values and belief systems external to the prevailing local ideology. The new state ideology shaped by Buddhist ideals and value systems of the core societies of Gangetic valley was captured and manipulated by the rulers of the initial Sri Lankan states. By doing so not only were they able to undermine clan leaders in the hinterland but also could develop means to tie diverse communities into the socio-political orbit of
the center, an essential step towards the socio-political consolidation leading to the creation of cohesive state apparatus.

DeMarrais et al (1996) points out that a strategy to convince communities beyond local groups to follow an imposed state ideology is through materialization of ideology. According to them…

...ideology is materialized in the form of ceremonies, symbolic objects, monuments and writing systems to become an effective source of power. Materialized ideology can achieve the status of shared values and beliefs. Materialization makes it possible to extend an ideology beyond the local community and communicate the power of a central authority to broader population (DeMarrais et al 1996: 16).

In such instances the spaces where the processions take place regularly can become communal/national scared spaces and in turn become symbols of state power, which display the state’s ability to gather masses. Such places thus communicate messages of state power, unity, and sacredness. This is probably one reason why we see religious administrative capitals in many ancient civilizations with monumentalized religious symbols, which are sure indications of political transformation towards cohesive states that guarantee more permanent political structure than in the case of initial states.

On the other hand other than creating sacred spaces associated with national ceremonies and processions within the capital it self, the masses are enticed to follow state ideology through locating state symbols in the periphery of state. Monumental scale pillars with edicts of 3rd century B.C. Mauryan empire of India, Mesoamerican stelas, Sri Lankan stupas are examples for such symbolism that is associated with political consolidation towards forming cohesive states or attempts to bring newly subjugated communities in the periphery to accept state power.
CHAPTER 4. GEOGRAPHY AND SETTLEMENT HISTORY: AN ARCHAEOLOGICAL PERSPECTIVE

4.1 Sri Lanka: The macro setting

4.1.1 Geo-environment

Sri Lanka is a relatively large island located a few degrees north of the equator between 5°55’ and 9°50’ north latitude in the Indian Ocean approximately 20-35 miles off the southeastern coastal belt of Peninsular India (Fig. 1). The island separated from the mainland 12 million years ago due to the submergence of land giving way to the ocean (Cooray 1984). The initial land area is estimated to be much smaller in size than today, but a sizable portion of the island’s surface was emerged mainly in the north at the end of Miocene 7 million years ago. The extent of the Island today is 25,000 sq miles. It is 275 miles from north to south and 144 miles from west to east from its widest points.

Geologically the Island is connected to the Deccan Plateau of the Indian subcontinent by a narrow under water ridge not less than four miles wide. This ridge runs across Palk Strait approximately 70 miles from Ramnad of the mainland to the Mannar coast on the Island (Stoddart and Gopinadha Pillai 1971: 112). Within this ridge the cross waters between the Rameswaram Island of the mainland and the Mannar peninsula of Sri Lanka are not more than 20 miles (Fig. 1) wide and this narrow water stretch is studded with a thin line of miniature islands (limestone shoals) generally known as Adam’s Bridge. For millions of Hindus living in the subcontinent, this is a revered landscape and its topographic feature was mentioned in ancient Hindu epics such as Ramayana and referred to as remnants of a passage constructed by god Hanuman linking the main land and the Island in order to send troops to invade Lanka in the Rama-Ravana war.
Despite mythical aspects shrouding the origin of this landscape, there is no doubt that this place was a migration cross point between the mainland and the Island of Sri Lanka, at least from around the late Pleistocene. However, this does not mean that Adam’s bridge is the only cross point between the two lands. The shallow Palk Bay north of Adam’s Bridge between the Jaffna peninsula of Sri Lanka and the southeastern coastal belt of Peninsular India (from Veddaranniyam to Rameswaram), can be crossed with a rudimentary sea going vessel with relative ease. Thus human traffic between the two lands must have been a regular occurrence long before the beginning of early Iron Age where evidence for intense inter-regional interaction is available.

Sri Lanka has three main topographic zones: the central highlands, the plains, and the coastal belt (Fig. 35). It consists of a number of geological formations namely Precambrian, Jurassic, Miocene, and Pleistocene and more recent Holocene deposits (Cooray 1984). Much older Precambrian strata consist of parts that are up to two billion years old (Berger and Jayasinghe 1976). Sloping from central highlands, Precambrian strata run throughout the island, diving below all the subsequent formations. The Northern region of the island, including the Jaffna Peninsula and a small area in the southeastern coast, consists of Miocene limestone deposits (formed between 5-20 million years ago), while much of the surface deposits in the lowlands consist of Pleistocene (one million years old) soils and more recent Holocene river gravels. Remnants of Precambrian ridges extending from the central hills are cutting through North central plains towards the northeasterly shoreline. Two isolated spots of Jurassic deposits (formed between 140-190 million years ago) remain in the Northwestern part of the island. Recent Holocene deposits are found in river valleys and the coastal belt where
Pleistocene bay areas have transformed to barrier beaches and sand dunes in which shallow lagoons and estuaries have formed (Weerakkody 1992).

The central highland is located mainly within the southern half of the island and the core of this region consists of a high plateau while the rest is adorned with numerous mountain ranges, rolling hills, deep valleys, and canyons. The highest peaks range from 8200 to 5000 feet and the terrain slopes from the central highlands to a number of escarpments and ledges at 1200 to 1500 hundred feet above sea level before sloping down to the plains that end at the coastal belt.

The total coastal belt of Sri Lanka is approximately one thousand seven hundred kilometers and it consists of variable geo-morphological features such as white sandy beaches, reddish-brown sand dunes, mangrove forested inter-tidal zones, estuaries, lagoons, offshore islands, low-lying cliffs, and deep natural Bays. Considerable parts of the coastline of the island were altered during Pleistocene and mid Holocene times and these changes are hypothesized to be both due to sea level fluctuation (Swan 1982) and neo-tectonic movement (Vithanage 1972). The maximum mid-Holocene shoreline - dated from 5200 BP (Wilson 1984) to 4000 B.P. (Weerakkody 1988) - is found in the eastern and southeastern coastal belt five meters above sea level (Weerakkody 1992:304).

The coastal environment has been populated and extensively exploited at least from late Pleistocene period onwards. Prehistoric shell middens and burial grounds found in the shell beds of middle Holocene lagoons - now dried up - of southern Sri Lanka, highlight differential adaptive strategies and variable food resources utilized by prehistoric populations. Black and Red Ware (BRW) Ceramic scatter, found on the deposits immediately overlying the Shell middens of Pallemalala (Somadeva 2006: 85)
and Udamalala mid-Holocene lagoon beds, suggests that the Mesolithic hunter-gatherer
groups continued to live in these drying lagoons perhaps until the beginning of the early
Iron Age.

The majority of the perennial rivers (Fig. 35) of the island is originating from
central hills. Starting as trickling springs high up in the hill country, and feeding along
the way by a plethora of small and medium sized streams, many waterways flow into the
Indian Ocean as swollen rivers from all corners of the island. Once the rivers reach
lowlands the rapids disappear and slowly begin to meander through floodplains and
deltas before discharging into the Ocean. There are 103 perennial rivers in Sri Lanka, out
of which sixteen are main rivers longer than 60 miles. The river Mahavali, the longest of
all, runs 272 miles and dissects through mountains and valleys into the flat terrain.

Some of these rivers that cut through the eroding rock-outcrops in the central
mountains are world renown for their gem bearing gravels in the foothill regions of
Ratnapura and Matale. They produce precious stones in the caliber of sapphires, rubies,
and other highly priced stones. These gem deposits have been heavily mined at least from
around early historic period and are mentioned in ancient text as the sources of exotic
minerals that are imported to distant regions as far as western Asia and beyond.

4.1.2 Monsoon winds and its impact on human adaptation

Based on Sri Lanka’s close proximity to the equator and a regime of monsoons
that it receives, the island is designated as having a warm humid tropical climate.
However, the Indian Ocean winds and high mountain ranges in the center endow variable
temperatures ranging from 16°C in the central highlands to 37°C in the eastern coastal
belt. There are two main monsoon systems namely northeastern and southeastern winds that had a profound impact in shaping the adaptation of both flora and fauna not to mention the human populations that inhabited the island at least from around late Pleistocene. The southwestern monsoon system occurs from May to October when winds blow from the southwest. The northeastern monsoon occurs from November to April (Holmes 1958) when winds occur from the direction of the Bay of Bengal. Southwestern monsoon winds bring moisture only into the southwestern lowlands and the central highlands as the cloud cover cannot penetrate beyond the steep central mountain ranges that face a southwesterly direction. On the contrary, the northeastern monsoons crosscut the island passing the central mountains providing rains to both southwestern and northeastern halves. Having the benefit of two monsoon rainy seasons, the southwestern region is much wetter than the northeastern half that gets only one monsoon precipitation annually. Two more inter monsoon wind patterns occur in between the main seasons from March to mid May and from October to November making a total of four different rainfall patterns (Domroes 1974) and these variable rainfall patterns and deferential morphological features have created variable ecological niches in different parts of the Island.

Thus monsoon winds and the topography have been the determinant factors of the amount of rainfall distributed in different regions creating a number of macro and micro environmental zones consisting of wet, dry, and semiarid zones. However, the island is generally divided into two main environmental zones based on the effectiveness of monsoon rainfall (Cooray 1948). Receiving moisture throughout the year from all four monsoon systems, the southwestern regions and the central mountains mark a staggering
250cm average of the annual rainfall and this region is appropriately named the “Wet Zone.” The Dry Zone is defined by the mean annual rainfall ranging from 100cm-190cm and is generally contained within the regions below 300m elevations. This region covers approximately 70 percent of the island within northeastern and southeastern parts of the Island where most parts receive between 120 and 190 cm annual rainfall during northeastern monsoons. The mean annual temperature in these two regions ranges from 27-30C with relative humidity range from 60-65%. The potential annual evapotranspiration rate in the dry zone is 210cm. Furthermore, small parts of southeastern and northeastern regions in the Dry Zone of Sri Lanka receive a low rainfall ranging from 60-120 cm annually and these regions are considered as semiarid.

It is clearly evident that the differences in rainfall has caused a significant variation in the vegetation cover of the island ranging from thorny bushes and cactus-ridden dry areas to scrub vegetation; from Dry Zone jungles and grasslands to evergreen rainforests in the Wet Zone, upon which numerous plants and animals have adapted to live. In the Dry Zone and semiarid regions plant growth accelerate much faster during monsoon rains than during long spells of draught where plants virtually become dormant. Many Dry Zone plants have thick bark and small leaves. Although some trees drop leaves during the driest months of the year, many retain them throughout, despite the hot sun. In the lowlands of the Wet Zone, rain forests consist of a continuous high canopy, which protects the forest floor from sunlight and controls the growth of thousands of seedlings that emerge through creepers and vines to reach the heights of the parent trees. It is only when the parent tree is dead or fallen that sunlight is permitted on the lower canopy and in turn directs the waiting seedlings to grow tall. In the high
mountains of the Wet Zone the vegetation is stunted and covered with numerous epiphytes and parasitic plants.

In these variable vegetation environments numerous species of insects, birds, reptiles, and mammals have formed symbiotic relationships reproducing the natural landscape for thousands of years before the intervention of agriculturalists. Larger animals such as elephants, buffalos, leopards, bears, elks, deer, wild boar, and different species of monkeys have adapted to these variable conditions - not to mention a number of species of mega-fauna that became extinct in the onset of Holocene - and they themselves have formed considerable interdependence.

Just as animal and plant life, monsoon wind patterns and topography have had a profound impact on the human adaptation. These monsoon winds must have surely shaped the traditional life ways such as the mobility of hunter-gatherer groups, the pastoral migrations, the agriculture, the deep-ocean fishing, the pearl harvesting, as well as the maritime trade. Research on rural communities in Dry Zone Sri Lanka (Bulankkulame 1976, Gunawardena 1982, Leach 1961, Myrdhal-Runebjer 1994, Tennakoon 1974) implies how lives of traditional Dry Zone farming communities are shaped according to the changing seasonal patterns of monsoon winds. Except for the systems of large-scale irrigation canals and storage reservoirs that are fed by perennial river systems, the monsoon winds have been extremely critical for traditional agriculturalists. Even macro irrigation based large scale agriculture systems that do not directly depended on monsoon winds for its water, needs planning taking the behavior of monsoon wind patterns into account. Particularly the timing of land preparation, sowing, and harvesting are important farming activities that are clearly shaped by the behavior of
monsoon winds. On the other hand agricultural methods such as the slash and burn method that do not depend on irrigation rely on moisture that is brought by the monsoon winds. Therefore, planning of *chena* cultivation needs intimate knowledge of seasonal weather patterns and a fine-tuned senses for nature’s symbols that indicate ensuing conditions associated with monsoon winds. Forest clearance and burning has to be completed before the arrival of the rains (Myrdal-Runebjer 1994: 241-262). Tilling, sawing, and planting need to be completed at the arrival of rain, thus can give ample time for growth. Timing of grain harvesting is expected before the monsoons in order to avoid wastage. Similar to agriculture, maritime activities are also highly influenced by monsoon winds.

Pre-modern maritime trade in the Indian Ocean had been largely shaped by these monsoon winds. Many colonial period records and Arabic geographers have expressed the impact of monsoon winds on the sailing in the Indian Ocean. Since midyear winds are violent and stormy, sailing in the areas west of India and Sri Lanka is hazardous, thus maritime travel comes to a standstill during the months of May to September in the western seaboard of India and the southern Arabian coastal belt. Therefore, the port towns are busy only during certain months of the year (Ray 2003). Sri Lanka being an island only 140 miles wide and having a central mountain range that breaks the monsoon winds, seems to have had a tremendous advantage when it comes to maritime trade in the Indian ocean. When the southwestern monsoon winds in the western seaboard are rough, ports in the eastern seaboard of the island could still be functional without hindrance. The reversal occurs, when the opposite wind pattern commenced. In Sri Lanka today fishermen migrate to the eastern seaboard during the height of the southwestern monsoon
and they return to the west coast when northeastern winds begin. Thus we can assume similar patterns in the early maritime trade activities, as trade guilds operating in the western coast could have easily gone across the island to ports on the eastern coastal belt when wind patterns changed. Perhaps it is this advantage that might have had positive repercussions on the Island’s maritime economy in the early historic period where numerous inscriptions and seals often indicate the presence of local and foreign mariners. According to Buddhist literature, this seasonality in maritime trade affects the prices of certain goods (Ray 2003). Thus having access to both northwestern and southeastern wind systems, it is plausible to assume that Sri Lankan traders may have had an advantage in their dealings as middlemen between the traders from the regions west and east of the island who mainly had the benefit of only a single monsoon system in their local ports. Having access to international trade throughout the year when many competing ports in the subcontinent and adjacent regions are seasonally closed may have had positive implications on the economy. Early historic archaeological records from the sites like ancient Mathota (Manar) on the north eastern sea board where considerable investments were made by ancient rulers to build fortifications, reservoirs, and irrigation canals for massive agricultural systems to support large urban populations, highlight the importance of the maritime trade for Sri Lankan society in the past.

4.2 The study region: the north central plain

4.2.1 Topography

The two main sites focused in this study, Ibbankattuwa (IBB) and Anuradhapura Citadel, are located in the North central plain within the northern half of the Island (Fig.
35). The North Central Plain is in the climatic region designated as the Dry Zone. 
Northwards it spreads from the lowlands adjacent to northern foothills of the central 
mountains to the northern costal regions south of Jaffna peninsula.

Surface deposits of the flat terrain in the North central plain consist of Pleistocene 
reddish brown earths and gravels. Narrow Precambrian ridges tapering from the central 
highlands slice through this flat terrain before diving into the ocean bed near northeastern 
coastal belt. The main rock types generally appear in this Precambrian formation is a 
combination of rock bands such as granite, gneiss, quartzite, and crystalline limestone 
(Vithanage 1959). These rock types have been extensively utilized from proto-historic period on wards. First evidence of granite use for major constructions emerges from 
“megalithic” tomb sites. Subsequently from early historic period onwards both crystalline 
limestone and granite were used for massive building projects such as irrigation, 
monastic, and royal complexes.

Along the narrow mountain ridges that cross cut the Dry Zone plain, erosions 
have exposed isolated rock outcrops rising 100s of feet from the surrounding plains. The 
summits of these massive rock climbs and ridges have been the places where impressive 
royal fortresses and Buddhist monuments were built during historic periods. Generally 
these rock outcrops are surrounded by a plethora of relatively large boulders strewn at 
their feet. Curving shades of these boulders were used as shelters by prehistoric hunter- 
gatherers (Karunaratne & Adhikari 1994, Adhikari 1994) while in the early historic 
period, during the last few centuries of first millennium B.C., the same rock-shelters were 
shaped into living chambers (kuti) of meditating Buddhist monks of the monastic order 
(Bandaranayake 1992). Most of the early Brahmi inscriptions (Fig. 34), the earliest form
of writing in Sri Lanka, are found inscribed on the rock shelters where these natural *kutis* or chambers are located (Paranavithana 1970). Since a majority of these natural topographic settings have been utilized for certain cultural purposes through different periods, certain topographic features give important clues on a possible cultural use in the past and invites further explorations.

### 4.2.2 Drainage

At least seven major waterways, including the longest river of the island, the River Mahaweli, flow through the north central plain of the country. Out of these, five rivers empty into the Indian Ocean from the northwestern coast, while the rivers Mahavali and Yan Oya discharge from the northeastern coast. There is a drastic change in the flow of most Dry Zone rivers during monsoon and inter monsoon winds. In the height of drought during May to September many rivers and specifically the primary feeders that originate within the Dry Zone plains or in the foothills, are reduced to trickling streams. In many cases, the flow of the primary feeders, originating in the lowland Dry Zone, completely ceases, leaving small pools along the riverbed. In the past these pools were the lifeline for many animals as well as humans during the hot months that pass without a drop of rain. However, having major parts of its catchments in the Wet Zone hills, the River *Mahaweli* maintains its flow comparably less varied throughout the year. Near the banks of some of these Dry Zone rivers and feeders a number of proto-historic burials sites are located. Although only a few settlements associated with these burial sites are found, this cultural pattern reflected on the landscape surely indicates some sort of adaptive strategy that suits the Dry Zone environment.
Despite the presence of a plethora of perennial rivers throughout the Island, most floodplain lakes are found only in the Dry Zone Plains. The main floodplain rivers are located in the Mahavelli River, in the Kala Oya, and in the Moderagam Aru basins in the northern plain of the country. Floodplain lakes in Sri Lanka are known as villus. The villus are generally marshy vegetated land seasonally inundated during the monsoon rains when the rivers are swollen. Deep parts of the villus that are connected to the rivers retain water for the most part of the year or consists of ponding areas filled year round while shallow areas slowly dry up giving way to a plethora of plant life following the cessation of monsoons. Moisture retained in these alluviated soils creates large patches of lush grassland ideal for herbivores. Similarly perennial rivers that flow through the flat terrain of north central Sri Lanka consist of floodplains that becomes temporarily water logged during monsoon overflows and these are somewhat comparable to the drying portions of villus where pools give way to seasonal grasslands during the dry season. It is highly plausible that these grasslands have been utilized to raise flocks by pastoral communities. Furthermore, hilly areas in the plains and massive rock outcrops are the catchments of the shallow basins at their bases. These basins capture considerable amounts of monsoon runoff and retain them for several weeks or a couple of months into the dry season, creating shallow lakes and pools surrounding these outcrops. Later in the protohistoric-early historic transition periods, many basins of this nature have been transformed by building earthen dams to stock water. These could be the earliest and simplest form of village reservoirs that subsequently transformed the entire Dry Zone landscape (Fig. 5) with the implementation of sophisticated sluice gates and irrigation canals and cascade
reservoir systems with many inter-connected feeder tanks/reservoirs from around the middle early historic period.

4.2.3 Soils

Climatic influence is considered to be the main reason for the soil variation in different parts of Sri Lanka. Non-lateritic loamy soils generally known as reddish brown earths are concentrated in the Dry zone. Generally reddish brown earths occur in close association with low humic gley soils. According to Panabokke’s (1967) classification there are three horizons namely A, B, and C in the reddish brown soil belt, A being the top most horizon and C being the bottom horizon. But rarely all three horizons are present in one place; in many instances top-soils have eroded leaving only B or C horizon (Epitawatte 1990: 43). Drainage of reddish brown earths are excellent thus extremely suitable for cultivation. There is a striking pattern in the distribution of early historic monastic sites almost exclusively within this soil region, indicating that the early agrarian settlements of this period are concentrated within the reddish brown earth area.

4.3 Population history

As pointed out elsewhere in this chapter, Sri Lanka’s close proximity to the mainland was an important factor that was highly influential in its population dynamics. Sri Lankan chronicles, written in the mid first millennium A.D., suggest that the island was settled by mainland populations from around 500 B.C. The text alludes to a migration episode shrouded in many mythical elements, but yet the story highlights that the first settlers to the island of Sri Lanka sailed from north India during the time of
Buddha around 500-400 B.C. Nevertheless, the history of the population of the Island runs much deeper. The archaeological investigations (Deraniyagala 1992) in the prehistoric sites of Sri Lanka suggest that human occupation on the Island runs tens of millennia before early Iron Age migrations. Furthermore, excavations and explorations of megalithic sites (Bandaranayake 1992, Karunaratne 1994, Seneviratne 1987) in the past two to three decades highlight a very different migration pattern and regional network from those of the episodes alluded to by the chronicles.

Archaeological record (Deraniyagala 1992) and anatomical studies of prehistoric populations (Kennedy 1999) suggest that Sri Lanka is one of the few places where the earliest modern human skeletal remains have been found. The earliest evidence for anatomically modern Homo sapiens in South Asia comes from late Pleistocene deposits (Calibrated to 35,000 B.C.) of the Fa Hien cave in the Wet Zone of southwestern Sri Lanka (Deraniyagala 1992). According to Kennedy (1999: 173) the analysis of cranial and postcranial bones of the specimens from Fa Hien cave exhibits a pronounced degree of muscular-skeletal sturdiness and the massive mandibles that accompanied these crania measured closely to the sizes of certain Middle Pleistocene hominid mandibles from Europe and North Africa. Molar crown sizes are considered to falling closer to those of the anatomically archaic homo-sapiens including Neanderthals, than later food producing groups and modern day populations. Although evidence for such early specimens of modern homo-sapiens has not been found in the mainland, it does not suggest that these early populations did not arrive from the mainland. There is a high probability that early modern Homo- sapiens populations may have arrived on the island perhaps on canoes or by foot when the late Pleistocene sea level changes permitted them to cross the shallow
sea bottom of the Palk Strait and then spread throughout the island. More recent research (Adhikari 1994, Deraniyagala 1992, Karunaratne and Adhikari 1994, Somadeva 2006) has revealed numerous data such as Geometric microliths, faunal and floral remains, as well as mortuary records from open air habitation sites and cave dwellings of the central highland to shell mounds in coastal lagoons, indicating a range of adaptive strategies implemented in variable ecological settings by Mesolithic hunter-gatherer societies. Despite the diversity in the animal and plant life, terrain, and climate of the island, prehistoric hunter-gatherers have successfully adapted to different environmental niches and lived in almost all corners of the island. These populations have exploited resources from coastal lagoons to riverine and marshy landscapes, and from semiarid zones of northwestern regions and southeastern coastal belts to rainforests of the central mountains and Dry Zone lowlands of northern plains. Despite being exposed to contact with agro-pastoral societies at least from around the beginning of the first millennium B.C., hunter-gatherer ways of life persisted until the mid 20th century with slight adaptive changes until modern development programs forced these communities to practice fulltime agriculture.

Unlike in the regions of north India and western Asia where Mesolithic habitations are found overlapped by Neolithic communities, Sri Lanka lacks settlement evidence for Neolithic transition. Nevertheless settlement excavations at Anuradhapura (Deraniyagala 1992, Cunnigham 1990, 1991), prehistoric cave excavations in the Sigiriya-Dambulla region (Karunaratne and Adhikari 1994) in the north central province and Shell middens of Pallemalala (Somadeva 2006) reveal that from around the turn of
the 2nd millennium B.C. a new cultural complex utilizing iron technology began to appear over the deposits consisting of Mesolithic cultural implements.

The data reveal that the early Iron Age cultural phase of Sri Lanka is marked by the presence of a material culture as a complete package consisting of Black and Red Ware (BRW) ceramic (Fig. 21: c) technology and associated vessel forms, Megalithic mortuary traditions and associated burial types, and numerous implements and ornaments deposited as mortuary goods. These are made of various types of exotics such as carnelian, onyx, agate, gold, and paste beads, copper objects, such as pins and bangles, a number of different iron implements including spearheads, daggers, knives, chisels (Seneviratne 1987, 1988), and various graffiti symbols (Fig. 28.1) on ceramic vessels and on capstones of burial cists. The identical nature of the material culture as well as the similarity in the forms and techniques of its products is a clear indication that the proto-historic cultural complex of Sri Lanka is clearly a part of a much larger regional socio-cultural phenomenon, spreading within the southern regions of peninsular India and Sri Lanka (Seneviratne 1994) and not reflective of any link to the northern tradition, at least until the proto-historic/early historic transition phase.

The presence of evidence for an entire cultural package identical to the mainland counterparts in the south suggests more recent migration waves originating from the southern regions of peninsular India in the first half of the first millennium B.C. These migrant populations are mainly concentrated in the northern plain along perennial waterways almost up to the foothills of the central mountain range. Furthermore, although few in number, tomb sites and a few settlement sites of an early Iron Age proto-historic culture are recorded also from the coastal belt around the island. These
communities seem to be dependent mainly on an agro-pastoral economy where a considerable segment of the community needed to live a semi sedentary existence where flocks have to be rotated year around to gain access to better pastures. Sites found in the coastal belt may have been the points where exotic finished goods from the mainland entered the Island before reaching the interior populations. However, compared to the prehistoric period, proto-historic subsistence were specialized in such a way that it seems to have thrived in an specific geographical setting, i.e. the Dry Zone plain compared to the Mesolithic groups who were exploiting all niches in every corner of the island. As evident from the distribution of monastic sites with Early Brahmi (EB) inscriptions (Fig. 33), from around mid 3rd to the 2nd century B.C., the population distribution pattern and the physical landscape changed again with a massive expansion both into the northern and southeastern plains of the island. This entire region basically is contained within the Dry Zone of the Island and evidence suggests that the island was going through a dramatic socio-economic change during this period. As mentioned elsewhere in this chapter the significant topographic feature created by these expanding communities is the construction of village reservoirs to collect water that fed the rice fields. Later at the turn of the millennium and in the beginning of the first millennium A.D., the settlement pattern changed further with the introduction of complex irrigation networks that constructed massive dams and canal systems, which created more arable lands suitable for rice fields.

4.4 The center and the boundary of initial state
Finding the location of the center of the initial core area of the North central plain is not a difficult task. Both chronicle records as well as the past hundred years of archaeology in Sri Lanka clearly pin point the physical location of the earliest urban center of the northern plain. Chronicle episodes clearly indicate that the ancient capital of the northern plain was located on the bank of present day River Mulwathu Oya near the large monastic complexes of Abhayagiri and Mahavihara (Fig. 5). Massive religious edifices (Fig.34b) in these two complexes whose identities have been archaeologically and textually verified, leave no doubts on the identification of these large built up areas. It is quite clear that the oldest politico-religious center of the island was located at this place. Two hundred acre ancient citadel fortified by a massive rampart surrounded by moats is located in between the two monastic complexes mentioned above. The excavations carried out in the past few decades (Coningham 1990, 1991, 1993, 1999, 2006; Deraniyagala 1972, 1986, 1990) in this area have revealed a plethora of evidence suggesting that this is the ancient political center known as Anuradha-pura (the ‘city of Anuradha’) mentioned in the ancient chronicles. Deraniyagala’s excavations at this site (ASW1) yielded a potsherd carrying Brahmi script ‘biya Anuradha.’ This confirms the historicity of this term “Anuradha” that was used to name the center/city of the first Sri Lankan state as mentioned in the chronicles. Thus without doubt archaeologists have identified the location of the ancient city center of the core area. The settlement mound within the ramparts consists of nine to ten meters deep occupational layers, out of which earliest phase of Iron Age is dated to the 8th century B.C.

Despite the availability of adequate information on the location of the earliest core settlement area, identifying the boundaries of hinterland and the frontier areas of the
initial Anuradhapura state needs careful analysis. One reason for this is the paucity of settlement data for proto-historic and early historic settlement phases. Only evidence that indicates proto-historic population distribution surrounding Anuradhapura region is the presence of megalithic cemeteries. Data revealed from the settlement excavations at IBB indicate that a major segment of the early Iron Age society was adapted to mobile pastoral life. Nevertheless early Iron Age cemetery sites can be regarded as one source of evidence that could highlight the proto-historic habitation area. In the absence of comprehensive settlement data the other important source of evidence that could fruitfully be employed to understand the boundaries or a regional concentration of populations during a proto-historic/early historic transition phase in Sri Lanka, are the distribution patterns of early historic monastic cave complexes that carry early Brahmi inscriptions. Given that Buddhist monasteries of meditating monks strictly depend on the services and donations of surrounding settlements for their sustenance, the distribution of early historic monasteries in the Island (Fig. 33) is surely an important cultural marker that indicates the settlement pattern of PH/EH social transformation phase.

Both Bandaranayake (1992: 17) and Seneviratne (1996:300) have pointed out that the names that appear in the early historic monastic inscriptions, are possibly descendents of Megalithic tomb builders. This is an important possibility because BRW potsherds from the same vessel forms found in the Proto-historic burial sites have been recovered from early historic monastic sites at Dambulla and Sigiriya. Ninety-five percent of these Buddhist monastic sites with early Brahmi inscriptions (Fig. 33) corresponding to 3-century B.C. to 1st century A.D. have been recorded, deciphered, and mapped by Paranavithana (1970). Recent research projects (Bandaranayke 1990: 15-38; 1994:9-36)
in the southern regions of the North central plains where foothills meet central mountains
give insight into an important spatial distribution pattern of megalithic sites
corresponding to the early historic monastic sites. Although a few early historic monastic
sites penetrate into the highlands, the southern boundary of both these site types is in the
regions where the northern plain meets the foothills of the central mountains (Fig. 33).
This pattern indicates a clear physical border of proto-historic and early historic activities
at the edge of the plains during the second half of the first millennium B.C. The content
of the inscriptional record found in the monastic sites clearly indicates a novel socio-
political trend, which involves a competitive socio-political environment where emerging
elites try to consolidate their new status. Thus without qualms we can suggest that
together these two sets of data can be used as an important maker that reflects the
hinterland boundaries of the initial state society in the north central plain. Therefore, to
test my hypothesis that the initial state formation on the island of Sri Lanka is mainly an
endogenous development stimulated by a surge in Indian Ocean trade in the fourth
century B.C., I will analyze data retrieved from my field research at two important areas
of the northern plains: 1, the Sigiriya-Dambulla region where the proposed southern
boundary of the north central polity was located, 2, Anurdhapura, the ancient urban
center of the initial state of north central region was situated (Fig.5).
CHAPTER 5. THE SETTLEMENT STUDIES

5.1. Proto-historic settlement pattern

As highlighted in chapter one, archaeological investigation in the hinterland areas can give important insights into the way in which people in the countryside had responded to the expansion of emerging states. Thus having a view from the perspective of hinterland is as important as viewing data from the angle of the core. One crucial advantage of having a view from hinterland is that it allows us to gain insights into the scale of social organization of hinterland societies immediately before the expansion of nearby state societies. It could give us a reference point to measure the rate of change and the extent of impact that hinterland societies underwent in the advent of state expansion. This would give us a better understanding on the ways in which previously independent countryside communities were subjugated, dominated, infiltrated or even encouraged to participate in a greater socio-political and economic sphere beyond their local realms. Also this would give us insights into the strategies of resistance, particularly the way in which communities in the hinterlands and the margins of emerging centralized polities resisted domination.

Part I of this chapter is focused on presenting settlement survey data from the Sigiriya-Dambulla region (the hinterland: Fig. 2), an area considered to be within the southern boundary of the initial Anuradhapura state (Fig.33). It presents a new interpretation on the proto-historic period settlement pattern in the Dry Zone lowland environmental setting. In part II, data from excavations at proto-historic–early historic transition-phase settlements at IBB in the Sigiriya-Dambulla region is presented with a
focus on elaborating social change through time. In addition, proto-historic and early
historic transition phase data from the excavations at Anuradhapura city are compared
with the hinterland data from the Sigiriya-Dambulla region to gain a feel on the socio-
economic differences between the center and the hinterland.

5.1.1 Archaeological field research history in the Sigiriya-Dambulla region

One of the earliest accounts on the antiquity of the Sigiriya-Dambulla region (by a
westerner) was by J. Forbes (1841) of the British Army. His travel records give an
elaborate description of the ancient rock cave temple at Dambulla. In the 1870s, T.H
Blakesley (1870) of the Public Works Department and T.W. Rhys Davids (1875) of the
Ceylon Civil Service of the British colonial government, made visits to this region and
reported the exploration work they did in the massive 5th century A.D. Royal complex at
Sigiriya. In addition Rhys Davids (1872: 139) was the first to decipher the royal
inscription found below the drip ledge of the great cave at Dambulla. During colonial
times the general interest was on monumental works of the classical period such as palace
complexes, temples, monastic centers, and irrigation systems. There was no deviation
from this trend when the colonial government of formerly Ceylon began its first official
archaeological work at Sigiriya in 1894 with the aim of restoring the Sigiriya royal
complex (Bell 1897). Since then archaeological research of the past one hundred years in
this region has given us an elaborate account of the regional archaeological landscape of
the classical period. However, as pointed out in chapter one, up until the last decade and a
half of the previous century, the archaeological record of this region or of the whole
Island for this matter was mainly seen through the lines of chronicle episodes. A material
record was not viewed as an independent source of socio-political history (either at the local level or at the pan island scale) beyond the chronicle verses.

Nevertheless, all this began to change after 1982 when archaeological research in this region took a new turn with the establishment of the Sigiriya and Dambulla cultural triangle projects under Central Cultural Fund, Sri Lanka (also known as CCF) funded by UNESCO. Although these two projects (funded by UNESCO) initiated to restore the very same classical period monuments, with the initiation of CCF projects at Sigiriya and Dambulla, archaeological research in this region diversified and accelerated with renewed vigor. Under the guidance of the first director of these two projects, Prof. Senake Bandaranayake of the Department of Archaeology, University of Kelaniya, archaeological interest in the region took a new direction and a plethora of multidisciplinary field research projects began. As a consequence, in the late eighties the Postgraduate Institute of Archaeology (PGIAR), University of Kelaniya, (along with the funds provided by SAREC, the Swedish Agency for Research Cooperation with Developing Countries, which is now attached to SIDA Swedish International Development Cooperation Agency), used this region as a field laboratory of its Settlement Archaeology Research Collaboration Project (SARCP), which was aimed at researching rural settlements surrounding the monumental sites. According to Dr. Mats Mogren (1999: 111), the Swedish consultant of the project…

Our strategy was clear from the very outset: take the societal apex sites into consideration, but concentrate the field effort on the societal base, the rural settlements surrounding the monumental sites.

As a consequence of this new approach, extensive field surveys, began in 1988 in an area (surrounding the Sigiriya royal complex and the Dambulla monastic center)
approximately 18km x 40 km in size. However, employing total land survey methods was not possible mainly due to impenetrable scrub and aggressive wild elephants roaming in the region (Mogren 1999: 112). Thus field surveying was concentrated in and around the river basins located within the regions surrounding Sigiriya and Dambulla. This does not mean that hilly areas were neglected. Hilly areas surrounded by boulders were scanned for prehistoric cave dwellings and monastic sites. The survey area was divided into four subunits based on the distribution of main river basins (Sigiri Oya, Kiri Oya, Dambulu Oya, and Miris-Goni Oya) flowing through the study area (Fig. 2). The main strategy was to traverse the landscape in each basin while information on ancient sites was gathered by interviewing farmers by a village inquiry unit. The villagers constantly traverse most of the jungles and scrub vegetation for various purposes. Some of the scrub areas had previously been cleared for slash and burn cultivation, thus people in the area have an intimate knowledge about their surrounding landscape. Interviewing villagers was more or less an efficient method as most often the survey teams were able to locate iron production sites, irrigation canals, monastic sites, settlement sites and other ancient cultural landscapes through the information provided by village elders and farmers. Most of the surface sampling was done with the aim of preliminary identification of site types and time periods. Diagnostic ceramic rim sherds and ceramic ware types were given a careful attention as such material could provide information necessary for preliminary identification of time periods and site types.

Following the initial field surveys, a series of excavations and mapping projects, were carried out in the Sigiriya-Dambulla region (Bandaranayake 1994; Mogren 1994, 1999). The project continued until 1993 for six field seasons. Initially as a team leader
and subsequently as a field director of this research project I conducted archaeological investigations in this area for five field seasons in several sites (Karunaratne 1994a; Karunaratne 1994b; Karunaratne and Adhikari 1994; Karunaratne and Mogren unpublished; Mogren 1999: 116-119), which helped me gain important insights into the socio-cultural landscape in the region through time. Thus SARCP was instrumental in gaining a thorough understanding of the regional archaeological landscape, the settlement history, and the material record and associated cultural complexes, of which we knew little prior to the project. Field surveys carried out by the SARCP teams within the four main river basins in the Sigiriya-Dambulla area yielded over 195 new archaeological sites, and in addition 203 irrigation tanks (reservoirs) were recorded making it one of the most thoroughly investigated archaeological landscapes on the Island (Bandaranayake 1994: 10). These archaeological sites include settlements ranging from early historic to the middle historic period, various types of monastic sites including those with early Brahmi inscriptions, iron production sites, Mesolithic cave dwellings and open air habitation sites. Bandaranayke’s rural small-site strategy resulted in an important new understanding of the archaeological landscape in the region, from prehistoric times onwards. It gave us clear insights into the variability in settlement patterns during different time periods, allowing us to fine tune our senses in reading cultural landscapes and land use patterns.

During these surveys we understood that early historic settlements are generally concentrated along perennial waterways, smaller streams and in association with small village reservoirs. The pattern continued to the middle historic period but ceramic assemblage allowed us to differentiate early historic period settlements from middle
historic period villages. Altogether we were able to gain a good understanding of the prehistoric cultural landscape and Mesolithic material culture; we also gained insights into the settlement pattern, material culture and cultural landscapes of both the early historic period and middle historic period. However, our understanding of the proto-historic period is another matter. Despite the presence of a number of proto-historic burial sites in the study region, our knowledge on the proto-historic socio-political organization, subsistence strategy, and settlement pattern were limited only to hypotheses without the backing of a solid archaeological data-base from the settlement context. Although we tried to mitigate this inadequacy by continuing excavations at IBB settlement under SARCP (a few trenches were excavated in this site initially under PGIAR-CCF-KAVA project), a lack of settlements corresponding to the burial sites in the region left a major lacuna in our knowledge on the proto-historic social-political organization and subsistence strategy. It is this issue that we address mainly in chapters five and six by investigating the way in which proto-historic communities in this region responded to the hegemonic expansion of emerging states at Anuradhapura.

Apart from participating in the above mentioned annual field surveys and excavations as a SARCP member, from 1988-1990, this writer conducted numerous excavations and surveys in the Sigiriya-Dambulla region while stationed in the CCF archaeological research center at Sigiriya. Some of this work involved excavating early Buddhist architectural features such as the stupa and the bodhigahara at the Dambulla monastic center (Karunaratne 1992) and research at Sigiriya 5th century A.D. Royal complex. This work indicated several phases of reconstruction and restoration efforts in this region from around the early historic period onwards. In addition to SARCP and
CCF research projects, another research collaboration that include PGIAR, CCF, and Kommission für Allgemeine und Vergleichende Archäologie (KAVA) of Germany, conducted excavations in the same area. Although these projects overlapped each other for a few years (1988-1990), since they were conducted during different seasons of the year, this author could participate in the PGIAR-CCF-KAVA project as well. This project allowed us to conduct research focusing on the proto-historic period. The PGIAR-CCF-KAVA project was mainly aimed at excavating the IBB megalithic cemetery, the settlement, and the Buddhist monastic complexes at Dambulla and Pidurangala. Together the SARCP and PGIAR-CCF-KAWA projects were able to create massive archeological databases. Although most of these databases were published in a number of volumes (Bandaranayake et al 1982, 1990, 1994), the IBB database still awaits publication and analysis.

This chapter and chapter 6 partially address this problem by discussing data from IBB and the surrounding archaeological landscape with the perspective of explaining how the hinterland (the Sigiriya-Dambulla region) was affected by the process of political centralization elsewhere (Anuradhapura). I have argued that the Sigiriya-Dambulla region became a hinterland of the emerging centers at Anuradhapura during the PH/EH transition period somewhere in the third century B.C. This happened after the emergence of centralized polities in the Malwathu Oya basin at Anuradhapura in the mid 4th B.C. Eventually when the Anuradhapura polity became a state society during early 3rd century B.C., populations in the southern ecological boundary of the north central plains also had to undergo drastic socio-political changes. I argue that the data presented in chapter 5, and 6 suggest a massive dislocation of the traditional socio-political structure of the early
Iron Age proto-historic communities that lived in the hinterlands of the north central plains. In this process these communities were politically and economically integrated into the expanding state level polity of Anuradhapura not later than the end of the 3rd century B.C. To gain further insights into this process I will consider the hypotheses on state formation presented in chapter one in light of survey data. In part II of chapter V, data from IBB settlement excavation are presented with the scope of explaining the socio-economic change during the PHEH social transformation (4th - 3rd Centuries B.C.) phase and socio-political organization of the Early Historic period (post 3rd century B.C. era). I conclude with a novel view of the proto-historic settlement pattern and subsistence economy in the Sigiriya-Dambulla region (as explained below) based on the field data collected during the above mentioned field projects.

5.1.2 Early Iron Age settlement studies in the Sigiriya-Dambulla region

The earliest BRW ceramics from Sigiriya-Dambulla region are from the Aligala cave, context # 8/15, dates between 998-848 cal. B.C. (Karunaratne and Adhikari 1994: 58-60). In context # 8/15, in addition to BRW ceramics, minute pelts of limonite and melted iron slags were also recovered. Although this may not be conclusive evidence for the first iron production, these two contexts were sitting directly on a deposit representing the pre-ceramic prehistoric habitation phase (context 24) that were rich in faunal remains, geometric micro-liths, pitted hammer stones, red ocher, etc. Thus it is plausible to conclude that the descendents of the same hunter-gatherer groups who lived in these caves began bartering with Iron Age communities who lived elsewhere around the beginning of the 1st millennium B.C. This date is not so far off from the 9th century B.C.
However, the date received for early Iron Age levels at Aligala is approximately 3-4 centuries earlier than the earliest date received for the IBB cemetery (located eleven miles southwest of the site), which dates between 540-400 cal. B.C. Nevertheless, it is safe to assume that early Iron Age communities began their habitation in this region somewhere in the first half of the first millennium B.C.

Nevertheless, as highlighted above, the major obstacles in the study of the protohistoric period in the north-central Dry Zone plain of Sri Lanka or the Sigiriya-Dambulla region is the lack of settlement data in a region where dozens of burial sites have been recovered. Not more than three positively identified settlement sites have been located in the entire north-central Dry Zone plain. Except for the Anuradhapura proto-historic settlement, the archaeological record of this period is so far known only through “megalithic” cemeteries, even in areas covered by the SCRCP survey. This problem is not limited to the north-central Dry Zone plain of Sri Lanka alone; the pattern was noticed in the mainland as well. In all, in peninsular India only 55 Iron Age proto-historic habitation sites were recorded, as compared to 1668 megalithic traditional cemeteries (Ray 2003:113). Moorti (1994: 6) presents slightly different statistics for this region, but with 176 habitation sites compared to 1930 burial sites, the pattern is still the same. For example in the Sanur district, despite concentrated efforts to find settlements that are associated with burials, none of the surveys have produced positive results (Leshnik 1974: 247). F.R. Allchin (1954: 232) observed the same pattern in the Raichur district, where he had difficulty finding settlement sites associated with cemeteries during his
research in the early 1950s. The archaeological record of the Sigiriya-Dambulla region is no exception to this pattern.

As highlighted above, although SARCP settlement surveys discovered 195 new archaeological sites within the Sigiriya-Dambulla region, it is striking that despite the presence of several proto-historic burial sites not a single settlement site belonging to this period was recovered during SARCP surveys. However, two settlements belonging to the proto-historic or proto-historic-early historic transition phase have so far been found from this region. The IBB settlement was found in 1988 during the first season of the PGIAR-CCF-KAVA excavation project, and the Rotavava/Bellan Oya settlement site was discovered in 1992 by this author during an iron production site survey carried out under SARCP. Given that there are eight known megalithic cemeteries in the region, it is puzzling to see why an extensive field survey program like the SARCP could not recover any settlement sites associated with the proto-historic period. Two main scenarios are possible: 1. A considerable segment of this society may have adapted to a nomadic life and thus had not left enough cultural material in one place that could give out the location of their temporary settlement, 2. The sites are deeply buried in the floodplains, thus kept from being discovered. One way to further investigate this issue is by analyzing the internal characteristics and the microenvironment of the two known settlement sites at IBB and Bellan Oya in comparison with the micro-environment of the Anuradhapura proto-historic settlement, which is the only other proto-historic settlement discovered from the interior of the north central Dry Zone plain.

5.1.2.1 Rotavava/ Bellan Oya settlement
In 1992, while walking in an onion field near a Rotavava megalithic cemetery, this author stumbled upon a cluster of BRW ceramics on a pile of soils newly dug out from a well used for watering the fields (Fig. 6). Since the ceramic scatter (Fig. 7) reflected characteristics of the ceramics generally associated with proto-historic period, it was realized that this might be the settlement site corresponding to the Megalithic cemetery nearby at Rotavava, and it was named Bellan Oya after the local stream. Given the scarcity of proto-historic settlements, a further examination was immediately carried out. From the soils piled next to the well, 24 diagnostic rim sherds were collected. Ten of them were from BRW tray-bowls ranging from 18 to 25cm in diameter. The majority of them were more or less standard in size ranging between 20-22cm. Furthermore 14 rim sherds, one belonging to a large bowl type vessel, five from medium to small size bowls, another one which could possibly be considered as a rim sherd from a “lamp,” five from large urns, one medium size pot, and one small rimless bowl were also recovered. The majority of these forms are identical to the ones that are found at the IBB proto-historic cemetery and adjacent settlement. Nevertheless the rim sherds from large urns found at Bellan Oya have a conspicuous lower lip that has a slightly pointed tip. This is a unique feature that we see rarely in the IBB collection.

Furthermore, there were many BRW and RW body sherds strewn in the pile. On one sherd a post firing graffiti symbol (Fig. 7) reflective of a square shaped box with a cross scribed in the middle connecting the four corners was found. Almost identical symbols have been found from proto-historic levels at Anuradhapura ASW3 excavations by this author in 1994. Also a discolored cattle molar that was partially fragmented was found among the sherds. These materials indicated, without a doubt, that the Bellan Oya
settlement site was indeed the settlement corresponding to the Rotavava cist burial site located a few hundred meters from the settlement.

In the profile walls of the well the surface of the settlement deposit was lying 190cm below the present ground level. Above this, except for recently ploughed topsoil of about 20cm, the rest of the deposit was natural and sterile of cultural material. This natural deposit consisted of compacted clayey sediments indicating slow long-term settling. The proto-historic settlement deposit, on the other hand, consisted of comparably loose grayish color sandy soil. The deposit was approximately 30cm in thickness and could be seen all around the well profile. It was rich with potsherds and decayed carbonic matter. Since part of the settlement layer was below the water table, examination of the deposits below the settlement layer was not possible. Further surveys on the surface of the onion field did not lead to the recovery of any cultural material thus the site extent could not be determined. Nevertheless, this finding is a good indication why methodical surface surveys are not adequate and fail to find settlements belonging to this period. Simply put, they are buried deeply in the flood-plain.

The Rotavava cemetery site is located 400 meters north of the settlement site (Fig. 4) on high ground approximately 4 meters above the settlement level. There is a perennial water stream (Bellan Oya) flowing about 100 meters East of the irrigation well where the settlement deposit was exposed. The level of the Proto-historic settlement deposit is only a couple of meters above the present level of the shallow streambed. From this place eastwards the entire area is a flat terrain crosscut by the stream and now consists of large tracks of irrigated rice fields. It is clear from the topography that the settlement was originally started on the floodplain, about two meters below the present surface.
The proximity to the stream and the low flat terrain indicate the possibility of seasonal flooding. If this observation were correct then permanent settlements in this low-lying area would be doubtful. Then one has to conclude that the ceramic scatter indicates seasonal habitation that probably occurred during the dry season or in the period immediately following the flood season. This conclusion gets complicated when considering the fact that the community was involved in manufacturing large urns with many different ceramic forms, indicating more sedentary ways of life. The question is whether mobile communities would build such large earthenware in view of the difficulties associated with transportation. One plausible answer would be that the population made large ceramics for use only at this locality for specific purposes, e.g. for mortuary activities. Also there may have been sedentary segments of this society elsewhere on relatively high grounds away from the flood zone but still buried deep enough to evade surface surveys. Along this line of thought it is plausible to assume that the Bellan Oya settlement may have been initially used as a seasonal campsite. The presence of a cattle molar tooth along with ceramic scatter further indicates that these people probably had a pastoral subsistence economy similar to the community at IBB, as highlighted elsewhere in this chapter.

5.1.2.2 Ibbankatuwa (IBB) Proto-historic Settlement

The IBB settlement site is located about 150m southwest of the Dambulu Oya River, which runs in a northwesterly direction (Fig. 3). The corresponding cemetery site at IBB is situated approximately 200 meters west of the western edge of the settlement. About 700m south of the settlement site the Punchi-Dambulla hill rises about 100m from
the surrounding plain and without any hesitation we can assume that this is the source where granite slabs, that were used to build burial tombs, have come from. The site is approximately 6 hectares in size. Unlike the Bellan Oya settlement the surface is densely scattered with ceramics both BRW and RW, along with iron slags on the surface. From the surface down to the yellowish brown clay deposit there were continuous settlement deposits. The yellowish brown fine clay deposit, which was 75-50cm thick, was mined at various places for pottery clay from the proto-historic period onwards, destroying the original settlement deposits in many areas. Below this clay deposit was reddish colored Pleistocene gravel sitting on the bedrock. The gravel deposit that consisted of lots of pebbles also contained secondary deposits of some intriguing prehistoric lithic implements made of clear quartz. Although ceramic scatter gives an idea of the site size, the multi-period occupation does not allow proper surface analysis since materials from all periods are scattered on the surface. However, BRW scatter suggests that the settlement was a large site from the PH/EH transition phase and extended almost up to six hectares. The topography of the immediate surrounding area has significant parallels to that of the Bellan Oya area. Nevertheless, unlike the Bellan Oya settlement, the IBB settlement is located on a slightly higher ground, thus safe from floods. However, towards the northwest of the site there is a lengthy narrow floodplain, which is crossed by several streams flowing from the surrounding higher ground before they join Dambulu Oya River. Part of this floodplain is now permanently inundated due to the construction of a larger irrigation reservoir built in the 1970s. Although most of the smaller streams are seasonal, during rainy seasons these streams, along with the main river Dambulu Oya, bring a considerable amount of flood water, enough to inundate the floodplain. This may
be one reason why in the same area where the present reservoir is located, ruins (tank bund) of an ancient reservoir can be seen during the dry season when the water level is low. When considering the features of this landscape and the parallels present at the Bellan Oya site, it seems the proto-historic settlement pattern in this region is determined by an ecology associated with this floodplain topography.

The main difference between the two sites is that IBB is located on slightly high ground. This does not mean that there were no campsites in the floodplain. There is a high probability that the IBB population may have had its pastoral camps in the low areas of floodplain, at least during the dry season. This becomes clear when considering the topographic setting associated with the Anakatava cemetery (Fig.3), which is another megalithic cist burial site of the same period located 3 miles west of IBB. This small cemetery, although consisting of fewer cists compared to the IBB cemetery, has a couple of massive cist tombs. It is located in a lower part of the same floodplain associated with the Dambulu Oya River, which flows about 500m from the Anakatava burial site. This area too has similar topographic features compared to that of the Bellan Oya floodplain. Like the Bellan Oya area, large stretches of rice fields are now located here. Although we could not find the corresponding settlement site near the Anakatava burial site, there is a high probability that the Anakatava settlement, buried in the floodplain closer to Dambulu Oya River, reflects a pattern similar to that of the Bellan Oya settlement location.

If this is the case, the question arises why the IBB settlement site is located on high ground. On the one hand this could be considered as the locality where the sedentary segment of the population was residing. On the other hand one could also raise the
question whether this was a late development where groups who initially seasonally settled in the floodplain, were subsequently becoming more sedentary and shifted to higher areas that did not affected by the floods. To gain insight into these issues I will analyze the excavation data in part II of this chapter. However, when analyzing IBB settlement excavation data it is important to keep in mind the micro environmental setting reflected in the proto-historic habitation sites in the region. Without a thorough focus on the patterns reflected in the microenvironment of the proto-historic communities, understanding subsistence economy and socio-political complexity of the IBB proto-historic community would not be grasped properly.

5.1.3 Micro setting of Anuradhapura proto-historic settlement

The site at ancient Anuradhapura city is the same location where the earliest proto-historic settlement deposits are found. Archaeological data from ASW2 (Coningham 2006) and ASW3 excavations conducted by this writer (Karunaratne et al Unpublished) suggests that initially the site was occupied by pastoral communities. When first pastoralists began seasonal migration into the area on the west banks of the Malwathu Oya River, the site seemed to have been dissected by a number of feeder canals heading in the direction of the river. Thus the heavy silting that we see 9.5m below in a thick compacted, clay deposit (ASW3: context 220; Fig 22) cannot be attributed to the flooding of the Malwathu Oya River alone. Years of silting from the sediments brought by the streams heading from the west, may have been a factor as well that led to the seasonal marshy conditions prevailed in this area until the early centuries of the first millennium B.C. Proto-historic settlement deposits appear for the first time on the upper
segment of this silt deposit. Based on over twelve excavations conducted in different parts of the ancient citadel mound at Anuradhapura, Deraniyagala (1991) estimated that the earliest proto-historic settlement extended over 10ha by 800 B.C. Under Dr. Deraniyagala’s instructions, this author conducted a test excavation (ASW3) at the same site in 1994. This area was particularly important to understand the stratigraphic sequence at the highest location within the citadel mound. The height on the surface measured 87 meters above sea level. The earliest proto-historic deposits at this location were approximately nine meters below the surface (at 77 meters) and approximately one meter above the bedrock. Malwathu Oya River flows at the eastern edge of the site and supplies water to the moats of the citadel through a canal that starts a couple of mile up river. Today the water level of the canal is approximately 74M above sea level. Although present day Malwathu Oya flows by the citadel mound a couple of meters below the normal water level of the moats, it is quite plausible that initial proto-historic settlement levels were located precariously close to the flood levels of the Mulwatu Oya River. Furthermore, a closer look at the Satellite photos (Fig. 5) leaves no doubt that the settlement site was located within the ancient floodplain. Although the settlement site grew in height over time due to continuous occupation, first settlements were established on low ground that could be inundated with floods.

The first proto-historic occupation deposit at ASW3 contained BRW ceramics, iron objects, cattle bones and other faunal remains (Fig. 24a and 24b). As pointed out before, the settlement deposits are sitting over a compacted clay deposit and such sedimentation of clay deposits can foam under long standing waterlogged conditions such as marshlands or lake sedimentation. In chapter four I described that floodplain lakes in
Sri Lanka are known as villus. I further described that these villus generally are marshy vegetated lands inundated seasonally during the monsoon rains, particularly when the rivers are swollen. I also mentioned that …

…deep parts of the villus that are connected to the rivers retain water for the most part of the year or consist of ponding areas filled year round while shallow areas slowly dry up giving way to a plethora of plant life following the cessation of monsoons. Moisture retained in these alluviated soils creates large patches of lush grassland ideal for herbivores. Similarly perennial rivers that flow through the flat terrain of north central Sri Lanka consist of floodplains that become temporarily water logged during monsoon overflows and these are somewhat comparable to the drying portions of villus where pools give way to seasonal grasslands during the dry season. It is highly plausible that these grasslands were utilized to raise flocks by pastoral communities.

When taking these natural features surrounding the early Iron Age settlements at Anuradhapura and the archaeological record (that consist of cattle remains) into account, initial Iron Age inhabitants at Anuradhapura were pastoral communities who had exploited natural floodplains for cattle raising. Although initially the site was extended up to 10 ha, by ca. 700-600 B.C., after 100-200 years of occupation, the Anuradhapura settlement size increased dramatically, extending over 50ha. This massive site size prompted Deraniyagala to designate the Anuradhapura settlement into a town by the 7th century B.C. (Deraniyagala 1990b: 253). However, based on present analysis, it is highly possible that if the floodplain was seasonally inundated (not only by Malwathu Oya River, but also by other feeder streams flowing from the west that may have been the sources for reservoirs built in the subsequent PHEH transition period such as Jaya Vapi and Abhaya Vapi), the initial settlement may have been seasonal as well. Having seasonal camps in different locations during each season can be a factor that contributed to the creation of an exaggerated site size. When taking these factors into account, the
Anuradhapura proto-historic settlement location and subsistence economy associated with floodplain resource exploitation and pastoral life, there is no doubt that populations who inhabited the Anuradhapura citadel reflect a similar type of adaptation to those that occupied the Sigiriya-Dambulla region.

5.1.4 Proto-historic settlement patterns in the Sigiriya-Dambulla region: the synthesis

As pointed out above, the IBB and Bellan Oya sites are the only two settlements associated with the megalithic cultural complex found from the Sigiriya-Dambulla region so far. Further north-wards, other than Anuradhapura (Deraniyagala 1992: 709) only known proto-historic settlement in the northern Dry Zone plain is Kantarodai (Deraniyagala1992: 356). Since the site at Kantarodai is located close to the coastal region, Bellan Oya, IBB, and Anuradhapura are the only known inland settlements in the north central plains and all three sites are located within similar micro environmental settings.

This pattern is further reflected from the locations of known megalithic cemeteries in the Sigiriya-Dambulla region. A closer look at the topographic environment at the Yatigalpotta, Pothana, Digampathaha, Anakatawa and Havanvela Megalithic cemeteries indicates that they too are located within micro-environmental settings that are not very different from the environmental settings associated with IBB and Rotavava-Bellan Oya proto-historic cultural landscape, i.e. cemeteries are on slightly high ground overlooking the floodplain, while settlements are located within the floodplain.
All of them are within a few hundred meters of a stream or a river. Most are located at or near the foot of a small hill where they obtained granite slabs for tomb construction. In comparison to the IBB and Bellan Oya/Rotavava sites, the only difference reflected in the abovementioned cemetery sites is that the settlements corresponding to them have not been discovered. Given the similarity reflected in the topographic setting of the microenvironment there is a high probability that corresponding settlements are buried deeply in the floodplains. Overall, this pattern suggests that proto-historic settlements are seriously underrepresented in comparison to the cemeteries because of their floodplain site locations.

As discussed above, the only other proto-historic settlement found in the north central Dry Zone plain, the Anuradhapura site also reflects this pattern, with the proto-historic settlement deposits at Anuradhapura approximately 9m below the surface. This author’s excavation at ASW 3 at Anuradhapura citadel (conducted under the instructions of Dr. Deraniyagala) further confirms the floodplain settlement hypothesis presented above to describe the subsistence economy and settlement pattern of early Iron Age communities of the proto-historic period. Although the depth of the Anuradhapura proto-historic settlement level may be an extreme example due to continuous human occupation that may have added a few extra meters of occupational deposits by cultural activities, the overall settlement pattern points to a new interpretation of floodplain resource exploitation by initial proto-historic populations in the interior of the northern Dry Zone Plain.

The above discussed settlement pattern observed for proto-historic communities of inland north central plains is compatible with Dr. Somadeva’s (2006) data from Lower
Kirindi Oya Basin (LKB) near southeastern coastal region. Although Somadeva’s interpretation argues for a population movement into the floodplain at LKB (only in the latter part of 4th century B.C.) from a settlement pattern that had its initial concentration in high ground (2006: 293), his own C14 dates (Somadeva 2006: 177) for oldest protohistoric sites (Ellegala and Konvelana) suggest quite an opposite pattern. The first occupation of the Ellegala site is dated to 900-700 cal. B.C. (Somadeva 2006: 177). Layer five of this test excavation was dated between 840-510 cal. B.C., a deposit, which contained potsherds and faunal remains. According to Somadeva’s (2006: 178) observations, this site had been subjected to floods, perhaps more than on one occasion. A similar pattern was observed for the Konvelana site, which is also located on the banks of the Krindi Oya River a few kilometers south of Ellegala. Based on the evidence of floods in this early phase of occupation (prior to later part of 4th century B.C.) Somadeva suggests that between 850 BCE and 510 BCE, the populations living in the high ground away from the floodplain attempted to encroach into the floodplain, but the attempt was failed owing to the floods. However, there are no high-ground settlement sites that have C 14 dates older than Konvelana and Ellegala sites. Therefore, although Somadeva interprets that an earlier attempt to settle in the floodplain was failed, Somadeva’s data from Konvelana and Ellegala are clearly complement my own floodplain settlement interpretation for the north central Dry Zone plain, which argues for seasonal pastoral camping and an adaptation associated with floodplain resource exploitation by early protohistoric communities. Thus, as depicted from the evidence of proto-historic settlements of Bellan Oya and Anuradhapura, not to mention the locations of Sigiriya-Dambulla region cemeteries that are overlooking the floodplains, it shows that all most
all the initial early Iron Age settlements that we know from Dry Zone Sri Lanka (both in north central plains and south eastern coastal regions) were in fact located in association with floodplains where seasonal inundation was eminent.

The lack of known proto-historic period settlement sites in the northern Dry Zone plain could thus be attributed to this adaptation associated with the exploitation of floodplain resources. As shown above all known initial proto-historic settlements are buried deep in the low-lying flood zones, leaving only the cemeteries archaeologically visible. This settlement pattern that I am proposing for early proto-historic period and the cultural landscape complements Seneviratne’s (1982: 239) earlier observation on proto-historic landscape, which suggests a link between megalithic cemeteries, irrigation tanks, and fertile lands. Although construction of irrigation tanks and extensive exploitation of fertile land stretches for wet rice cultivation were surely a PH/EH transition phase or an early historic period trend, long stretches of narrow floodplains fed by small rivers and streams were ideal locations for nomadic pastoralism during proto-historic times. Subsequently, during the early historic period these locations became the loci for irrigated rice farming, and reservoirs built to stock water.

Therefore, the new floodplain resource exploitation interpretation presented in this chapter suggests two stages of development for proto-historic Iron Age communities lived in the north-central Dry Zone plain of Sri Lanka. Initially, the population seems to have adapted to a mobile way of life, associated with pastoralism and seasonal post-flood or rain-fed agriculture, and supplemented by hunting and gathering. Such resource exploitation requires relatively large stretches of land for territorial mobility when compared with the intensive land use strategies of irrigation societies. Thus during proto-
historic period although intertribal gathering areas cannot be ruled out clan or tribal territories may have been fixed and agreed upon to avoid conflict and competition. Based on the characteristics of proto-historic cultural landscape as reflected from the early Iron Age archaeological record of Sigiriya-Dambulla region it is plausible to assume that tribal and clan territories were located along river basins and floodplains. In this context McIntosh’s (1985: 481) hypothesis that megalithic tombs were territorial markers that symbolizes tribal land ownership of is applicable to Sigiriya-Dambulla region. Tombs are located in the relatively high ground away from the flood zone but overlooking the floodplain. They clearly stand out as prominent landmarks located above tribal or clan resource areas.

During the early historic period with the introduction of intensive irrigation agriculture floodplains may have been heavily utilized for rice fields. Such changes in the subsistence economy may have had adverse effects on the previous pastoral economy. Somewhere in the 3rd century B.C. mobile pastoral life seems to have been gradually replaced by sedentary life based on an irrigation agricultural economy. This does not mean that pastoral activities altogether abandoned. There is evidence indicating that pastoral economy persisted three to four centuries after irrigation agriculture was introduced in this region. Even as late as the 1st century A.D., there are inscriptions indicating that proprietors of pasture lands making donations to Buddhist monasteries (IC #1149, #1150) at Avukana (Paranavithana 1970: 90). Nevertheless it is plausible to assume that the proto-historic/early historic socio-economic transition in the inland regions of the Dry Zone plain of Sri Lanka was marked by a shift in the subsistence economy. This same pattern of change in the subsistence economy is
suggested by McIntosh (1982) in the south Indian megalithic context where she argues for a shift from initial semi-nomadic pastoral way of life to a more sedentary economy. However, there are other scholars who have a slightly different take on the subsistence economy of the megalithic cultural complex of peninsular India. For instance, Gururaja Rao (1972) argues that the economy of the population of megalithic cultural complex in the peninsular is agrarian based, while Leshnik (1974) is of the opinion that the society was adapted mainly to a pastoral based economy. Perhaps all these observations could be correct for certain communities that lived in certain regions, but overall the range of adaptive strategies could have been variable depending on the micro- and macro-environmental settings associated with the proto-historic habitat in the peninsular India and Sri Lanka. The pattern reflected in the inland regions of Dry Zone Sri Lanka surely depicts a clear socio-economic change at the Proto-historic-early historic threshold where proto-historic ways of life were gradually replaced by new socio-economic trends in the beginning of the early historic period. This pattern, which involved a shift in socio-economic activities from semi-sedentary ways of life to full sedentism, parallels McIntosh’s observation for peninsular India. My interpretation of floodplain resource exploitation for proto-historic communities in the inland regions of north central plains of Sri Lanka is further evaluated in chapter six, which focuses on analyzing the excavation data from the IBB megalithic cemetery.

5. 2 Settlement excavations

In part one of chapter five I forwarded a new interpretation of the settlement pattern and subsistence economy of the proto-historic societies of the north central plains
based on the data recovered from the Sigiriya-Dambulla region and Anuradhapura. This interpretation suggests that the floodplain resource exploitation (pastoralism, seasonal agriculture, and hunting), represents one of the earliest forms of subsistence strategies of early Iron Age communities of Dry Zone Sri Lanka. This form of adaptation seemed to have taken root around the turn of the second millennium B.C. or the beginning of the first millennium B.C. The strategy continued until complex irrigation and wet rice cultivation spread during the second half of the first millennium B.C. In part two of chapter five the focus is to understand this change (through time) based on stratigraphic data, i.e. to gain insights into the way in which proto-historic/early historic transition took place in the ensued phase of political centralization and social change. Since my main aim of this study is to understand how the hegemonic expansions stemming from emerging centers have influenced the hinterland societies, First, I gave careful attention to the data retrieved from the settlement excavations conducted in the Sigiriya-Dambulla region. Secondly, to gain a good understanding of the way in which core regions have transformed themselves and the catalysts associated with such transformation, data from the settlement excavations at ancient citadel mound at Anuradhpura are investigated.

5.2.1 Ibbankatuwa (IBB) Settlement excavation

The IBB settlement was first excavated during the PGIAR- CCF- KAVA collaboration project in 1988. More trenches were excavated on the northeastern end of the settlement during the 1989, 1990, and 1991 field seasons. Data presented in this section are mainly from the final phase of fieldwork carried out at IBB from September to November 1991 under SARCP. A 10x8m area was opened up, close to the center on
the northeastern side of the site. This trench was divided into four 5x4m subsections and each subsection was further divided into 1x1m areas. The total area of excavation was 80 square meters. The main aim of the excavation was to unearth settlement deposits corresponding with the IBB megalithic cemetery and to gain insight into the socio-economic organization of the community. A brief communication of this work was published in the SARCP publication in 1994 (Karunaratne 1994: 103-109) before all analysis were completed.

The excavation was conducted using the context matrix system. Every deposit (cut, pit, fill, wall, debris etc.) was given a separate context number. A Harris matrix (Harris 1979) was maintained to record the sequential order of contexts. Special artifacts were registered in a separate register along with details of the context number and XYZ measurements (horizontal and vertical positions of the finds). Ceramics from each square meter were collected separately and bagged with labels indicating the corresponding context and square number. Diagnostic rim-sherds, bases, handles, etc. were also sorted at the site. Charcoal samples were collected for C14 dating. Soils, burnt clay, and faunal remains and micro botanical samples were collected and bagged separately for further analysis.

Cultural material and C14 dates revealed that the site was occupied for several centuries, at least from the Proto-historic/ Early historic (PH/EH) transition phase to the middle historic period. All together the vertical stratigraphic sequence was divided into three main developmental phases associated with time: the PH/EH transition phase, the Early Historic Phase (EHP), and the Middle Historic Phase (MHP). In the present analysis the main concern is with the data excavated from the first two phases (Table 2):

5.2.1.1 Proto-historic-early historic (PH/EH) transition phase

As discussed above, during phase I (PH/EH transition phase) the potters have heavily excavated this area for clay. The contexts 28, 42, 43 are such pits dug into the natural clay deposit. These pits were filled with PH/EH domestic refuse, broken ceramics, burnt clay, charcoal, and soils. Several cattle teeth *Bos sp.* (molars & an incisor) and other faunal remains such as *Axis axis ceylonensis* (Spotted dear), *Sus scrofa cristatus* (Wild pig) and *Tragulus miminna* (Mouse dear) were also found.

Context # 28, the earliest dated depositional episode found in the excavation, was associated with kiln debris that involve ceramic production. The pit was completely sealed with ceramic wasters, burnt clay and a pile of charcoal from the kiln fire. The charcoal (sample # 91) collected from this fill received a calibrated date ranging from cumulative probability (using one sigma) of 436-226 BC (Ua 5566). As expected this was the earliest date received for the IBBB settlement site. Nevertheless, it should be emphasized that although Context 28 has the oldest date for the IBBB settlement so far, it certainly cannot be the oldest settlement deposit. There are numerous shallow clay pits dug by potters (Fig. 9b) throughout the surface of the natural clay deposit lying immediately below the settlement layers. If there were settlement deposits older than the 4th century B.C., they would certainly have been removed due to the heavy clay mining in the subsequent PH/EH period.
What is more important is that this is the first time that a pile of PH/EH transition-phase kiln debris recovered from Sri Lanka. It contained a considerable amount of BRW and RW ceramic wasters with many forms of diagnostic rim-sherds giving insights into the variable vessel forms and sizes produced in a given point in time (Fig. 14 and Fig. 15). Oxidization on the soils at the edge of the clay pit indicates that the kiln was fired nearby on the exposed natural clay deposit and that the clay pit was leveled later by having kiln debris thrown into it (Fig. 9a)). Kiln material included lumps of burnt clay pieces, pottery wasters, broken sherds and heaps of charcoal clustered together. Ceramic wasters thrown into the pit are clearly an indication of the forms produced in a given point in time. The data from IBB kiln debris indicate the possibility that both Red Ware and BRW were fired in the same kiln. This could have been achieved probably by spreading a layer of pots placed upside down, sinking the rims on a soft surface (layer of saw dust/ rice chaff or fine sand), in order to reduce oxygen in the interior of the pot to create BRW, while placing other pots face up, leaving enough space for complete oxidization in order to get a RW finish. There is a high probability that pots were fired in an open fire. However, a large number of oxidized clay blocks from the pit indicate the possibility of having a low clay ridge around the area where the pots were stacked for firing.

A total of 42 kilograms of sherds were in the context 28 debris, out of which 67% were Red Ware while 31% were BRW. Pots are standardized in terms of form while sizes vary considerably. The potters seem to have had a strong consciousness about the style and form, which were probably associated with specifically intended functions. 85 diagnostic rim-sherds of different sizes were collected from the pile. The sherds indicate
that at least four different techniques were used in the production process: slow wheel, mold, pinch, and coil methods. Anvil and paddle technique was used to thin the walls. Handmade pots contained grooved wooden bat marks on the exterior of the body. Among burnt clay pieces found in context 28 were a few fist-sized lumps of rice husk mixed in oxidized clay. The rice husk was grounded to some extent, perhaps by pounding before mixing them with wet clay. This is probably intended for temper. Mourer (1986) has observed preparation of rice husk temper by certain potter families in Cambodia. In this process they mixed rice husks with wet clay and formed them into balls, which was then baked in the fire and grounded into powder. In context 42, a clay pit used as a trash pit, we recovered some unique ceramic forms different from the forms that we found from other two pits belonging to PH/EH transition phase. Contexts 28 and 43 (Fig. 14, Fig. 15, and Fig. 16) had more forms that resemble IBB cemetery ceramic collection. Although context 42 has parallels with ceramic forms of earlier phase, we can surely see new forms are appearing for the first time. We haven’t come across datable material from the pit fill of context 42 (Fig. 17), however, ceramic assemblage indicates a slight change in the daily life, perhaps the way in which food processing was done. Open shallow bowls can be considered as proto types of *nambili*, which is an essential item in the rice preparation process. Although evidence of rice cultivation is present from Proto-historic phase new food processing technology can be attested to an increase in the consumption. Thus context 42, the trash fill may have been due to actions towards the end of PH/EH transition phase.

Numerous iron objects, iron ore, and iron slags have been recovered from the three proto-historic-early historic transition phase pits. Similar to what was found at the
cemetery, knives, pegs, leaf-shaped spearheads, small iron rods, are some of the objects found from the PH/EH phase of the settlement during the PGIAR-CCF-KAVA excavation. A piece of iron and iron ore were also found in context 42 during the SARCP excavation. Finding evidence for iron production throughout the site during all phases of occupation indicates that the raw materials were obtained from the vicinity and iron production technology was widely applied throughout the site without discrimination.

The tool manufacturing seems to be intended for domestic context; however, production aimed at the mortuary ritual (discarding/offering) cannot be ruled out.

Unlike in the cemetery excavation, not many exotic beads were found in the PH/EH contexts of the settlement. Out of the 8 carnelian beads (Fig. 12d and Fig. 12e) found at the settlement, five were identical to the beads found in the burial site. Two barrel shaped onyx beads identical to the ones that are found at the cemetery were also found at the settlement, but no bead wasters or blanks of exotics were found. Thus we can conclude with certainty that during PH/EH almost all exotic stone beads that had arrived at the site were finished products. A few minute terracotta ring beads and glass paste disc beads identical to the ones that were found at the IBB cemetery were also recovered. Therefore, it is possible that in this region megalithic cultural practices continued up until the 3rd century B.C. As will be discussed below, perhaps the introduction of Buddhism and the direct interference of the Anuradhapura polity on the tribal affairs accelerated the derailment of the social organization of the proto-historic communities.

5.2.1.2 PH/EH domestic economy and subsistence activities at IBB
Based on the nature of the settlement deposits and location of sites as well as a preliminary investigation of surface collection materials and test excavations, in part one of this chapter I have concluded that the subsistence economy of the proto-historic Iron Age communities in the region was mainly associated with floodplain resource exploitation. Judging by the data revealed from IBB settlement excavations the pattern seemed to have continued into the PH/EH transition phase. It is clear from the data from PH/EH deposits at IBB that the two main archaeologically visible productions at the IBB settlement are ceramics and iron. The only known specialized activity area was located towards the eastern and southeastern sector of the site where evidence of clay mining is plentiful. However, there is a high possibility for this pattern to recur in other unexcavated areas of the settlement, because the clay deposit used by potters is spread throughout the site below the settlement deposits. Production of some ceramic forms such as cups, bowls, and trays found at IBB did not require the work of highly skilled potters. Nevertheless most large vessels produced at the site do need experienced potters, with an awareness of the vessels’ function, shape, size, and form. At IBB the community did have such skilled producers. There is a possibility that at least several families in a clan or some lineages within the tribe were specialized in the work, as pots were one of the utensils often required in every aspect of PH/EH life at IBB and produced in the hundreds. From the evidence, it is clear that they were needed in domestic, agricultural, pastoral, mortuary, ritual, as well as in craft contexts. Thus specialization in certain areas such as ceramic production cannot be ruled out and intra and inter clan level exchange may have been the norm.
In terms of the distribution of iron implements, the pattern does not show large-scale specific iron working areas within the site. As mentioned above, slags are found on the surface in various places and throughout all occupational phases. However, the production was on a small scale, at household level. The implements produced are domestic tools such as chisels, pegs, knives, and spears. There were numerous fragmented unidentified iron objects, thus it is not possible to claim that the inventory of household tools is limited. Nevertheless, a lack of agricultural implements such as sickles and ploughshares are of concern but that does not mean that agriculture was an insignificant part of the economy.

Lumps of baked rice chaff (considered to be prepared for temper) in context 28 are a good indication that rice production was a regular practice and a considerable part of the economy. At IBB (Dambulu Oya floodplain) rice could have grown successfully with or without irrigation. Myrdal-Runebjer (1994: 252) in her ethnographic investigation in the Sigiriya region reports that sometimes paddy fields are prepared in low-lying flat areas where water naturally collects during the rains, and bunds of paddy fields themselves have the ability to retain water. As pointed out above in the analysis of a settlement/cemetery distribution pattern of the Proto-historic period in the study region, such low-lying floodplains are prime territories for proto-historic habitation. A combination of floodplain agriculture and dry farming could have been an essential part of the subsistence economy, even at the PH/EH transition phase.

Furthermore, the cattle teeth found at IBB PH/EH context suggest that the community may have been keeping large cattle herds. This pattern, i.e. the increase in pastoral activities, is reflected in the material from Anuradhapura period I of ASW2,
which is contemporaneous with IBB PH/EH transition phase. Unusual presence of cattle teeth was first observed at the IBB settlement excavation during the final field season of the PGIAR-CCF-KAVA project (Karunaratne unpublished). The two trenches excavated earlier in March and April of 1991, fifty meters south of the SARCP trench, revealed numerous cattle teeth in the proto-historic level. The same pattern is repeated at the 1991 SARCP trench where a number of cattle teeth including 6 molars were found from the PH/EH transition phase. As pointed out in part I of this chapter, a cattle molar was found at the Bellan Oya site along with proto-historic ceramics from a pile of dirt dug out during an excavation of a well from a single-phase occupation deposit. Cattle bones are present from period K at Anuradhapura ASW2 (Coningham 2006:524-540), during the first phase of early Iron Age occupation and at stratigraphic phase III of ASW3 (Karunaratne et al unpublished) excavations where the earliest proto-historic occupational deposits contained cattle bones. The only explanation for the presence of cattle teeth in the settlement mound at IBB is that the site may have been used as a cattle pen cum settlement. Biologically cattle loose their temporary molars at the age of 18 months. Since they roam in open fields throughout the day, the only place where numerous teeth could be accumulated is the kraal. Given that cattle molar teeth were found from PH/EH transition levels at trenches excavated during the PGIAR-CCF-KAVA project (Karunaratne unpublished) and at the 1991 SARCP trench (Karunaratne 1994), we can safely assume that the IBB community kept their cattle within the settlement itself. As we know from ethnographic parallels, in many cultures pastoralists keep cattle within the settlement for their protection. Given that leopards (panthera pardus) are known to roam in these regions even today, keeping cattle within the
settlement itself could be a viable alternative. This pattern is not very different from many ethnographic communities in India. Thus presence of numerous cattle teeth in the settlement itself clearly suggests that pastoralism was probably a major part of the PH/EH economy at IBB. Nonetheless, among faunal remains present in the PH/EH phase, spotted deer (*Axis axis ceylonensis*) dominate other species. Overall, hunting seems to have played a significant role in their subsistence economy. Therefore it is highly probable that a segment of the society may have been mobile within a certain period of the year depending on seasonal availability of grass along floodplains. Myrdal-Runerbjer (1994: 253) points out that even today, in the dry season, the villagers around Sigiriya send their cattle to remote areas within the same region for grassing.

The following data further highlights the possibility that pastoral production was an important part of the subsistence economy of the PH/EH period. Over 50% of 84 different vessels identified from diagnostic rim sherds from the kiln debris at context 28, were trays of variable sizes. A similar prevalence of trays was evident in sherds collected from the Bellan Oya settlement discussed above. These trays are similar in shape to the present day ethnographic curd pots used in Sri Lanka, thus it can be assumed that they are associated with pastoral production, until further residue analysis is done in future studies. If these shallow round trays have any functional advantage in its circumference and height ratio measurements appropriate for settling of curd/cheese or other milk production, transportation, and storage, then the same attributes could be applicable to the proto-historic counter parts. Nevertheless, the tray bowls in the PH/EH phase could have multiple usages and are found in numerous contexts both in the settlement as well as in
the cemetery. Therefore, my hypothesis about this BRW tray type and its utility associated with dairy production needs further research.

These data suggest that the IBB PH/EH community had a self-sufficient economy. Their subsistence requirements seem to have been fulfilled through specialization associated with floodplain resource exploitation combined with dry farming and hunting. However, even though a segment of the society specialized in the pastoral activities, inter and intra clan exchange of rice, pottery, iron, pastoral produce, and other natural products cannot be ruled out. Cattle may have been one of the most valued assets. Like in many ethnographic pastoral communities cattle would have been an important medium of social transaction. Nevertheless, to fulfill basic subsistence requirements, floodplain adaptation and associated resource extraction are quite sufficient. Particularly both rice and herds can be rotated in the same floodplain during different seasons. The floodplains also contain good clay sources for ceramic utensils. Given the regional level uniformity in the settlement pattern and subsistence economy associated with floodplain resource exploitation, the pattern may not have been limited only to the Sigiriya-Dambulla region. This pattern somewhat resembles Seneviratne’s take on proto-historic settlement patterns in Sri Lanka where he sees a link between location of megalithic cemeteries, irrigation tanks, and fertile stretches of land (Seneviratne 1984:239). From the present data analysis it is really striking in the proto-historic settlement pattern and the distribution of cemeteries overlooking floodplains that, in most instances, the same floodplains exploited during proto-historic times were later (during early historic periods) utilized to build irrigation reservoirs and rice fields. Close scrutiny of the Early historic settlement pattern in and around the sites of IBB, Beliyakanda, and Digamthaha, not to mention the
settlement site at Anuradhapura where initial political centralization took place, indicates an adaptation to similar micro environments in two different ways during proto-historic period and early historic period. What this pattern tells us is that the same environment exploited by proto-historic communities were later in the EHP altered drastically because the floodplains were ideal locations to build reservoirs and irrigated rice fields (Fig. 3, Fig. 4, and Fig. 5). Thus there is a possibility that many of the initial proto-historic campsites cum settlements were buried under large reservoirs found in the Dry Zone.

**5.2.1.3 Evidence for external trade during proto-historic period at IBB**

In chapter 2, I summarized Seneviratne’s (1996) position on proto-historic population movement into the Sigiriya-Damulla area (Upper Kala Oya region), in which he argues that the initial movement of early Iron Age communities to this area from Dry Zone alluvium was due to incursions made in search of mineral resources. He further argued that during the PH/EH transition phase the region played an important role as a link zone between mineral resource regions in the central hills and the core areas of the Dry Zone plain, a role that Seneviratne sees as central to the socio-political transformation in the region towards formation of independent chiefdoms. However, the data from IBB (from the settlement as well as from the cemetery) for these two periods (proto-historic period and PH/EH transition phase) do not support material evidence for predominant mineral resource extraction or outflow. However, this is not to deny that these populations did extract minerals available in the vicinity. They may very well have extracted available mineral resources just like they did with iron ore and clay, but not to the extent that would lead to specialization on mineral trade, which would have caused
social transformation towards political centralization and independent polity formation in the “periphery” as suggested by Seneviratne (1996).

However, when it comes to external trade during the proto-historic period, the main issue that needs focus is the inflow of exotic finished goods to this region. As we know from the data from cluster 21 excavations at IBB cemetery discussed in chapter 6, proto-historic societies in the region seem to have had a considerably unrestricted access to external resources. The closest carnelian and agate sources are in the Deccan plateau, thousands of miles away in the mainland. These goods surely have arrived down the line in exchange with neighboring communities. It is plausible to assume that the exotics would have played an important role similar to that of the role that cattle may have played in the social transactions. What was paid in return is difficult to assume in the absence of solid material records on a comparable local craft production associated with mineral resources or raw mineral extraction. Nevertheless, cattle products cannot be ruled out, because in ethnographic and ethno-historic tribal societies, payment in cattle for both economic and social transaction was not an uncommon practice.

5.2.1.4 The Early Historic Phase (EHP) at IBB settlement

One major problem with the stratigraphic deposits of the early historic phase was the lack of good charcoal samples from sealed contexts for C14 dating. Clay mining continued during this phase and settlement deposits were disturbed to a considerable extent. However, comparative analysis of material records with other known early historic deposits discussed below, leave no doubt that the stratum was the result of the
activities of EHP. This time period could be further confirmed by the available dates of the next stratigraphic phase overlying EHP deposits. Two samples from contexts 16 and 5/2 got calibrated dates ranging from cumulative probability (using one sigma) of 347-534 A.D. (Ua 5565) and 311-483 A.D. (Ua5564) respectively. Context # 5/2 was collected from a shallow hearth next to a stack of crushed pots. These phase III stratigraphic deposits resulted from activities taken place during the late early historic/early middle historic transition phase.

Therefore, it is clear that those deposits that are sandwiched in between late early historic/early middle historic (311-483 A.D.) transition phase deposits (phase III) and PH/EH transition phase (436-226 B.C. B.C.) deposits (phase I) are EHP or late EHP deposits. Nevertheless, based on the material record, it is plausible to conclude that the stratigraphic phase II deposits at IBB resulted from the activities of the last two centuries of the first millennium B.C. It yielded black and red ware (BRW), red ware (RW), gray ware (GW), and ceramics with certain glazes and pigments, an unidentified copper coin, copper alloy ingot, iron objects, slags, glass beads, and a plethora of terracotta objects. There is no break (non-cultural inter phase) in the sequence of the cultural deposits between PH/EH transition phase and EHP, indicating that the occupation may have been continued without interruption from PH/EH to EHP. During EHP (as in the previous PH/EH phase) the settlement seemed to have remained as a rural village. Although a few semi-luxury type artifacts were found, no evidence of tiles or baked brick constructions reflective of more sophisticated urban complex, such as in Anuradhapura, was found. Furthermore, there are no structural phases for this early part of the early historic period, although a portion of a fallen wall debris (granite and mud) from a hut was recovered
from the final phase of occupation, which is dated to 311-483 cal. A.D. Except for dense ceramic scatter and slag pieces distributed throughout the site, there are no significant spatial patterns reflective of political centralization within the region.

5.2.1.5 EHP material culture from the IBB settlement excavation

Throughout the EHP the site remained a large village level settlement. It never developed physical features of known EHP urban centers such as Anuradhapura or Akurugoda, where evidence of tiled roofs and brick structures, streets etc. is found. Nor did it leave any evidence of an urban socio-economic structure where coins, seals, sealings, and a high-level concentration of exotic trade goods indicating an existence of a vibrant economy. Nevertheless, a much more complex domestic-level production and technology is associated with the EHP as compared to the previous PH/EH transition phase. On the one hand, similar to the PH/EH transition phase, ceramic and iron production activities continued unabated. A ‘bottom slag piece’ recovered from this phase indicates that the ore was smelted using bloomery furnaces. Perhaps a large portion of the wall of the furnace was surely taken apart to get the slag and the bloom out before separating the bloom from the slag settled on the bottom. The rounded shaped partial segment of the bottom slag (which was not more than ten inches long, 8 inches wide and about 4 inches in height) indicates that the furnace was comparatively much smaller in size than that of the massive industrial scale furnaces exposed at Dehigaha-ala-kanda during SARCP excavations (Forenius and Solangarachchi 1994). Thus the production was surely a small household level endeavor.
On the other hand, numerous other domestic level productions such as copper work, crude lapidary work, glasswork, were also evident from the site. A small ceramic crucible fragment (Fig. 13d) with glossy dark-greenish pigments in its exterior was found from this phase. Although such crucibles may have been used for low melting point metal work, the production of crucibles needs an in depth knowledge on the behavior of the raw materials used when exposed to high temperatures. The greenish lining applied in the exterior has a functional purpose as well. The outside lining on the crucible is expected to reduce fine ingredients and heat escaping through the walls. The greenish color pigment could have been created by using a mixture of copper zinc sulphites and carbonates, although specific brightness and gloss would have needed a further mixture of ingredients such as gold, mica, and tin or silver (Deshpande 1996:371). It is not clear whether this particular crucible was manufactured on site. Nevertheless, the presence of a crucible fragment indicates that certain soft metals and alloy works were handled at the settlement. In addition, a bell shaped copper alloy ingot, close to 2cm in diameter at its base and 1.5cm in its height, was significant. This is further evidence that small-scale copper alloy works have been carried out at the site. Another important copper-alloy object found from this phase is an unidentified coin.

Among the other metal objects a small “U” shape lead object (Fig. 13.b) found from the EHP phase is significant. Numerous objects of this category are recorded from the Akurugoda EHP urban site at southeastern Sri Lanka (Bopearachchi and Wickremesinghe 1999). Particularly forms M36 to M48 (Bopearachchi and Wickremesinghe 1999: plate 30) can be categorized as the same form, almost identical to the IBB find. Bopearachchi and Wickremesinghe (1999: 33) highlight that, although a
well developed monetary system based on coins was established at least by the 2nd century B.C., there is a possibility of having a parallel system where lead objects were used as money. There are other miniature lead objects made in the form of conch, fish, collar beads, circular shaped rings etc. from Akurugoda of southeastern Sri Lanka. Similarly during the 1990 CCF/PGIAR excavations at the EHP Bodighara at Dambulla monastic site, present author (Karunaratne 1990) found a U shaped lead ring identical to the type M 10 of Bopearachchi and Wickremesinghe (1999: plate 29). Thus there is a high possibility that miniature lead objects such as conchs, fish, turtles, collar beads, and two headed segmented rings are auspicious symbols. A collection of a group of such symbols (bronze), placed in a pot, was recovered from a pond at the Jetavana Buddhist monastery at Anuradhapura.

The IBB lead object found from EHP deposits closely resembles the “U” shaped segmented ring/ earring found at the Bodighara at Dambulla Buddhist monastery as well as above-mentioned specimens from Akurugoda. Although we do not know the source of origin of the lead found in SL, it is clear that at least from around the second century B.C. lead was utilized at the Akurugoda site for production of coins. Based on this evidence, Bopearachchi and Wickremesinghe (1999: 33) suggest the possibility of lead imports from Thailand from around early historic times.

Another type of new domestic production to appear in Early Historic deposits was craftwork associated with glass. A dark blue glass ingot about 2x1.5x1.5cm in size was found from this phase. However, no further evidence of glass production was present. Knowing that smelting technology associated with various metals was utilized in the settlement, there is no reason to doubt that a glass-associated craft was performed.
Among other glass objects from the IBB settlement, glass beads and bangle fragments are significant. However, we do not find evidence of melted bead clumps, segmented beads, or disfigured blanks, as in the case of the Anuradhapura ASW3 excavations.

Furthermore, evidence of crude lapidary work appears for the first time in the EHP. Clear quartz blanks, chips, polished irregular shaped quartz beads, incomplete perforations are evidence of an attempt to do lapidary work. Other than using local materials such as clear quartz, there is no record on successful domestic-scale lapidary works from the excavations.

While lapidary work begins during this phase, the flow of exotic beads such as carnelian seems to have completely stopped. The only spherical shape carnelian beads found from the settlement excavation are from the deposits belonging to late early-historic/early middle-historic phase. The lack of carnelian or exotic beads from the EHP is significant compared the five carnelian and two agate beads found from the earlier phase that corresponds to the IBB cemetery. It should be highlighted here that over 500 carnelian beads were recovered from the cemetery from cluster 21 alone, indicating a smooth unhindered flow of exotics in the previous proto-historic and PH/EH transition phase. This pattern indicates a restriction of exotic flow during early historic times.

Furthermore, numerous terracotta objects (Fig. 11) were recovered from the Early Historic levels. Among them, spindle whorls, miniature terracotta balls, terracotta discs, a seal, dice-like rectangular objects with dots marked on all sides, small terracotta lids and caps are significant finds. The terracotta seal has a round knob-like handle. The face of the seal is round in shape and its surface is slightly indented. In the center of the seal’s face is a minute convex button. It could have been used for decorations, particularly to
emboss double circle patterns on soft surfaces. Also it is possible for this to be an incomplete blank seal. Numerous identical seals are reported from Akurugoda in southeastern Sri Lanka from private collections (Bop earachchi and Wickremesinghe (1999: plate 20) Somadeva (2006: 195). Some of these seals from Akurugoda had symbols such as a pot of flowers, a swastika, and a pair of fish. These seals may have been used for numerous purposes, such as craftsman symbols, symbols of trade guilds, as well as for administrative work. The style of the seal handles, material, and the symbols indicate that the IBB seal and Akurugoda seals are probably from the same time period. Although Akurugoda seals lack stratigraphic contexts, one particular seal reported by Somadeva (2006: plate 6.6 (a)) has a swastika mounted on a staff with a railing at the base along with smaller symbols embossed around it and this surely indicates an EHP origin. This theme is somewhat reminiscent of the designs reflected in the reverse of elephant and swastika coins that circulated during the last two to three centuries of the first millennium B.C. Although the symbols are not exactly identical, the trend is surely EHP. Such seals, sealings and symbols are found in greater numbers at urban sites in southeastern Sri Lanka. Although the IBB seal did not contain symbols, the stylistic character of the seal itself, materials used, and most of all the stratigraphy, indicate that it belongs to the same early historic tradition that was thriving elsewhere.

Among other terracotta objects, dice-like rectangular blocks (Fig. 11f) are intriguing, and two of them were recovered from EHP deposits. All six sides are marked with dots similar to that of a dice. The utility of such objects is unclear. It is plausible to assume that they may have been used as gaming pieces. Two terracotta balls are found from this phase that are similar to the ones found in the contemporary EHP sites of

In terms of ceramic form, some of the PH/EH ceramic types such as BRW trays, continued into EHP but much less frequently. The frequency of red ware ceramics increased rapidly with new forms during the EHP. A couple of sherds indicating new special wares, such as fine gray wares, silver color (probably graphite? coated) pigmented red wares and gold color (probably mica coated) pigmented red ware were also recovered. The data presented above suggest that during the EHP numerous domestic scale production activities have been performed. Communities were rather self-sufficient. Although no direct evidence of rice cultivation is present from this phase, we can assume that the society was much more dependent on irrigation agriculture than previous PHP or PH/EH transition phase where pastoral production played a major role in the subsistence economy. It is striking that, despite the evidence of contacts with urban communities elsewhere, the flow of certain exotics (particularly of the carnelian and agate that was extremely important for the social reproduction in the proto-historic phase), did not continue during the EHP. However, during the Early Middle Historic period, (the site’s final occupational phase) exotic items like interior resin-coated buff color ceramics (wine jars imported from western Asia), glass objects, fine ceramics, and an unidentified copper coin (identical in size to Roman coins found at the Sigiriya royal complex), as well as spherical-shaped carnelian beads, are some of the imported materials penetrated into the settlement site. During this period, large reservoirs such as the Kala-vava and the Minneri-vava (with massive earthen dams that were stretching up to several miles), were built close to Sigirya-Dambulla region. Thus from around the beginning of the final
occupation phase at the IBB settlement, some of the luxuries that were previously (during early historic period) highly concentrated in the urban sites, subsequently began to flow into IBB area.

5.2.2 Contextualizing the IBB settlement in the EHP: archaeological data from Sigiriya and Dambulla region

From around the 3rd century B.C. there was a major transformation in the archaeological landscape in the north central plain. Unlike the proto-historic period where sparsely scattered megalithic cemetery sites and corresponding settlements along perennial waterways were the main features of the landscape pattern of the time during the EHP, the archaeological landscape was marked by a range of new physical features that are much more significant, dense, and expansive. These new features included a mushrooming of Buddhist monastic centers, archaeologically more visible settlements, and small-scale irrigation tanks known as vapi. At the same time it is clear that, at least by the mid 3rd century B.C., the megalithic mortuary tradition was rapidly going out of practice.

New patterns reflected in the cultural landscape indicate a major population increase and outward expansion from the core regions of the Dry Zone plain beyond the boundaries of the proto-historic ecological belt into the mountain regions (Bandaranayake 1992; Seneviratne (1996). The pattern was more or less homogenous throughout the Dry Zone plain, and the Sigiriya-Dambulla region was no exception.

As pointed out above, the most prominent feature of the Early Historic period was the spread of Buddhist monastic complexes. This new tradition of monastic dwelling
systems is usually found in and around rocky hills where natural caves and rock shelters are abundant. The roofs or high interior slopes of caves or rock shelters were chiseled out to create drip lines to prevent rainwater seeping into the walls of the chambers built below. Monumental religious symbols such as stupas were built in association with these monasteries. The antiquity of these constructions could be measured with accuracy by the style of the Brahmi script and the genealogies of the donors, which sometimes match the important figures mentioned in the chronicles.

This tradition of cave donations continued through the first three centuries of the first millennium B.C. Nevertheless, the change in the style of the script at the turn of the millennium allows archaeologists to recognize Early Brahmi (EB) inscriptions from the later Brahmi script (Paranavithana 1970). From the Sigiriya and Dambulla region alone within a 13 km radius encompassing the above two sites, over one hundred EB inscriptions have been recovered. The basic message in each and every inscription is that the relevant cave dwelling was prepared for the benefit of Buddhist monks. However, there is a hidden message behind these donations. Every donor has paid special attention to include his/her name and title in addition to emphasizing his/her lineage by stating his/her father’s name and title. These lineages, titles, and names reflected in the inscriptions seem to depict a new, more complex, socio-political phenomenon and economic order than that of the traditional socio-political structures of the proto-historic period (I have argued in chapter one and chapter six that the proto-historic social organization was based on a segmentary lineage system prior to the onset of proto-historic-early historic social change). Based on the contents of EB inscriptions it can be argued that from around the 3rd century B.C. the Sigiriya-Dambulla region was
dominated by Anuradhapura rulers. The appearance of some of the names of certain Anuradhapura kings as donors in some cave inscriptions is a clear indication of this dominance. For example: The inscription (IC # 835) at the great cave at Dambulla Paranavithana’s (1970), located just 1.5 miles northeast of the IBB settlement, bears the name ‘Devanapiya (friend of god) Maha Raja (great king) Gamani Tisa.’ Based on the title ‘Gamani’ Paranavithana identifies him as king Saddatissa (137-119 B.C.), the brother of the infamous warrior king Dutta Gamini Abhaya who has been given prominence in the chronicle chapters. The title ‘devanapiya’ was clearly an emulation of the title used by emperor Asoka of the Gangetic valley. As evident from the chronicles, King Devanapiya Tissa was the first to use this title in Sri Lanka (250 to 210 B.C.) Furthermore, chronicles indicate that the successor to the throne after Devanapiya Tissa was his younger brother Uttiya (210-200 B.C.). Two inscription of this period found at Mihintale (IC # 46 and # 47), where the first Buddhist missionaries to Anuradhapura were settled, bear the name Utti along with the titles of gamani, devanapiya, and maha raja. Paranavithna identifies this ‘Gamani Uti Devanapiya Maharaja’ as no other than the brother of Devenapiya Tissa. If this is the case then it is plausible to suggest that ‘Devanapiya (friend of god) Maha Raja (great king) Gamani Tisa,’ which appear in the great cave at Dambulla (IC # 835 mentioned above) as the elder brother of Uttiya, the infamous Devanapiya Tissa himself who is mentioned in the chronicles as the receiver of the Buddhist mission from the Mauryan court and not Saddhatissa who ruled a century later in the mid second century B.C.

In another inscription (IC # 236) at Ritigala, 20 miles north of IBB, one more king with the same title appears: ‘Devanapiya Tisa maharaja,’ Paranavithana (1970) identifies
him as king Lanjatissa, the son of king Saddhatissa. IC # 813 from Demada Oya, 20 miles south of IBB, contains the name Macuda Raja, who was identified as Anuradhapura king Maha Chuli (77-63 B.C.). This inscription refers to lapidarists sent by the king in search of some sort of stone blocks. IC #894 & #895 from a site near Ridi Vihara in Kurunagala district, 20 miles southwest of IBB, indicate that an official of the warrior king Gamani Abhaya (mid second century B.C.) donated the cave dwellings to Buddhist monks. These inscriptions are clear indications that Anuradhapura rulers had direct control of the Sigirya-Dambulla region, at least from around the mid third century B.C.

They not only had political power over its hinterland regions but also were able to directly control the resources in this region as indicated both from inscriptive sources as well as from the archaeological record. Although we don’t see evidence beyond the domestic level production at the IBB settlements, we see evidence of resource extraction and production at industrial scale away from the settlements. However, as the excavation data from the IBB settlement suggest, the benefit of such industrial scale production did not reach the local population. There is evidence of important industrial scale iron production sites from the early historic period that are recovered from SARCP surveys (Manjusri 1990: 113-120). The site is located 6 miles southeast of Sigiriya in the southern Kiri Oya basin. In this site, among half a dozen large slagheaps, the largest one measured 55m in length and 4 m in height (Mogren 1999: 120). Later in 1990 and 1991, this site was excavated by Foreniius and Solangaarachchi (1994) and they were able to unearth surprisingly large furnaces. The remaining portions of these massive bottle-shaped furnaces that are built sunken into the vertical face of the bed-rock, indicate that
originally they were up to 2m high and close to 1m in width at the bottom (Mogren 1999: 120). The site was in use at least from the 2-1 century B.C. till the 4th century A.D. A charcoal sample (# 38), collected from one of the largest furnaces (Furnace #27), yielded a date ranging from cum 1: 172-8 B.C. (Ua 5509). Along with this date and BRW sherds of a flat tray-bowl type that lack a neck and other EHP ceramic types is clearly an indication that the site was in use during the last few centuries of the first millennium B.C. The size of the furnace and its place among a row of other furnaces indicate that the industrial scale production has continued from an early stage of the EHP. The large slagheaps indicate that the scale of production was beyond local requirements in the Sigiriya-Dambulla region or the Anuradhapura center. Thus external trade across the Indian Ocean cannot be ruled out, and if this is the case, then given the level of the Anuradhapura kings’ influence on this region during the EHP (from around the mid 3rd century B.C.), attempts to control resource areas and craft production by the center is highly plausible.

5.2.3 Proto-historic- Early historic (PH/EH) transformation as expressed by Anuradhapura settlement data: A view from the center

In part I of chapter V I have pointed out that the initial proto-historic settlement at Anuradhapura was a seasonal campsite established by pastoral communities on the drying marshes of the Malwathu Oya floodplain. As revealed from this writer’s excavations at the Anuradhapura settlement (ASW3), the initial proto-historic settlement was started on a thick compacted silt deposit sitting 9.5 meters below the present surface. The stratigraphic data suggests that the heavy silting in this area abruptly ended with the
beginning of the initial Iron Age Occupation. The first occupation floor/cultural surface (context 188 at stratigraphic phase III) was sitting right on the surface of this silt deposit. On this occupation surface numerous BRW potsherds, cattle and dear bones, quartz waste, iron objects, iron ore, a terracotta disc, and a paste bead were found (Fig. 24). This evidence suggests that in many ways both Anuradhapura and IBB communities reflect the general cultural pattern of proto-historic Iron Age communities who lived in the southern regions of the subcontinent. In addition initial proto-historic communities of Anuradhapura were adapted to a subsistence economy closely resembling the economic system of IBB community. Especially the presence of cattle bone along with deer and other wild fauna is a clear indication of a mixed economy that depends on pastoral products, hunting, and perhaps seasonal floodplain agriculture. In Coningham’s excavations at the Anuradhapura settlement (ASW2), the initial occupation phase was dated to between c.840 and 460 cal B.C. and named period K (Coningham 1999: 126). Deraniyagala estimates that the earliest proto-historic habitation area at Anuradhapura extended over10ha by 800 B.C. By ca. 700-600 B.C., the settlement size increased rapidly, extending over 50ha (Deraniyagala 1990b: 253). As explained before, one way to gain insight into this unusual growth in the site size for a non-urban proto-historic community is through focusing on the subsistence strategy. Although in the long run the population aggregation may have been a factor that contributed to the growth of site size, the continued seasonal camping throughout the floodplain each year could have been the reason for a rapid spread of cultural material in a large area during the initial period.

In ASW3, semi permanent structures appeared for the first time during stratigraphic phase IV, soon after the initial occupation. A row of postholes (Contexts:
215, 214, 213, 212, 211, 210) was found at the base of a shallow foundation trench. Although the complete shape of the structure was not clearly visible (as the trench extends beyond the walls of the excavation area), based on the curvy shape of the posthole line, it can be assumed that the structure was circular in shape. This phase seems to be contemporary with Coningham’s Period J1. In structural period J at ASW2 c. 510-340 cal. B.C. Coningham (1996: 126) records five phases of round structures. Thus this date is contemporary with tomb cluster 21 of the IBB cemetery. They were dated to 540 - 400 cal. B.C.

Period J deposits of ASW2 artifacts indicate a continuation from the earliest occupation phase (period K). Copper, shell, amethyst, quartz objects and lithic debitage have been recorded (Coningham 1999: 126). Two carnelian beads were found from period J. Earliest copper alloy objects were found from J3 dated to c. 400 B.C. (Coningham 2006: 83). From stratigraphic phase IV of ASW3 excavations, we were able to recover a number of copper alloy objects, a translucent glass bead, several paste beads, terracotta discs, and clear quartz debitage. The first evidence of pre-Brahmi graffiti was found from stratigraphic phase IV. Four symbols inscribed on potsherds were collected from a small pit (context 198).

All these evidences leave no doubt that the early Iron Age settlers at Anuradhapura were part of the same regional-cultural phenomenon spread in the southern regions of peninsular India, which is generally known as a megalithic culture (Pandukkal cultural complex). In this early phase of occupation there is no difference in terms of social complexity or cultural systems between initial settlements at Anuradhapura and proto-historic communities at the Sigiriya-Dambulla region.
However, Coningham (1999) reports some important new developments in the later phases of period J. Craft working waste and finished products from sources over 60 km away from the site compelled Coningham to conclude that the site was becoming a *manufacturing and centralizing locus* during this period. Evidence of rice (*Oryza sativa* Linn) appears for the first time from layers corresponding to phase J3 of period J at ASW 2. Also there is a clear increase in the number of cattle bones found from this period in comparison to period K. In addition appearance of horse bones in the faunal record, recovery of a few fine gray ware sherds, and the arrival of a Brahmi script for the first time (a stylus from J3, three Brahmi inscriptions and a stylus from J4, and Prakrit inscriptions written using Brhami script in J5) are new developments that we hadn’t noticed in the data from cemetery excavations at the IBB. These data suggest that in the later part of period J, the Anuradhapura community was moving towards a new direction of social evolution from its initial socio-political structure, emerging as a dominant tribal community. The Presence of Brahmi scripts and fine gray ware during this time is clear evidence of an initial linking up with communication networks that stemmed from urban cultures of north India at least by the 5th century B.C. Although in general a Brahmi script is considered as a phenomenon that initially associated with the Mauryan imperial court (3rd century B.C.), more recent discoveries of Brahmi inscriptions in older stratigraphy has caused archaeologists to explore the possibility of their existence a couple of centuries earlier (Deraniyagala 1990, Coningham 1999). There is a clear possibility for the script to be used as a medium of long-distance communication with the expansion of inter regional trade from around the fifth century B.C. or earlier. These initial changes reflected in the later part of period J excavation data at ASW2 could well be associated
with initial contacts with north Indian trade networks. Despite the initial changes reflected in the material culture of period J, as indicated by Coningham’s excavation data from ASW2, a major socio-political and economic shift had taken place at Anuradhapura during period I (c. 360 and 190 cal. B.C.). According to Coningham (1999: ) during the structural period I the expanding settlement reached the status of an Early Historic City. This period is parallel with period V of ASW3 (Fig. 22) and the data recovered from both excavations show a similar pattern of change from the previous period. What is significant is the presence of many forms of new exotic materials coming into Anuradhapura from faraway urban cultures. A variety of imported fine wares, including gray ware, northern black polished ware, and rouletted ware ceramics, are recorded from this period (Fig. 25e, Fig. 25f, and Fig. 27e, 27f, and 27d). Rouletted ware sherds appear for the first time in period I4 (Coningham 2006:133) at ASW2, it gradually increased through I7 and I8 (Coningham 1999: 127). From ASW3 along with rouletted ceramics and gray ware, a number of other rare ceramic verities such as black slipped ware, red slipped ware, white painted red ware and exterior brown slipped BRW ceramics, have been recovered.

In addition to the ceramics, from ASW2 other materials that have arrived at the site are seashells, conch and chank from the coastal area, beads such as lapis lazuli (Coningham 2006: 377and 418), and carnelian from far-reaching locations in northwestern India. There was debitage indicating craftwork utilizing local stone material such as garnet, amethyst, clear quarts, and smokey quarts that also appeared during this phase. Utility and production of both iron and copper objects increased. Copper rings, vessels, nails, and bars have been recorded from this phase. Initial trade with polities of
the northern regional sphere is further confirmed by five coins that were recovered from this period, and out of which two have been positively identified as punch mark coins. The earliest punch mark coins found in Sri Lanka are belonging to a category generally known as imperial series, which appeared for the first time in various parts of India during the rise of the Magadha empire (Bopararchchi: 2006: 16). Although many of the imperial punch mark coins found in Sri Lanka are identified as an early Mauryan period series, given the fact that intensified trade relations with north India began around the 4th century B.C. (most probably parallel to the Magadha expansion), finding early imperial period coins in Sri Lanka cannot be ruled out. In addition to punch mark coins, two coins suspected to be of elephant and swastika, tree or caitya and swastika, have been found from period I5 (Bopararchchi: 2006: 7). Furthermore, during Period I the use of Brahmi script increased significantly: four inscriptions and ten single Brahmi letters have been recovered (Allchin 2006: 432). Most of these new materials that appear at period I indicate a clear penetration of north Indian communication networks into the early Iron Age southern interaction sphere. Furthermore, from ASW 3 first evidence of utility of burnt bricks and tiles come from stratigraphic phase V. A paving of bricks, perhaps a pathway or a floor appeared at the edge of the southern wall of the excavation pit in context 139 (Fig.22). Coningham reports a transition of geometric forms of the house structures from an earlier round-shaped house to a rectangular house (1999: 74). The observation is confirmed by the appearance of postholes patterns reflective of rectangular-shaped structures on the occupation floor, as is recorded on the surface of context 166 at ASW3. Despite the continuation of indigenous cultural characteristics of the initial phases, external interactions, particularly north Indian contacts, seemed to have
created irreversible changes to the indigenous social structure of the Anuradhapura community. Therefore, if above data are a testament to the socio-cultural changes that took place at Anuradhapura in advent of a surge in long-distance trade after the 4th century B.C., then the data emanating from the construction of a massive fortification around the ancient settlement during the same time, clearly highlights a revolutionary change in the socio-political arena from that of the traditional tribal socio-political structure of the previous period, which is discussed in detail in chapter 6.

According to Coningham’s research, the earliest phase of the fortification (a rampart and a ditch) built around the settlement was in Period I; it consisted of an earthen wall construction 2980m in length, 2.10m high, and 8m wide, circling an area of 100 hectares (Coningham 1999: 53). The settlement was divided into a grid. Furthermore, large-scale irrigation works were constructed in the vicinity of the fortified town. If these data are accurate then they clearly indicate the emergence of a political centralization parallel to the surge in long-distance trade. The evidence highlights an obvious socio-political transformation from that of an initial tribal level structure. This created a new hegemonic power centered on Anuradhapura urban center, compelling previously independent tribal territories to become its hinterland. The process signals a new pattern of social economic relations between the Anuradhapura urban center and surrounding tribal societies during the flowing time period. However, it is unwise to state that the hinterland tribes immediately accepted the hegemonic power emanating from the emerging center. It must have contested and resisted in various forms as the hegemonic center implemented variable strategies of subjugation. Nevertheless, as expressed from the epigraphic record of mid-third century B.C., it is plausible that the Anuradhapura
society has already established an initial state-level socio-political structure by that time. The title of Maharaja (great king) appears at the Mihintale inscriptions (IC # 46 and # 47: Paranavithana 1970), increased competition of elites for status as expressed by the contents of the plethora of EB monastic inscriptions. Another indication of the presence of initial states by the mid 3rd century B.C. is the utilization of Buddhist ideology to expand and consolidate state power in its hinterland. Construction of monumental symbols associated with Buddhist ideology as expressed in the chronicles around the Anuradhapura center for the first time around the mid third century B.C., is a clear step in the direction of this political process.

5.2.4 The IBB and Anuradhapura settlements: the Synthesis

The C14 date obtained for phase I of IBB settlement indicates that the village occupation at this site began not later than the 4th century B.C. Nevertheless given that tomb cluster 21 at the corresponding cemetery has a 6th century B.C. date we can assume that settlements belonging to this early phase should be lying somewhere in the vicinity. Cluster 21 data parallel initial phases of period J of ASW2 and stratigraphic phase IV of ASW3. This surely indicates the possibility that there were other proto-historic settlements surrounding the IBB settlement that are much older than the PH/EH transition phase (phase I) deposits at the IBB Settlement. Based on the settlement pattern discussed in this chapter we can predict that more proto-historic settlements are buried in the floodplains associated with proto-historic burial sites in this region.

Furthermore it is clear that although Anuradhapura was gradually becoming a dominant tribal area from around the middle part of Period J of ASW2 (stratigraphic
phase IV of ASW 3), and during period I of ASW2 (ASW3 stratigraphic phase V) the settlement transformed radically into a centralized polity that had enormous political weight. This is surely shown in the ability of the rulers of the site by the construction of massive fortifications and sizable irrigation works. Nevertheless, in hinterland regions, such as the IBB, traditional tribal structures have continued for about another century. They seemed to have received exotics continuously through their traditional exchange networks up until the beginning of third century B.C. However, except for carnelian and agate, none of the other luxury goods mentions above have been received at IBB. Contrary to this exotics coming from the northern sphere went directly to Anuradhapura. Soon the rulers of emerging states of Anuradhapura seemed to have decided to be directly involved in the socio-economic and political process in the hinterlands. It was this intervention that is evident in the archaeological record of the IBB area during EHP. During EHP proto-historic social practices have been discontinued while new socio-political, economic, and ideological trends have emerged. The smooth flow of exotics into Sigiriya-Dambulla region has been completely cut off by the beginning of EHP. As a consequence megalithic cemetery tradition was no longer feasible. Perhaps direct involvement by the Anuradhapura center through promotion of a new ideology, borrowed from the imperial powers of the north, undermined the traditional tribal structures in the hinterland societies. Spread of Buddhism in the hinterlands was considerably swift and decisive that in many areas monastic complexes began to mushroom along with evidence of major dislocation of traditional tribal structure. During this time we can see a new elite class emerging breaking social control mechanisms of
proto-historic period. This is evident from the donations made to monasteries as expressed by the Early Brahmi inscriptions.

We can see that the proto-historic community of the Sigiriya-Dambula region went through a massive social change around the 3rd century B.C. As the settlement patterns and subsistence economies at the macro level changed, population density increased. Instead of adapting to seasonal changes and floodplain economy, small-scale village reservoirs played a major economic role, enhancing irrigated rice and other agricultural surplus productions. There is no doubt that a significant increase in the agricultural surplus was achieved during the EHP. At the same time it is clear that a considerable economic surplus was spent on maintaining a large number of monasteries and monks. Most likely, services of administrators, architects, surveyors, carpenters, masons, rock carvers, smiths, cooks, ordinary laborers, transporters, etc. were needed constantly at the monasteries. Despite this vibrant socio-economic change we do not see a qualitative material improvement in the settlements from the IBB or from other sites such as Sigiriya, Alakola vava, and the Inamaluwa area. In fact, out of several dozens of settlements found in the SARCP surveys, none of them depict qualitative physical development beyond gangoda (settlement with clustered houses)-type physical features. They all more or less retained the characteristics of rural hamlets for many centuries. There is evidence of the existence of one or two large expansive activity areas where iron production sites, smithy slag sites, associated with patches of ceramic scatter such as in the Inamaluwa, and western gate area of Sigiriya royal complex stretching along the Sigiri Oya towards the south, but such features can be cumulative and could have been developed during different time periods. Without excavations and in-depth analyses we
cannot say much about these sites. However, these features do not reflect characteristics of urban communities either.

The general pattern is that village-level settlements in this region do not reflect any qualitative expansion parallel to the increase of economic surplus. It seems that the surplus in the rural areas was reserved only for the development of Buddhist temples and infrastructure (irrigation systems). This is in massive contrast to big urban centers and monastic centers elsewhere in the urban areas. In the hinterlands, surely there was a major disparity in the resource distribution between hamlets and temples. Based on these evidences it is plausible to assume that the southern region of the Anuradhapura hinterland was strictly controlled by the emerging states from the beginning of the EHP. Even the elite who donated cave-dwellings for monks do not seem to have been living in the region. Their presence is not archaeologically manifested in the settlements except in the inscriptions found on the rock surfaces of cave dwellings. There is a high possibility for elite to be relocated into the emerging center from the hinterlands during EHP although they may have made donations to maintain monasteries back in their villages while residing in the urban centers. On the contrary, as presented in the chapter 6, during the proto-historic period, extended families or smaller clan units seem to have had absolute autonomy for their self-conduct within their society.

One of the more significant EHP changes was the replacement of exotic imports that were present in the proto-historic period with products from new local industries. In the proto-historic period, exotics flowed smoothly into the region regardless of their rareness. Such a flow played an important role in the social reproduction. But all this changed in the beginning of EHP, while new household scale production of glass,
lapidary works, and metal production began, flow of important exotics such as carnelian, agate, gold ornaments that played an essential role in the social arena altogether stopped. On the contrary, Anuradhapura continued to receive exotics from far-reaching sources and there is a clear indication that trade networks have completely reoriented and had strong north Indian trade relations as depicted by coins, Brahmi script, the prakrit language, and fine ceramics such as NBPW. To further consider the importance of the proto-historic exotic trade and to understand the level of complexity during the proto-historic period, I will present the data recovered from the IBB proto-historic cemetery in the next chapter.
CHAPTER 6. MORTUARY ARCHAEOLOGY

6.1. The archaeology of mortuary practices and Proto-historic social organization of IBB society

In chapter five, the analysis of the settlement and the burial site distribution pattern within the Sigiriya-Dambulla area led to the conclusion that proto-historic society was a tribal level socio-political configuration with a subsistence economy based on floodplain agriculture and mobile pastoralism. However, to fully understand the proto-historic social organization in the northern Dry Zone plain of Sri Lanka, we must also turn to vigorous archaeological analysis of the mortuary record. Therefore, this chapter focuses on a comparative Anthropological study of the scale of social organization of the Ibbankatuwa community through analyzing its mortuary record.

6.1.1. The methodology

The utilization of mortuary data to gain insights into the social organization of past societies is not a recent phenomenon associated with the tradition of New Archaeology. Alekshin (1983: 137) reports that as early as 1930’s soviet archaeologists carried out mortuary data analysis with the notion that burial customs are shaped by basic social structures of primitive tribes. Nevertheless by 1970’s there was a marked increase in the application of new methodological approaches developed by the “processual” school of thought focusing on utilizing mortuary record to gain insight into the past social organization. Particularly the emphasis on the importance of utilizing ethnographic and ethno-historic data in the analysis of mortuary data stimulated a new
wave of interest in the funerary analysis. In this regard works of Saxe (1970) and Binford (1971) have been highly influential. It is not an exaggeration to suggest that these scholars have triggered a wave of new interest (Brown 1971, Chapman 1981, Charles and Buikstra 1983, Goldstein 1981, Peebles and Kus 1977, Saxe and Gall 1977, Shennan 1975, Tainter 1978) on mortuary data analysis to gain insights into the social practices and organizational complexities of the past societies.

As summarized recently by Rakita and Buikstra (2005: 3), Saxe (1970:2) through his ethnographic data analysis of the Kapuka Papuans, Ashanti, and the Bontoc Igorot attempted to develop a cross-cultural model explaining how mortuary practices were linked with social cultural system of the society. Saxe suggested that such models should be able to “monitor social complexity” and infer organizational “type.” Saxe’s model focused on understanding whether the individual’s social position or socio-political complexity of the society is manifested in the mortuary practices. Binford’s (1971) work on the other hand focused on utilizing ethnographic and ethno-historic data to understand the social significance of the mortuary record of archaeological societies. His method involves probing ethnographic and ethno-historic record to identify behavioral regularities associated with the treatment of dead in relation to social organization. Based on these behavioral regularities, cross-cultural generalizations focusing on the interrelation between mortuary practices and social organization were made. These generalizations in turn were utilized as tools to gain insights into the social significance of the patterns reflected in the mortuary archaeological record.

The “Processual” school’s approach to ethnographic and ethno-historic data produced numerous key generalizations widely applied in many archaeological case
studies. A few examples for such key generalizations are: 1. When societies gradually change from mobile subsistence strategies to sedentary life (agriculture) mortuary practices increases in complexity (Binford 1971), 2. Status of the deceased was symbolized through status specific badges and by the amount of mortuary goods inserted in the graves (Binford 1971), 3. Social status of the dead is relative to the amount of mortuary treatment performed (Shennan 1975), 4. Inherited rights to control critical resources are emphasized through maintaining formal disposal areas (Saxe 1970). Some of these generalizations are inter-related; some have been refined and rephrased later with more research. Nevertheless, underlying assumption of these generalizations are that the mortuary record is variably patterned and this patterned variability reflects some kind of social reality associated with real life social relations. Most of these key generalizations have not only gained attention and further refinement by more recent studies (Charles and Buikstra 1983, Goldstein 1980, Moris 1991) but also attracted strong criticism, particularly from the works of “postprocessual” school of thought such as Hodder (1982), and Shanks and Tilley (1982).

The postprocessual school raised valid concerns about the danger of utilizing mortuary archaeological record to make inferences on past social organization, when in fact, such patterns could result from any number of other factors external to social context. The postprocessualists highlighted the futility of utilizing cross-cultural generalizations based on ethnographic data to interpret the archaeological record, pointing to the arbitrary nature of symbolic behavior and the range of alternative possibilities. In contrast, the postprocessual school views mortuary context as an arena where mortuary rituals are used by the living to negotiate status and other social
differences, thus operating as agents of culture change. This view on the one hand challenges the processualist view that the mortuary record is, to a certain extent, a manifestation of real life social relations. On the other hand, postprocessual scholars overemphasize the fluidity of social structure, particularly in the mortuary arena and the agency of living actors to act against the rules of structure. While I would agree that the mortuary arena is a place where actors could respond creatively and transform structure like in other contested social arenas where structure is challenged by actors as explained in theory of Practice (Bourdieu 1980, Ortner 1989), I also firmly take the position that structure in the mortuary arena was neither more fluid, nor more rigid than other areas of social reproduction where social structures are reiterated by repeated social practice, such as in the contexts of marriage ceremonies, initiations, gift exchange, potlatch etc. I argue, that the mortuary arena is a stage where mortuary rites are repeated and re-repeated according to the rules of structure and a place where practices are influenced by ‘habitus’ that gets us to regenerate regularity in our practices as explained by Bourdieu (1980: 54), just as in other social arenas where structure operates with endurance and social practices reproduce tradition. In certain traditional social types, constraints of structure could operate with much more rigidity, while in contrast, greater fluidity may characterize societies penetrated by external influence, allowing much more freedom for agency.

While not forgetting the dangers associated with the utilization of cross cultural generalizations, there is no doubt that careful application of the ethnographic record from societies with similar mortuary context to that of the archaeological record being investigated can produced valid insights into the past social organization, and social significance of tomb construction and associated ritual behavior. Thus in exploring the
social organization of early Iron Age megalithic cultural complex in Sri Lanka through its mortuary record, we can turn to the ethnographic and ethno-historic record of tribal societies of mainland India such as the Gonds, Thodas, Ho, and Nagas who produced a similar mortuary record. Simple techniques of monumental construction by small clan groups or tribal level gatherings, as highlighted by colonial period ethnographers, can illustrate how segmented corporate groups can be successful in achieving difficult tasks. Certain customs and rituals associated with ethnographic mortuary practices such as ritual discard and sacrifice may also be indirectly helpful for outlining traditional social structure.

Before delving into the ethnographic record from the mainland tribal societies to gain insights into the social significance of IBB mortuary practices, I will construct a working hypothesis on the social organization of the IBB community based on the data presented in chapter 5. This is an important step to assure that the IBB mortuary record would be compatible to be compared with ethnographic tribal communities in the mainland India.

6.1.2 IBB protohistoric social organization: the working hypothesis

My focus here is on the social organization and scale of “Megalithic” communities in the Sigiriya-Dambulla region. This southern “settlement” belt of the north central Dry Zone plain may be compared with scholarly interpretations of the larger pan-regional or island-wide scope of proto-historic social organization. For example as pointed out in chapter 2, Deraniyagala (1990) suggests that the society centered in Anuradhapura was an urban group that migrated from peninsular India. Gunawardena
(1981) on the other hand suggests that before the second century B.C., society consisted of relatively egalitarian structures with “bigman”-like leadership. Seneviratne (1982) is of the opinion that proto-historic society consisted of a clan-based village system run by a chieftain. However, as pointed out in chapter 1 and 2, none of these assumptions on Proto-historic social structure have been vigorously tested against the mortuary archaeological record beyond citing the proximity of megalithic burials to resource regions or early historic (3rd century B.C.) monastic complexes with inscriptions that emphasizes lineage titles.

Based on the spatial patterning of tomb clusters and mortuary goods found at IBB (discussed below), it is plausible to make a new working hypothesis slightly different from that of Seneviratne. I argue that IBB society consisted of a collection of small groups segmented along clans or extended families (segmented clan units) headed by a group of clan elders. These clan(s) while controlling their own floodplain land along certain river basins where their cemeteries were located, seemed to have shared larger common tribal area comprising a number of river basins through which annual cycles of pastoral mobility took place. The lack of chiefly type burials instead of a number of equally elaborated cists in each burial tomb cluster indicates the possibility that IBB society was a segmentary lineage system run collectively by a group of clan elders and not by an individual chief. Anthropological theory suggests that mortuary practice would have been an important theater of social reproduction, which reinforced traditional structure through the performance of certain mortuary ritual behaviors. Thus, if my hypothesis that segmentary lineage system run by a group of clan elders is correct then
the mortuary record of IBB should be reflective of practices that reiterated principles and rules of segmentary lineage structure.

To identify whether the material patterns in the mortuary archaeological record at IBB reflective of a segmentary society, one has to refer to the ethnographic record from a similar social context. To test my hypothesis in the subsequent section, an archaeological criterion for mortuary record of the segmentary societies is constructed utilizing both Sahlins’ (1961) conceptual framework for “segmentary lineage systems” and ethnographic tribal mortuary record from mainland India. This criterion in turn is applied to IBB mortuary record to see whether the patterns predicted for segmentary social systems are reflected in the IBB archaeological record. This method will allow reinforcing or discarding the working hypothesis presented above.

6.1.3 Application of the Segmentary lineage concept to mortuary data interpretation

Ever since the concept of segmentary social structure was introduced by Fortes and Evans-Pritchard (Evans-Pritchard 1940), it became an essential explanatory framework in studies focused on tribal socio-political systems. Although the main premises of segmentary concept (e.g. equality across segmental units and tribal level unification during external threat) have been subjected to strong criticism, lack of alternative theory and applicability of segmentary concept to tribal communities with certain structural characteristics, the segmentary framework still remains a potent explanatory tool especially in the studies of particular type of tribal societies.
According to Segmentary theory, segmentary societies are considered to consist of a group of social segments that are structurally similar and functionally equal. In general, segmentary theory emphasizes on the mechanisms of clan or segmental group autonomy within a larger tribal level socio-political existence. It explains the role of the mechanisms of fusion and fission where larger tribal level socio-political formations are developed at times only to be broken off quickly without forming any permanent institutions of political centralization. Such mechanisms, according to segmentary theory, operate favorably for the sustenance of segmental unit autonomy. In the past, when this concept was still fresh, it was applied to a wide variety of societies ranging from simple tribes to proto states (Barnes 1954, Leach 1954, Southall 1956). Sahlins (1961: 325) critiqued this broad approach and argued that segmentary theory should be applied with a narrower focus to a specific social type. Particularly it should be applied to study certain social groups such as Tive and Nuer who Sahlins claimed to possess a specific adaptive variety and a level of organization that can be placed between bands and chiefdoms. Although there are many remodified versions of segmentary social existence and autonomous village level structure, Sahlins work seem to be the most appropriate for the study of pastoral tribal societies who are fiercely independent and yet to see any form of political centralization. Such societies have the capacity to change but yet structurally rigid slowing them from social change.

According to Sahlins’ (1961) criteria, in a segmental social system, a tribe consists of a number of equivalent multifamily groups that are structurally identical. Each segment has its own equivalent organization and do not functionally depend on another. These unspecialized segments are the residential and (usually) proprietary units of the
tribe, the people that settle or wander together in a given sector of the tribal domain and that separately exploit a sector of strategic resources (Sahlins (1961:325). Sahlins points to different levels of segments, at primary and secondary levels of segmentation. The primary segment is the smallest unit in a tribe consisting of a small group of relatives acknowledging a leader, wandering separately from fellow tribesmen some of the year. This smallest unit or primary segment in a tribe is the largest permanent political unit. Such segments are politically and economically autonomous self-sustained entities. The group manages its own affairs and is strongly unified against outside interference and acts collectivity in defense of its property and persons. According to Sahlins the leadership within primary segments is not hereditary, but it is earned by virtue of personal characteristics. Loyalties can be built through generosity, fearful acquisitions through magic, inclination to accept a leader’s opinion through demonstration of wisdom, oratorical skill etc. Perhaps such attributes can be instrumental in gaining respectful attention but may not be useful to achieve ambitious individualistic political goals.

Sahlins (1961) further points out that the fragmented character of segmentary polities is mainly due to their Neolithic type mode of production. Lack of technology that requires intensive division of labor and absence of socialization of the production over a wide region is seen as the main characteristics of the tribal economy. The tribal subsistence economies are considered to rely generally on methods such as shifting agriculture and simple pastoralism and such practices are responsible for keeping the tribe dispersed with nucleation at a low level. Therefore, segmentary theory assumes that tribal subsistence economies do not have any incentive for permanent integration or
interdependence and as a consequence tribal unity is a loosely structured aggregation rather than a well-integrated social system evident in centralized polities.

Nevertheless, speaking on secondary segments, Sahlin points out that tribal political solidarity is not confined to small segments all the time. Ecological conditions force primary segments to come into contact in certain seasons requiring them to terminate feuds and develop unity. Thus secondary and higher segments may exist as territorially defined sub-tribal groupings. In these secondary level groupings, the level of consolidation between primary segments said to be depended on the level of external competition. When the external competition is high tribes tend to form confederations but when the threat is over or the tribal level group tasks are fulfilled they break off and live as autonomous socio-political units. Thus the tribe as a whole is a social cultural and ethnic entity but not a political organization. It is held together by likenesses among its segments and by pan tribal institutions like intermarrying clans, age grades, military or religious societies that cross cut segments. But conditions are unfavorable to developing permanent tribal leadership that cross cut segments. When tribal confederations break off the leaders fall back into social oblivion. If such situations were manipulated by certain individuals to gain undue power or wealth, social leveling mechanisms come to play in the form of gossip, ridicule, and ostracism to put the individual back in his place (Sahlins 1961:327).

If we agree with Sahlin, the basic premise of segmentary societies is the emphasis on clan autonomy, clan level internal unity, and tribal level co-existence. Much of the social regulatory mechanisms operate to reiterate these principles. Given that ethnographic and ethno-historic data suggest that in many tribal societies mortuary
behavior plays an important role in the social reproduction process - in the analysis of IBB mortuary record we can expect to see mortuary behavior influenced by certain social regulatory mechanisms that would reiterate clan autonomy and internal clan unity within tribal level social existence. Thus to apply Sahlins’ criteria for segmentary lineage system to study mortuary archaeological context of a tribal society one has to create criteria for possible archaeological correlates of such behavioral patterns. Such criteria in turn are useful to read the patterns reflected in the mortuary record suspected to be of similar level of social complexity.

6.1.4 Criteria for mortuary archaeological correlates of segmentary societies

As highlighted above, Sahlins’ criteria for segmentary society underscore three basic premises of segmentary societies: 1, clan autonomy (Clan autonomy relates to segmentary social existence) 2, internal clan unity (inter clan unity associates with the importance of having closely knit smaller group working as a co-operate group). 3. tribal level co-existence (his emphasis on secondary level groupings indicates necessity of overarching tribal level social consolidation). The mortuary context should be one such theater where such principles are materialized through social practice. Therefore, when examining the mortuary archaeological context of a society that is hypothesized to be consisting of a segmentary social system, one should expect to find material conditions compatible with the principle characteristics or rules of the social structure of that society, i.e. archaeological patterns indicative of clan autonomy, internal clan unity, and tribal level socio-political existence being repeatedly reiterated through mortuary practices.
Utilizing Sahlins’ criteria it is possible to predict certain behaviors shaped by the social structure that would lead to specific material patterns in the archaeological record of a segmentary society. I have chosen ethnographic examples from mainland India from communities known to have non-complex tribal organization and who built tombs in memory of their dead similar to the tombs found in the archaeological context at IBB.

Overall I will consider eight possible mortuary correlates of a segmentary social system:

1) Clustering of tombs into numerous groups

If clustering is evident then it could possibly be a reflection that the concerned society was adapted to social segmentation along clan or extended family line.

Elsewhere, I have argued that distribution of numerous burial clusters within a larger (tribal level) cemetery could be a significant material correlate of “clan unity and autonomy.” This is the primary feature of a segmentary socio-political system as pointed out by Sahlins. Ethnographic record on various tribal societies such as Oraon and Khasis in the subcontinent who performed similar mortuary practices have yielded behavioral patterns where concentrated efforts have been taken to bury clan individuals together in a separate location from that of the other clans. For example, the Oraon of Chotanagpur of mainland India buried the bones collected from the funerary pyre in the bone burial ground of the tribe where each clan has a separate stone slab under which the remains of its members are buried (Dalton 1872: 261-262). Khasis of Assam periodically collected the bones of clan members and deposited them together in a large stone chamber (Leshnik 1974:...
Mundas and Ho tribes are also reported to have arranged their burials with a similar principle where remains of the original family members of the villages are deposited in urns together in one place under one or more large stone slabs (Singh 1970: 153). These actions are a clear indication that in tribal level social existence where clan unity and individual ties to his/her clan has been extremely important that real world social ties have been reiterated and maintained continuously into the other world as well.

Such behavioral patterns are reflected in the archaeological context of Neolithic and Bronze Age mass tombs in western Asia and Europe where community members are inserted in a single tomb through a lengthy period of time leading to mass accumulation of skeletons. In the same way we can argue that clustering of burials in a larger tribal cemetery reflect similar behavioral pattern where clan unity and autonomy is expressed. There are numerous archaeological cemeteries in different parts of the world where clustering of tombs have been reported (Gamble et al 2001; Leshnik 1974, Bandaranayake 1992). Excavation of such a tomb cluster in a cairn burial site at Junapani near Nagpur (a megalithic burial site) was reported in 1867 by Rivett-Carnac and interpreted that the evidence reflect burials of a chieftain and his family members (Leshnik 1974: 138). Similarly, Leshnik (1974: 110) reports that Megalithic pandukkal burials at Brahmagiri depict a pattern of clustering where number of small cists arranged in groups around larger cists. These patterns surely are expressions of certain social reality of the society who authored them and most of all they display the unity of a closely knitted clan/family groups. Thus based on
the main premises of segmentary concept where clan unity is seen as an important aspect of tribal level social existences, it is plausible to argue that one form of materialization of such behavior in the mortuary arena is clustering of burial tombs along clan boundaries in a larger tribal level cemetery.

2) Repetition of similarly structured clusters within large cemeteries (no inter-cluster hierarchy should be visible)

In a segmentary system, since all the clans are more or less economically equal and politically autonomous excessive wealth accumulation is not encouraged, it is logical to assume that material representation of such political and economic relations should display equality in the socio-economic existence. Material representation of such clan level socio-economic equality and social leveling in the mortuary record would be repetition of similarly structured tomb clusters in terms of tomb architecture, tomb sizes, and mortuary paraphernalia. Ethnographic descriptions on the spatial arrangement of burials in different tribes such as Khasis of Assam (Leshnik 1974), Mundas and Hos of Chotanagpur (Singh 1970) where clan/family members are buried together, do not suggest any overall difference in the mortuary treatment at family or clan level, because all clans or families repeat the same behavioral patterns.

Spatial patterning of tombs reflective of such behavior is available from the early Iron Age archaeological record of India. The site plan of the megalithic cemetery at Junapani in the Nagpur district, India (Leshnik 1974: 137) clearly depicts distribution of similarly structured separate clusters in a cemetery without
much elaboration between tomb clusters indicating repetition of burial clusters in other archaeological sites as well.

Thus it is plausible to argue that in a segmentary level society one should see perpetuation of burial clusters consisting of similar characteristics throughout the cemetery and one should not expect to see significant hierarchy between burial clusters. Therefore, there should be no clear cut inter clan inequality reflected in terms of tomb architecture and mortuary goods. There should be no evidence of the presence of a ruling class or family burial clusters whose burials stand out as a group from that of the other tomb clusters. What we should witness is similarly structured tomb clusters representing the presence of a number of clan elders and other subordinate clan members clustered into groups along clan or extended family lines.

3) **Intra-cluster variability in individual tomb constructions and mortuary treatment**

Hierarchy within clusters should be visible in the form of relatively elaborated tombs representing clan elders and other clan members. In a segmentary social system since lineage or intra clan level hierarchy is common and considered to be the highest level leadership achievement, we can expect to find a few relatively elaborate tombs in each cluster representing a number of clan elders who may have headed each clan in different times. In many ethnographic tribal societies in the subcontinent such clan elders or tribal heads for that matter were given special mortuary treatment different from that of the ordinary members of the clan. Maria Gonds of Abujhmar hills in India only the headman
and clan elders were cremated (Singh 1970: 164). Among Hos in Bihar the size of the stone used for burial tomb depend on the status of the deceased (Sachchidananda 1965: 13-15). In Assam some of the tribes were reported to have performed human sacrifices in the honor of the tribal chiefs (Crooke 1909: 457-476). In the same district certain tribes considered that a fresh skull of a human victim was essential to adorn the tomb of the chief. These data clearly suggest that in the mortuary context of tribal societies there is a certain level of inequality in the way in which different individuals were treated.

Thus in the archaeological record of a segmentary society, although one cannot expect to find clear cut inter cluster hierarchy between tomb groupings one would see certain level of intra-cluster inequality in the treatment of members of a same clan. Cemetery sites at Nagpur and Brhmagiri (Leshnik 1974: 138 and 110) depict such intra-cluster inequality. Thus it is plausible to argue that despite the overall clan independence a certain level of difference in terms of mortuary paraphernalia and tomb construction could be visible within clusters.

4) Aggregation of numerous tomb clusters in a large cemetery (despite clan or extended family level segmentation) indicating overarching tribal level social unity

Although clustering of tombs indicates clan level unity and autonomy, inter clan interaction is an essential part of the tribal level social existence. Intermarrying clans, age grades, and military or religious societies that cross cut social segments (clans) are important for tribal level socio-political existence. Many activities surrounding mortuary rituals/ ancestral worship in larger
community gatherings may play important roles in social reproduction and reiteration of traditional socio-political structures. Institutions and activities surrounding mortuary rituals and ancestral worship contain such mechanisms of social cohesion. Because activities such as mortuary rituals usually make larger tribal level gatherings possible allowing various lineages to come into contact and actively take part in the ritual ceremonies. In an event of a megalith type monumental construction main requirements are to have a large labor pool and coordinated labor efforts. Ceremonial gatherings that cross cuts clan boundaries can bring larger tribal level labor pool together to achieve massive tasks. Dewer (1966) describes such an event where close to one hundred Angami Nagas achieved such a communal task by transporting and erecting an eight-ton megalith without prior organization. Thus both monumental tomb construction and clustering of tombs in a large cemetery can be considered as material representation of tribal level social unity and consolidation. Location of separate cemeteries within a close proximity in the same floodplain) or adjacent floodplains too could be an indication of both tighter clan or extended family level unity within larger overarching tribal level social existence.

5) Evidence of destruction/sacrifice/discard of high value status objects in the mortuary arena indicating strict social control mechanisms at play

We know that inheritance of wealth and status is an important source of social inequality and mortuary arena is a place where such wealth and status transformation can take place. In a segmentary social setup, since clan autonomy
is an essential social condition we can expect to see social leveling mechanisms play an important role in the social reproduction process. There is a high probability for such practices associated with structural regulation to be performed in mortuary arena. Thus acts of destruction, sacrifice, and discard of high value objects used by the deceased can happen in the mortuary theater. Therefore, in a segmentary level tribal social setup, evidence of ritual discarding, sacrifice of valuables at mortuary context could mean that such mechanisms prevent accumulation of wealth and status objects.

Although potlatch type destruction or sacrifice is seen as display of ability to muster resources, a power enhancing strategy for big men, on the same token such mechanisms could prevent accumulation of excessive wealth thereby curbing reinvestment on undue power enhancing capabilities. Thus in a social setup where clan autonomy is emphasized and overarching tribal level individual power enhancement is not tolerated, the only encouragement for power seeking individuals would be to achieve status within the limits of clan boundaries, that too would only be within one’s lifetime. Therefore, although individuals would have tendencies to collect certain status objects during his/her lifetime, after death due to practices of sacrifice and discard these objects would not be inherited by the living.

Sacrifices can take different forms: breaking them or simply discarding them into contexts where recovery of such objects are taboo, spending all the wealth accumulated through one’s life to conduct ceremonies associated with his final rights, and distribution of wealth among community members but not within
Ethnographic Angami Naga tribe of Central India slaughtered all or some of the cattle belonging to the dead person during the performance of mortuary rites. After setting aside the skulls and the liver parts of the cattle for final funerary rites the meat was distributed and consumed among his friends, but not given to his family (Hutton 1969: 225). At the end of mortuary rites all belongings of the individual including materials of daily use such as cups and sources were discarded near the burial.

Therefore, we can speculate that in a segmentary socio-political setup one should be able to witness material evidence reflecting status goods or (social) wealth objects being removed from circulation through ritual discarding or as ceremonial expenditure.

6) Status items in the burials should be limited to tokens of mortuary rites or personified identity objects, not power enhancing display items

In a segmentary social system, since power enhancing political manipulation is not welcomed, even in the tombs of clan elders one should not see evidence of larger concentrations of excessively valuable mortuary goods as materials of wealth and prestige display that make certain political statements advantageous for living. Due to lack of permanent political centralization one can not expect to see mortuary evidence of the presence of powerful chiefs with overarching political control cross cutting different clans. Thus no elaborate tombs of chiefdom type where considerable wealth and labor were exhausted to gain political mileage and prestige should be present. If such valuable objects are
present in the tombs for some reason then they should appear exclusively as
tokens of certain mortuary rites or as tokens of personified objects (pieces or parts
of ornaments, cloths, etc.) that symbolizes the transformation of dead to the other
world. These tokens could expect to be played only a symbolic role representing
the dead individual, especially in a context where bodily remains are not interred
in a burial tomb.

Presence of such tokens – containing certain social status - could also
mean that specific social leveling mechanisms are in operation, especially when
focusing on the fact that tribal societies are considered to consist of mechanisms
that could curb power and prestige enhancing strategies.

7) Reusable status items should be found intact in the mortuary
context and this may indicate taboos and social sanctions preventing
them from reentering the real life transaction spheres

If ritual destruction or discarding plays a role as a social leveling
 mechanism that curb accumulation of status objects, then even if reusable status
goods are left in the mortuary contexts such materials should not be allowed to
reprocess or scavenge, thus should remain undisturbed in the mortuary context.
Prevention of the reuse of mortuary goods could be achieved by imposing taboos
and sanctions. Evidence that could probably be associated with such social
sanctions is witnessed among tribal ethnographic societies like Angami Nagas.
Hutton (1969: 229) recorded that at Angami Naga funerals, beads worn by the
dead person may be taken only by the man who buried the body and he may not
be sold them in the village (Hutton 1969: 229). Such practice not only denies
inheritance of the deceased’s wealth to his family but also removes or limit circulation of certain status objects for good.

8) Exotic finished items may be surprisingly common in the segmentary mortuary context because such materials are of great importance to social reproduction

Life histories of discarded /sacrificed exotic status goods can pass through certain stages where they may be used as items of initiation ceremony gifts, bride wealth, ritual payments, blood money etc. before being sacrificed in the mortuary context. Such elimination from circulation needs constant replacement of certain items - to maintain their roles in the social reproduction process - despite the far-reaching distances of their places of origin. Thus in a segmentary social system, some finished or raw exotic items can come from distant places and circulate abundantly indicating the existence of strong pan regional communication network crosscutting scores of tribes living in vast distances. Just as the common presence of such exotic items - discarded/sacrificed as ritual objects in the mortuary context - indicates the importance of such items for social reproduction. Disruption of supply routes of such material can lead to major social dysfunction and institutional failure, whose functions were depended on the circulation of such exotic status items. Therefore, as I argued elsewhere if the sacrificed exotic status objects play an essential role in the social reproduction of segmentary social system of the IBB community then the sudden drop in the circulation of such items altogether from its context would mean a considerable dislocation of the segmentary social structure.
It is not a necessity for all aspects listed above to be present at all times in an ethnographic or archaeological context of a segmentary society. However, recognizing such patterns may be a good step towards identifying the level of structural rigidity or limits of space for agency associated with a segmentary society. If IBB archaeological record matches the criteria for mortuary archaeological correlates predicted above for a segmentary social system then it agrees with our argument that IBB population was in fact a segmentary society and was consisted with a rigid structure with relatively less space for agency. Much of the archaeological patterns are resulted from actions that influenced by segmentary principles and these actions may have been an essential part of the social reproduction process. This will on one hand help us to conclude that proto-historic megalithic context in Sri Lanka was mainly a society that had its highest level political organization limited to tribal level confederations. On the other hand it can tell us that the end of megalithic mortuary practice around 4th to 3rd century B.C. signals the beginning of a major socio-political dislocation where clan autonomy was undermined, probably by the expansion of new ideals that promoted political centralization. Below I will analyze the mortuary record from the IBB cist burial site to test whether it matches the criteria outlined above for segmentary societies.

6.2 Excavations at Ibbankatuawa (IBB) megalithic cemetery

Located 200m west of the IBB settlement overlooking the Dambulu Oya River floodplain, the IBB cist burial site is one of the largest proto-historic cemeteries found in Sri Lanka (Fig.10a). It spreads approximately within a 700x400m area on a relatively high ground surrounded by low-lying seasonal flood plains around it. IBB is one of the
eight Megalithic tradition burial sites found so far in the Sigiriya-Dambulla region and it
is the only proto-historic cemetery site in Sri Lanka where a corresponding settlement has
been excavated. It has several hundred cist tombs made of granite slabs and is spread
more or less within 42 burial clusters averaging 10-15 cist tombs in one group. Number
of individuals inserted in these cist tombs and free standing urns (without stone
architecture) are far more than what is represented from the cist tombs. Carbon 14 dates
from the charcoal samples extracted from cluster 21 suggest that the cemetery was in use
at least from around 600 B.C. This is in contrast to the earliest date (400 B.C.) received
for the settlement. Nevertheless, the material record unearthed from the cemetery is
precisely the same as the data recovered from the PHEH level (context 28 and 43) at IBB
settlement. Thus without doubt we could conclude that the settlement and the cemetery
were contemporary at least during the later stages of the utility of burial grounds.

6.2.1 Field research involving IBB cemetery

The IBB cemetery was first excavated by Raja De Silva of the Department of
Archaeological Survey of Ceylon in 1970. As mentioned elsewhere, a dozen years later,
Bandaranayake recommenced work at IBB when the Dambulla cultural triangle project
was established in 1982. Subsequent to the 1982 preliminary survey, excavations were
recommenced in 1983 and 1984. A cist tomb cluster located at the northern fringe of the
site was opened up. Again in 1986 a research team from the University of Kelaniya
surveyed the site and produced a detailed area map of the cemetery. In late 80s new
excavations began at the site under the PGIAR-CCF-KAVA collaboration project
unearthing one of the largest tomb clusters (cluster 21) in the cemetery. This excavation
project went on for three field seasons from 1988 to 1990. In 1988 I was involved in the excavation of large urns removed from IBB cluster 21 at the Sigiriya cultural triangle laboratories while analyzing and cataloging the mortuary goods found at the site. I was also involved in the field excavations during the 1989/1990 field seasons at IBB and the monastic complexes at Pidurangala and Dambulla. In 1990, the first half of the field season was spent at the IBB cemetery when the cremation pit was exposed, while the latter half was spent excavating two 5x4m trenches at the IBB settlement. Also during the 1990 field season, I participated in a cesium magnetometer survey carried out at the IBB cemetery to locate the burial chambers that were totally submerged. This enabled us to enhance further details in the area map produced in 1986.

Despite years of archaeological research at the IBB cemetery, the data from the IBB excavation has not been utilized for an in-depth archaeological analysis in order to understand the proto-historic-early historic socio-political process. Bandaranayke (1992), in his article on the ‘Settlement Pattern of the Proto-historic-Early Historic Interface in Sri Lanka,’ published a brief account of IBB data recovered during the 1988-1990 field seasons. Seneviratne (1996), too, referred briefly to PGIAR-CCF-KAVA work at the IBB cemetery, specifically he had referred to this author’s unpublished research at the Sigiriya-Dambulla region in his article entitled ‘Peripheral Regions’ and ‘Marginal Communities’: “Towards an Alternative Explanation of Early Iron Age Material and Social formation in Sri Lanka.” Furthermore, in 1999 I presented a research paper entitled “Burial Deposits at the Ibbankattuva Megalithic Burial Site, Sri Lanka: A behavioral Perspective,” at the SAA symposium in Chicago (Karunaratne and Weerasinghe 1999). Other than these brief communications, IBB excavation reports
haven’t been completed, thus remain unpublished. Databases have not been utilized for an in-depth analysis. Part of the reason is an overwhelming amount of data produced by consecutive multiple field projects that were carried out in the region during the last two decades. Although these projects have generated numerous publications (Bandaranayake 1984, Bandarnayake et al 1992; 1994), time constraints and continuous involvement in new research projects have led to the loss of priority for IBB data publications.

Being the only researcher in the PGIAR-CCF-KAVA project who worked both at the IBB cemetery and settlement site (Karunaratne 1994), along with excavations at the Dambulla and Pidurangala monastic sites (Karunaratne 1993), and the regional surveys under SARCP and PGIAR (Karunaratne & Mogren unpublished), this author is in a position to mitigate the lacuna in the publication of Proto-historic period data by presenting them in an analysis focused on understanding the PHEH socio-political process associated with the formation of complex societies.

6.2.2 Excavations at tomb cluster 21

The PGIAR-CCF-KAVA collaboration project director Prof. Senake Bandaranayake decided to excavate Cluster 21 mainly due to its central location within the cemetery and the presence of a number of significant tombs, including one that possesses a symbol carved on the surface of its capstone. Several capstones were visible on the surface before the beginning of the excavations in 1988. The average height of the excavated area was 170 meters above sea level. The excavation began after laying a grid consisting of 30x30m units divided into nine 10x10 m subunits, where each of the subunits was further divided into one hundred 1x1m micro units. The excavation was
conducted using the *planum* method, which involves careful removal of 10cm horizontal soil strips disregarding the natural sequential order of deposition. After removal of each 10cm soil strip, control plans were drawn at 1:20 scale, marking all the features (cuts, pits, trenches, constructions, cultural objects etc.). The heights of newly exposed features were measured referencing the temporary datum point marked on the site. Similarly all the burial cists and urns were mapped on each plan as they surfaced during the excavation. Each special-find was collected and bagged marking XYZ measurements, and was registered in a special-find register. Charcoal samples were collected from sealed contexts for 14C analyses. Soil samples were bagged both within and outside tombs for further analysis.

Each cist tomb was given a separate cist number. Some of the larger capstones that roofed the burial tombs had to be removed with the help of a large crew numbering up to 10-15 individuals. Inside the tombs large urns capped with inverted trays or bowls were found along with a plethora of smaller vessels carrying offerings. Large and small urns, after recording their positions, were removed in gypsum casts. These were transported to the Sigiriya Cultural Triangle laboratories where the pots were carefully excavated.

After the third and final field season in 1990, when excavations at cluster 21 were completed, the total excavation area measured 373 square meters. Twenty-four cist chambers have been completely excavated (Fig.19). An additional twenty-six freestanding urns have been unearthed outside the cists and removed to the laboratories. Just as large urns found inside the cist chambers, these isolated urns/pots could possibly be associated with funerary rites as well. In addition to the freestanding urns numerous
other smaller pots, trays, and bowls used to insert mortuary offerings were found both within and outside the cist tombs. None of the tombs contained complete or partial human skeletons. Nevertheless a few urns contained minute bone fragments.

### 6.2.3 Excavations at the cremation pit

Finding the cremation pit (Fig. 20a) in the northern fringe of cluster 21 was a chance encounter, which has enormous value in understanding mortuary behavior of proto-historic communities. This is the only cremation area recorded so far from the early Iron Age megalithic mortuary context anywhere in the subcontinent and Sri Lanka. It was fully unearthed during the third field season when excavations were extended to expose a clay surface where it emerged in the northern edge of the trench line during the 1989 field season. On the surface this feature took the form of a cemented clay floor covering approximately 200x85cm. It had an elongated basin-like surface. The bottom of the feature was flat but the edges were raised all around. On the cemented clay surface a soil fill was laid up to two to three inches thick and on top of the soil fill two small granite blocks were placed. From the appearance it was clear that the clay paving was laid to seal something below. First, the excavations were conducted around the edge of the cemented clay layer without disturbing it. This gave an opportunity to get a profile/section view in the area below the clay-cemented surface. It was revealed that the cemented floor was laid to seal a pit. To excavate the pit fill the clay floor had to be removed. The soils in the pit fill revealed extremely important information on the sequential events associated with mortuary behavior. Mainly it consisted of soils mixed with charcoal and burnt clay. Mixed with these soils a necklace/belt (Fig. 20c) consisting of four strands of beads made
of exotic materials such as carnelian, agate, and gold was recovered. Furthermore, an inverted BRW tray was found placed over a row of charred logs that were laid on the bottom of the pit floor (Fig. 20b). These data from the cremation pit give important information on the ritual aspects of mortuary treatment and help to reconstruct the sequential events of mortuary behavior that preceded the construction of tombs.

The sequence of activities associated with the cremation process based on the data from the cremation pit was as follows:

1. Excavating a rectangle pit long enough to lay a corpse.
2. Placing a layer of logs in the bottom of the pit
3. Laying the corpse on the logs before piling up more wood on it
4. Setting fire to the funerary pyre
5. Once the fire consumed all the fuel and the corpse, ornaments were added to the cremation pit to be discarded/sacrificed
6. Symbolic cleansing or extinguishing of the fire by throwing water onto the charcoal with a tray
7. Recollecting some of the sacrificed ornaments or pieces of ornaments (beads) and charred bones from the funerary pyre as symbolic representation of the individual to insert in the tombs
8. Discarding of the implements used for the cremation rituals (the tray found laid inverted on the charred logs represents this act)
9. Closing the cremation pit: a. by filling it with soils dug out from the pit, b. by laying clay cement in the mouth of the pit sealing it completely, c. Laying another soil layer before placing two rocks on it to cover the cremation pit. Finally after the cremation activities were finished the individuals were symbolically removed to the tombs constructed in the clan burial grounds. This process is associated with another set of rituals associated with mortuary internments.

6.2.4 Architecture and tomb variability at cluster 21

IBB cist burial tombs generally consist of square or rectangle chambers made of granite. The chamber roofs are capped with granite slabs over the walls, sealing the tomb from its top. Inside the chambers are usually a large urn sealed with another pot (tray or a bowl) and a couple of smaller vessels that carry mortuary offerings. Some tombs consist of multiple urns. The main urns are the central theme of the whole process of the tomb construction. The purpose of building this chamber itself seems to be to protect the main urn inserted in it. Thus, although in most cases minimal fragments or no skeletal remains are found, it is highly plausible that each main urn found in a cist chamber represents a deceased individual. Such urns usually contain mortuary paraphernalia or certain objects that may have been used by the dead individual during his lifetime. More vessels containing mortuary offerings were placed within and outside the tomb (Fig.18c). However, there is a clear variability in the mortuary treatment.

At least five different tomb types can be identified in cluster 21:
1. **Single cist with one main urn**: A single cist inserted with a large solitary urn and a few smaller pots with paraphernalia is the general characteristic of this tomb type (e.g. cist #23, #15). This tomb type fits the general tomb architecture described above, i.e. a main urn carrying ritual paraphernalia symbolizing the dead individual placed within a cist tomb chamber. These cists can be varied in size ranging from large chambers with massive capstones that weigh up to a few tons to little chambers made of a small granite pieces easily carried or manipulated by a single individual. The size of the main urn varies. However, in most cases relatively big urns that would measure 35-45 cm across its body, would be used as the main urn that would represent the dead individual. Also a range of relatively small cups, trays, and pots are placed within the cist or outside the cist adjacent to the slab wall, containing offerings and other ritual paraphernalia and, unlike big urns, mini small vessels used for offerings were placed uncapped.

2. **Single cist with two main urns**: This type is similar to the type one described above except that it has two main urns, most probably representing two different individuals (e.g. Cist#1 & # 2) (Fig. 18b). This variety clearly highlights the fact that although each main urn may represent an individual person, each cist tomb may not necessarily be limited to a single person. This type of burials surely indicates close relation between the two individuals symbolically inserted in them than the ones that are with separate chambers.

3. **Single cist originally built with multiple chambers**: This type has a relatively long rectangle shape. The interior of the chamber is divided into two or more chambers by
sticking a vertical slab across the parallel sidewalls. Cist #11 & #12 and part of tomb #3 (chamber #3A & 3B) (Fig. 18c)) seem to be of this category, although cist #11 and #12 are severely disturbed. Sometimes sidewalls are made using a long single slab, other times two short slabs were used to extend the size of the chamber. Although cist #3 is categorized as a separate tomb type, one part of this cist seems to be initially built as a cist with multiple chambers, which means that chambers #3A & #3B were built at the same time. Subsequently cist #3 with two mortuary chambers was altered by adding an extra chamber, i.e. chamber #3C.

4. **Cist(s) with added chamber:** Some tombs were enlarged by the addition of an extra chamber to make room for more individuals. Cist #3 chamber 3C belong to this category (Fig. 18c, chamber 3c). This tomb type is one of the best indications that certain individuals were preferred to be buried together thus the community seems to have revisited the tombs for this purpose. This indicates that within a larger burial cluster small family level tomb groups were formed by choosing to place certain individuals together. Although recorded as separate cist tombs, together cist #1 & #2 could also be bracketed in this tomb category (Fig. 18b).

5. **Solitary urn:** The fifth tomb type consists of solitary urns buried among other chambers in the cluster. These are free of any stone architecture. The large size of such urns, relative to most offering-vessels found associated with cists, indicates that these urns too are representing deceased individuals just as the big urns that are found inside the chambers. These urns do not have the protection offered at the urns found in the
chambers. They could be not as important as other clan members buried in the cist tombs. If the sealing process associated with a cremation pit is to be considered as an attempt to contain the spirits of the individuals, then the individuals inserted in freestanding urns may not be as feared as the individuals who are contained in the chambers. Nevertheless, some of the freestanding urns were found capped with small pieces of granite. The general observation associated with freestanding urns is that most of them are capped with bowls/trays just like their counter parts found in the cists.

6.2.5 Spatial distribution of cluster 21 tombs

Elsewhere it was pointed out that the cemetery as a whole consists of over 40 burial clusters. Further spatial analysis of cluster 21 revealed that there are mini clustering within the main clusters itself. Some of the cists are grouped together hugging each other, which reflects an obvious closeness compared to those of the other cists found within the cluster itself (Table). Cist #1 & #2 can be grouped into such a small cluster where at least urns associated with four individuals have been inserted within a close proximity. Another mini-cluster is located in the extreme west of the trench where cist # 23 & # 22 are located. At least four more freestanding urns are located within this cluster. Furthermore cist 3, 4, 17, & 18, along with a few freestanding urns, reflect another mini cluster. Cist # 10, 11, 12, & 16 seem to be grouped together as another cluster, while another larger grouping is represented in the clustering reflected in the group of cists numbered 15, 5, 4, 13, 7, 6, 20, 9, 8. The probable meaning of such patterning is discussed in chapter 7.
6.2.6 Special Finds

Almost all special finds from cluster 21 excavation are ornaments used as ritual paraphernalia associated with mortuary practice. A majority of them are ornaments such as cloth pins, bangles, a leaf shaped diadem, and beads. Numerous metal objects such as iron, copper alloy, and gold were also present. The iron objects are mainly utility tools such as nails, spears, chisels, knives, and pegs. Except for minute terracotta ring beads, tiny glass paste disc beads and two quarts beads found at cluster 21, a majority of the beads (Fig. 21b) were made of exotics that originated hundreds of miles away in the peninsular India. The three main exotic minerals used for beads are carnelian, onyx, and gold. These objects were located generally on the tomb floors, within urns and other offering vessels placed within and outside the tombs.

6.2.6.1 Carnelian

All carnelian artifacts recovered from the IBB cemetery were beads. Over 500 carnelian beads were found within cluster 21. Ninety-eight percent of all carnelian beads are barrel-type beads. Except for a few long barrels and by-conical beads, a majority of the carnelian beads are of the short barrel type. Short barrel beads are remarkably similar in size, shape, and workmanship. The only other carnelian bead type different from that of the commonly found barrel-shaped beads is the flat tablet-like spacer bead which has 4 horizontal perforations that run parallel to its width connecting and spacing four parallel strings of beads. The spacer beads too are found in variable sizes, the majority of them were approximately 3 cm long and 1.2 cm wide from its center, and 6mm thick. The partial four-strand necklace or belt found at the cremation pit shows the utility of these
beads to hold several bead strings together and spread flat on the neck or waist in an elaborately designed necklace or belt consisting of beads made of extremely rare raw materials. Other than 3 spacer beads found in the cremation pit, 10 other burnt and un-burnt spacer beads were recovered from different tombs. Thus spacer beads are an indication of the presence of large composite ornaments consisting of scores of beads. Their distribution in several tombs means that there were many individuals in a clan that could afford and had access to scores of exotic beads despite the distant locations of their origin. This pattern indicates that, although carnelian was a highly desired exotic material originating several hundred miles away, it was a commonly utilized item in the early Iron Age megalithic cultural context. This could mean that people actively spent a lot of energy on acquiring items of value in their lifetime, but yet discarded them at the end of one’s life by throwing them into the funerary pyre.

Despite large numbers and evidence of wide spread usage, in most instances the number of beads inserted in an urn is extremely limited. This is not a characteristic that was first noticed at IBB mortuary contexts. Similar patterns were observed elsewhere in the mainland megalithic context in the beginning of last century. Beck (1930: 174) observed a spacer bead along with a couple of other beads made of semi-precious stones deposited in an urn. He realized that they were pieces or parts of a composite ornament. He concluded that the practice of depositing a few selected exotic beads in an urn is due to the high value of such material. However, it can be inferred that more than economic concerns, such behavior can be linked with symbolism associated with ideology and social organization. Other than the four strand necklace/belt found in the cremation pit, the only instance where a large collection of beads was found at IBB was at cist #3B.
Three hundred and twenty three beads were collected from a small vessel inserted inside the big urn found in cist #3B. At this occasion no burn marks or discoloration was noticed on any of the beads, however, it should also be noted that separately outside this small pot within the same large urn a few burnt carnelian beads were also present. Nevertheless, this is an exception to the norm in terms of the number of beads recovered from a single urn. The other types of mortuary paraphernalia and mortuary architecture in this tomb do not reflect any difference that would make it standout from other burials. Nevertheless, at all other occasions when carnelian or onyx beads were found inserted in the pots, they were found in small numbers. The question is whether the presence of small number of carnelian beads in an urn is due to scarcity of the material, as Beck (1930) infers, or due to the sacrifice of individuals ornaments associated with post cremation process which many beads were left in the cremation pit uncollected while only a randomly picked few were symbolically inserted in the tombs. This issue will be addressed below in a separate section of this chapter.

The colors of carnelian Beads from cluster 21 vary. They range from translucent bright orange to semi opaque dull orange and pink-orange. Some of them are turned completely white due to excessive burning during cremation activities. Thus the variability in the range of colors does not indicate any inferior raw material quality or the craftsmanship, as color altercations seem to be from the mortuary context. With the translucent orange red color, the beads that are not subjected to excessive heat during the cremation activities, indicate that they were originally made of high-quality raw materials. The sizes of the common short barrel beads range from 6-7mm in length and the diameter from its center ranges from 5-6mm. Perforations were done with skill, using
an efficient drilling technique, but most beads contain slight chipping at the end of the perforation indicating single side drilling. This is clearly an indication of mass production without paying attention to detail. IBB barrel beads and its smaller size may not involve a production process as complicated as the knapping Harappan-style long carnelian beads, which needs years of apprenticeship (Roux et al 1995: 80-84). However, the remarkable standardization and craftsmanship at IBB indicates that the bead manufacturing process was done with skill by well-trained craftsmen. Such techniques of quick production and less attention to detail on the part of craftsmen clearly indicate strong demand at particular markets. It should be noted that identical carnelian barrel beads compared to those of IBB, were found at the Burial sites at Anakatawa, Pohoranvava, Palvehera, and Rotavava by the villagers who live in the vicinity. These evidences suggest that this particular type of beads was extremely popular among proto-historic communities in the Sigiriya-Dambulla region and widely accessible, and there is no doubt that this may be true for the populations in the other regions on the Island as well. For example excavations at Pomparippu (Begley 1981) and Pinvava (Jayaratne 1997) burial sites have yielded carnelian beads as well. Similar beads were found at the ASW3 excavations at the ancient capital of Anuradhapura by this author from a disturbed context.

Thus it is highly plausible to assume that beads were mass-produced in India by skilled artisans for a particular market, in this case the proto-historic Iron Age community on the Island. Although Seneviratne indicates that raw nodules may have been imported and the beads were produced at Anuradhapura and redistributed throughout proto-historic settlements in the hinterland, except for few carnelian flakes from Anuradhapura, there is no clear evidence of large scale carnelian bead-manufacturing workshops found for this
period anywhere on the Island. The fact that carnelian beads were an extremely popular material in the proto-historic megalithic context of south India, it is also highly plausible to assume that the beads were imported to the Island as finished products. Peter Francis (1986) reports that Kotalingala of Andrapradesh is a well known site for stone bead manufacturing during the fifth to second century B.C. thus it should be profitable to further investigate the contribution of such production sites for the flow of carnelian beads in the regions of the megalithic cultural complex.

Although finished goods could arrive from different sites by numerous routes, which make it difficult to pinpoint the routes of carnelian bead flow, the source of carnelian is another matter. Deposits of the Babaguru formation in Gujarat are known to consist of high-quality agates that are rich with a high content of iron minerals. These agates, when heated, can transform into deep red-orange carnelian (Kenoyer et al 1991: 41). These sources have been heavily mined during the Bonze Age and found throughout the cities of Indus civilization and beyond. It is highly probable that the same sources were exploited during the early Iron Age as well, and a part of which may have been exported to satisfy the constant demand from the populations belonging to the megalithic cultural complex of south India and Sri Lanka. Furthermore, the distribution of carnelian throughout south India in the megalithic cultural complex indicates the presence of a steady exchange network of exotic materials throughout the southern regions of the subcontinent extending to thousands of miles. This is unique if considering the fact that carnelian sources or agate deposits that could produce good quality carnelians are found in only a few places in mainland India. It is a fact that this material played an important role in the mortuary ritual context of the megalithic communities. It may therefore not be
an exaggeration to assume that the same beads played an important role in the performance of social transactions and contracts in the real-life social context as well. Thus it may be useful to pursue the importance of such exotic flow in the social reproduction of the people of megalithic cultural complex.

6.2.6.2 Onyx

In comparison to carnelian beads, banded agate/onyx beads are extremely rare at IBB. These beads consist of thin white and dark-brown/black bands (Fig.12b). Not more than twenty-six beads were found from cluster 21 and the majority of them were from the cremation pit. Only two were recovered from the urn at chamber 3B at cist #3. All of them are barrel beads and comparable in size to carnelian counterparts. Specimens from the cremation pit four-strand necklace/belt indicate that onyx beads were used with carnelian beads to create decorative patterns. Particularly the four strings running through the perforations of carnelian spacer beads begin with an onyx bead. This leaves a pattern where eight onyx beads were placed vertically in two rows (four beads in each side), separating the carnelian spacer bead from the lines of carnelian barrel beads (Fig.20c), highlighting the long spacer beads.

Although it is hard to guess the source of the particular banded onyx bead-type at IBB, there is no doubt that they too are imported from distant places of the mainland through the same network that carnelian beads arrived on the Island. Although found in the same ornament along with carnelian beads, a slight variation in shape from that of carnelian barrel beads, prompts us to ponder whether the artisans who manufactured them were a different group from those of the artisans who produced the common short-barrel
carnelian beads. Since the process of transforming banded agates into high quality onyx requires a complex time-consuming specialist treatment, without hesitation we can conclude that onyx too, was a high-value commodity.

According to Peter Francis’ (1991) analysis at Arikamedu, unlike carnelian, that was mostly imported to work sites as treated carnelian nodules, the early historic lapidary workers at Arikamedu received untreated banded agates. Francis’ observation found that at Arikamedu the onyx quality was achieved in a post-manufacturing process where finished beads were subjected to controlled heat treatments running upto two weeks. Although Arikamedu is considered as one of the main sources where carnelian and other high quality beads were manufactured and distributed throughout south India and beyond during early historic times, (given that the Arikamedu lower level is dated to the second century B.C.), beads found at Sri Lankan megalithic sites such as IBB surely predates Arikamedu counterparts. Thus they may have been manufactured at a different location.

6.2.6.3 Gold

Eight spherical gold/gold laminated beads (IBB/90/31) & (IBB/90/50) approximately 5mm in diameter were found at the cremation pit. They were most probably attached to the same four-strand necklace/belt discussed above. These beads were not disfigured from the fire, which is a further indication that the necklace discussed above was thrown into the pit after the cremation pyre was contained. The only other gold object found at IBB was a gold foil (IBB/88/18) from cist #1 inside urn #2. Leaf/oval shaped gold diadems, probably used for head decorations, are known from
south Indian Context (Gururaja Rao 1972). Five gold strips or circular shaped discs of very thin leaves were recovered from pit circle burials at the Nagpur plain (Moorti 1994: 51) of mainland India. According to Leshnik (1974: 189) within Pandukal (Megalithic) context, oval shaped gold foils/fillets (plain) or oval with extended ends were found at Adichanallur Region I, which is the closest location where such ornaments are found on the opposite coast in the mainland. In this site 12 of them have been found in urns that were buried deeper in the ground (Rea 1904:120) than other burials. It is important that the same object was found from IBB indicating further connections with the communities at the opposite coast. Many other gold objects were also reported from the Adichanallur site. At IBB, compared to other exotic artifact types, gold is extremely rare but it is a highly desired material. Compared to the number of carnelian objects, which had to come from sources more than thousand miles away in Gujarat, the number of gold objects found at the site is less than 2%. Thus it is highly likely that the material had such a high demand in the local context that it did not produce quantities big enough to facilitate a flow into far-reaching regions as smoothly as carnelian. As pointed out elsewhere, there were no traces of gold from the IBB settlement site either. Although Seneviratne (1999) suggests that minerals such as gold and gems are from local sources near the site, given that all these items are found in the mainland megalithic context with considerably large quantities it is much more plausible that, at least in the initial periods of the Proto-history in this region, gold was imported “as a finished good” probably from the mainland along with other artifacts such as carnelian and agate.

6.2.6.4 Copper
Few small pieces of copper and copper alloy objects were recovered from cluster 21. Most of them were found inserted in the vessels. A majority of them are copper pins (Fig. 21a), ranging from 6-8 centimeters long and 2-3mm in diameter. These pins usually were pointed at both ends, although a couple of them had blunt ends. At the cemetery near Digampathaha on the Habarana road, a villager found a copper pin that is about 2 inches long with a point on one side while other side had a rounded (headless) blunt end. This one is rather short and thicker than the IBB counter parts. One of the pins uncovered in the 1989 field season was slightly bent in the center indicating that it was used to clip something. With this find it is highly probable that these pins may have been used to clip garments. In one pot a group of small copper rings were found. Given that a majority of the mortuary goods, with the exception of iron objects, are ornaments, it is safe to assume that these copper rings may have been used as bangles for toddlers or infants. Unlike iron, copper seems to be a scarce resource, at least during early times of the Proto-historic period. There is no evidence of local extraction of raw resources although there is no doubt that local smiths could have easily handled the work at the domestic level if the raw material had been available, just as they had done with iron.

6.2.6.5 Iron objects

Similar to the Megalithic tombs in the subcontinent, iron objects are commonly found in the mortuary context at IBB. Although they are generally found interred in pots that are placed on top of offering vessels, some have been recorded inside the cists but on the floor without association with any container. Most objects were badly corroded, disfigured, and fragmented. These are recorded as unidentified objects. Among them are
a few pointed pieces (two to four inches in length) that have a pointed shape and are recorded as nails. These may well be objects used for other purposes. Among other identifiable objects, a knife, a chisel, and a spearhead are significant. Nevertheless, compared to the subcontinent sites where variety of iron implements has been found, at IBB mortuary context the variability is limited. No agricultural implements such as sickles, hoes, or ploughshares that are commonly found in peninsular India (Moorti 1994: 35, Leshnik 1974: 179-81) are evident at IBB.

Furthermore, there is enough evidence from the IBB settlement to suggest that access to raw materials was quite sufficient and that domestic scale production was widespread throughout the site. Thus, unlike most of the other materials found at the site, iron was surely locally produced and ore was extracted from local ore sources.

6.2.6.6 Pottery

At least five main types of pottery have been recovered from cluster 21 excavations. They can be categorized as urn or large jar, enclosed vessels or small pot/mutti (Fig.21e), bowls (Fig 21b), trays, and cups or deep bowls that consisted of variable sizes, ranging from large urns standing up to two and a half feet to small cups that are not more than three inches in height and three four inches in diameter. Unlike the ceramics found in the settlement, almost all the pots found in the cemetery were complete. Despite cracks and deformity in the shape due to soil pressure, a majority of the pots were intact and undisturbed. In the mortuary context these pots have been utilized for several purposes. Other than the main urn type that elsewhere I argued as representing the deceased individual, which sometimes contained a few burnt bone
fragments collected from funerary pyre and perhaps some ornaments, all other forms of pots have been utilized to insert mortuary offerings. Since the majority of these pots utilized for offerings are devoid of any cultural materials except for an occasional bead, a copper pin, an iron implement, it is possible that the pots were used for refined or highly perishable organic materials.

The other utility of the pots in the mortuary context was for ritual purposes. Other than the containers of mortuary offerings and large urns/funerary jars that symbolize the deceased, the only other occasion where a vessel that could be related to ritual context, is the BRW tray found inside the cremation pit. This was placed inverted on the chard logs. This purposeful placement is surely an indication of a ritual performance. Perhaps it may have been used to throw water on the charcoal once the cremation process was over. Whatever the ritual behavior associated with it, the tray was surely not wanted for reuse in real life context, thus it was ritually discarded.

All mortuary pottery vessels entered into the mortuary context were surely new from the potter’s workshops. None of them contained used marks associated with domestic usage. However, it is plausible to assume that these forms are not designed exclusively for mortuary purposes. As pointed out below, the same forms appear in the settlement context as well. Perhaps large urns may be an exception, although a couple of rim sherds belonging to this category were recovered from the craftwork context. The vessels do not reflect any special features in terms of designs, techniques, luster, polish, or fabric. These plain earthenware pots were made using several different manufacturing techniques.
**Large urns/ funerary jars:** The largest urns tend to be found inside the cist. At least seven such large vessels were found inside cists 1, 3, 15, and 23. As pointed out elsewhere, they stood strait up, about 30 inches tall, and had 18-25 inches in diameter from the widest points of the body.

**Trays:** This is the most common form found in domestic, industrial as well as mortuary context for domestic, industrial as well as mortuary use. Most trays are BRW. They lacked a rim ridge except for a strait/slightly slanted thin wall rising up to two to three inches depending on the diameter of the base. Diameters vary from 4 to 14 inches. Although many trays had relatively flat bases some had unstable curvy bases. As discussed above, these may have been associated with dairy preparation in the settlement site. They were utilized for multiple purposes within the cemetery, as vessels that contained offerings, caps to close large urns; and for ritual purposes associated with cremation.

**Bowls:** Bowls too came in variable sizes; they lacked a rim ridge, and some lacked bases while others had small bases so that they could be steadily placed on a flat surface. The majority of the smaller bowls are BRW and a few large bowls are RW. Bowls were used in a similar manner to that of trays as they were used for offerings. Bowls were also used to cap other larger vessels that contained offerings.

**Cups:** Small hand-made BRW vessels with slightly elevated necks. In some cups an extra portion of neck was added separately to elevate the neck. Similar to bowls and trays and they also lacked a rim. This type is used to place offerings.

**Enclosed vessels or small pots/mutti:** Pots with variable sizes have been utilized in the mortuary context. Most of the pots are red ware. They measure 6-24 inches at the
widest point of the body. Wheel marks indicate that many of them were raised with a slow wheel. They were utilized to place offerings. Also substituted for urns that represented individuals. They were also substituted for urns that represented individuals. Unlike the cists tombs that consisted of numerous vessels containing offerings, many large pots were found outside the cists standing alone.

6.2.7 Distribution of interments in cluster 21

Out of 24 cists, 17 are single chamber tombs. At least three tombs (cist #3, #2, & # 11) consisted of multiple chambers. One tomb consisted of two large urns (e.g. cist #1) representing at least two individuals. Cist # 3 had three chambers containing one large urn in each chamber. This may arguably represent at least three individuals in cist #3. Two more disturbed cists (Cist #2 and cist # 11) had scatter of a broken vessel indicating that at least two large urns were inserted within them. Individuals represented in the twenty-four cists in cluster 21 are roughly 29. There are at least 27 more freestanding urns/pots found without clear association to any cist tombs and these urn mouths were closed with an inverted tray or a bowl capping over it. Some urns were capped with a small slab. Each of these urns is considered as a representation of an individual, thus a conservative estimate of the total number of individuals represented in cluster 21 is approximately 56.

6.2.8 Mortuary ritual behaviors at IBB

Data revealed from the excavations at cluster 21 have given us important insights into the mortuary ritual behavior of the IBB community. As mentioned elsewhere none of
the burials contained identifiable human skeletal remains except for a few bone fragments found in three urns out of over 85 vessels excavated. Thus IBB cists clearly represent a symbolic ritual process secondary to mortuary activities associated with the treatment of the corpse. Such symbolic performances linked to secondary mortuary activities have been recorded by many ethnographers among tribal populations who constructed megalithic type monuments (Singh 1970) and these activities have taken place during occasions ranging from clan level funerals to tribal level ceremonial gatherings.

There are no clear evidence on the way in which IBB inhabitants treated their dead immediately after death. The cremation and post cremation episodes give us a complex process associated with sending a dead into the other world. It is plausible to assume that at IBB, the dead were cremated within the burial site itself or elsewhere before they were symbolically transferred into the cist tombs. Secondary ritual ceremonies were performed at the tribal/clan cemetery when the tombs were constructed and ritual paraphernalia were inserted in them. The secondary ceremonies seem to be highly symbolic in nature where only tokens representing the dead person were inserted.

It is not sure whether the cremations were performed for each and every individual in the clan. However, burnt carnelian was found from four main locations within cluster 21 including cremation pit and cists #2, #12, & #22 indicating that the practice was considerably common although there were more unburned objects than burnt material found from the tombs. Cremation could be one stage among number of pathways consisting of sequences of ritual activities that led an individual into the other world.
As highlighted in the sequence of activities associated with the cremation process, the cremation pit gives us some interesting clues on how these communities perceived death and how they treated dead. The chard logs found in the bottom of the cremation pit indicates that logs were placed in the floor of the pit before inserting the corpse or remains before setting fire on them. Four-strand Necklace/ belt made of beads in the cremation pit indicates performance of sacrifice rituals. Although earlier we have suspected that the individual was inserted into the cremation pit with the ornaments intact (Karunaratne and Weerasinghe 1999), the fact that the remains of the necklace/belt were partially burnt begs the question whether the individual was actually wearing them at the time of the cremation process. It is much more plausible to assume that the ornament was thrown to the pit separately at a different time after the fire was extinguished. If the corpse adorned with ornaments were set on fire then the majority of the beads would have been burnt and completely discolored. As we know from other examples, over heated carnelians turn ivory white from its orange-red, which acquired through a course of controlled heating during material processing.

After the cremation process, within the pit, a few more rituals have taken place. The burnt carnelian beads found in the cist tombs and urns suggest that a part of the discarded objects have been recollected from the funerary pyre as tokens symbolizing the dead individual to inserted in the tombs. Once the symbolic tokens were removed from the cremation pit a ceramic bowl was placed inverted on the chard logs. This BRW tray bowl (one of the most common pottery forms of proto-historic Iron Age societies of the subcontinent and Sri Lanka) may have been used for funerary rituals before depositing in the pit. It is probable that this vessel was used to put out the fire from charcoal before the
items were collected. At the end of these rites the pit was closed with soils and ash debris from the funerary pyre. Over this fill a wet clay layer was added cementing the pit mouth at the ground level. After adding a two to three inches of soil on top of the clay cement layer, two rocks have been placed over it (Fig: 20a).

The data from cremation pit indicates that the individual associated with the cremation may have involved in many social transactions during his lifetime allowing him to accumulated many exotic items. The way in which the cremation pit was sealed it is highly plausible that the individual could be a well respected, and perhaps a feared person. The sealing of the cremation pit with a concerned effort suggests that the individual’s sprits needed to be contained within the pit. Ritualistic nature associated with the cremation and the sealing of the pit lead us to suggest the possibility of some form of ritual/shamanic power associated with this individual. Feared individuals have been treated in a similar way among archaeological Anazasi society in the American southwest where certain individuals have been buried in kivas and sealed the structures preventing their spirits escaping (Walker 1996). If this is the case at IBB then we can assume that there may have been certain individuals playing roles as ritual/shamanic figures, who are a common feature in middle range societies.

Second stage of the mortuary rites, which involve symbolic transformation of an individual from the cremation area to tombs seems to be even more complex. There is no doubt that the planning and construction of larger cists took a few days if not weeks as preparation of vertical slabs and capstones and their transportations could take more time than that of a less elaborate cist that could have been constructed in a day or two. It seems that the placement of urns consisting of tokens symbolizing the dead and mortuary
paraphernalia along with the pots containing other offerings within and outside the cists involve another sequence of rituals before they finally closed.

However, mortuary paraphernalia present in the cist tombs, particularly the exotic status items do not give a clear indication of relative status or wealth between individuals, unless other factors such as the size of the cist, presence of symbols etc. are taken into account, because the amount of exotic items left in the above mentioned mortuary pyre is so much that it is safe to suggest, that what is ended up in the cists are just a symbolic representation of the individual who owned them but majority of the items were left discarded in the cremation stage. It is important to note that this symbolization through personified objects used by the individual during his lifetime seem to be an important aspect of secondary funerary procedures at IBB, particularly in a context where biological remains of the dead person are almost nil.

After insertion of personified objects that symbolizes the dead person and placement of other paraphernalia in numerous vessels within and outside the cist chambers the general funerary process of tomb construction ends. However, the closing of a cist does not end the rituals associated with it and the use of the chamber for mortuary purposes for good. There is clear evidence that these cists have been revisited time to time, perhaps to enter remains and the belongings of other family members. In some large urns (e.g. cist # 1 and # 2) more than one large urn placed in a single cist and sometimes some of the cists seem to have been extended later (Tomb 3B of cist # 3) after the original constructions creating more space to enter remains of other individuals.

As pointed out elsewhere, at some instances two chambered burials (tomb 3A and 3B of Cist # 3) have been constructed at the same time. Such features are indication of
either multiple deaths at the same time or a long gap between the deaths and the performance of mortuary rites for two individuals at the same time. These belated mortuary ritual performances (tomb constructions) can be linked to the pastoral type adaptation where at least certain segments of the families involved in migration cycles following pastures for cattle. Death away from home can lead to such belated performance where remains of the dead are kept to deposit in the family burials at the end of the migration cycle.

Furthermore, given the extent of the organization of labor, offerings, and number of pots involved in burials and the fact that at certain times remains of more than one individual was involved in the performance of mortuary rites, it is plausible that construction of cists and the rituals associated with them at least with certain individuals was a major community affair that took place after a considerable time laps between death and final deposition.

6.2.9 Discussion: The IBB cist burials in comparative context

Generally the term “megalith” refers to tombs or monuments that are built using massive rocks. Nevertheless in the sub-continental context the term is used for numerous burial forms, not necessarily associated with the construction of large rocks. Some variations do not involve rocks at all. However, similarity in terms of symbolism, mortuary offerings, ritual behavior surrounding these burial practices, compel us to consider them as a single tradition that crosscuts numerous cultures and ethnicities living in a vast region across the subcontinent. Thus, despite criticisms on the inappropriateness of the term (Leshnik 1974:1) many still prefer to call this tradition as “megalith.” The
megalithic mortuary tradition is known to have been practiced in the northwestern boundaries of South Asia long before the beginning of the Iron Age. Its spread towards the subcontinent during the early Iron Age is considered as a result of diffusion via western Asia (Banerjee 1965) and Central Asian mountains (Allchin and Allchin 1968). Archaeological evidence suggests that, from around the turn of the second millennium B.C., along with the appearance of iron technology megalithic tradition became widespread in the Indian subcontinent (Gururaja Rao 1972; Singh 1970). McIntosh (1985) sees four different stages of development in the megalithic mortuary tradition beginning from 1100 B.C. This tradition prevailed throughout the first millennium B.C., basically in the regions within the states of Karnataka, Orissa, Tamilnadu, Kerala, and Andrapradesh before going out of practice towards the end of the first millennium B.C. Nevertheless, in certain instances “megalithic” mortuary practices continued a few more centuries into the first millennium A.D., while in many parts of India similar mortuary customs were observed by ethnographers such as Dalton (1867), Hutton (1969), and Roy (1912 & 1915), among various tribal populations (Singh 1970: 150-170).

In Sri Lanka, numerous types of megalithic tombs built during the early Iron Age are found in various parts of the Island (Bandaranayake 1992; Begley 1981; Seneviratne 1984: 237-299). Among all types found in Sri Lanka, cist tomb construction was the most prominent practice. Although megalithic burial tomb constructions are no doubt a process associated with treatment of the dead, many types of tombs lack human remains. Except for minute fragments of bones, no complete human skeletal remains have been found from protohistoric cist burial complexes in Sri Lanka. Such characteristics clearly indicate that for many societies tomb construction is exclusively symbolic in nature and
contains complex socio-cultural and ideological phenomena. The overall time and care taken to construct such monuments and to perform rituals are clear evidence that megalithic mortuary tradition played an important role in the social reproduction. The remarkable cross-cultural similarity in terms of mortuary behaviors and ritual paraphernalia in the mainland India and Sri Lanka indicates a widespread regional socio-cultural and ideological phenomenon. There is a striking similarity in styles, techniques used for tomb constructions, and materials used for mortuary paraphernalia among cultures across vast regions of the subcontinent. Exotic materials such as carnelian, onyx, lapis, copper, and gold etc. commonly found in the mortuary context in many parts of the mainland and Sri Lanka are originating from only a few sources. For example lapis had to be transported all the way from Badakshan of Afghanistan or from Baluchistan near Pakistan/Iran border. Carnelian had to be obtained from the Deccan plateau, while copper may have come from the Aravali mountain range located east of the Indus valley, and gold may have come from the Mysore district. Thus, it is plausible to assume that populations who followed the megalithic tradition during the early Iron Age in the Indian subcontinent and Sri Lanka, have heavily depended on largely extended interregional communication networks to obtain the symbolic goods essential for their social reproduction process. Exchange of these items had been essential to maintain social relationships not only within a single ethnic, tribal or clan membership but also played an important role in the arena of inter ethnic/tribal interaction spheres. As a consequence these items seem to symbolize a larger, more inclusive “collective cultural identity” that crosscuts tribal and ethnic boundaries. Since such items were ultimately removed from
circulation after the death of individuals who possessed them, maintenance of the flow of
such exotics seems to be an essential factor for the sustenance of the social structure.

The other significant cross-regional parallel reflected in the megalithic tradition of
mortuary goods in the southern regions of the subcontinent, is in the Black and Red
(BRW) ceramics vessels. BRW ceramic technology and its associated vessel form depict
a remarkable similarity across numerous early Iron Age populations in the southern parts
of peninsular India and Sri Lanka. Although there are no significant differences in the
ceramic vessel-forms found in the domestic context from those of the mortuary context at
IBB, (which indicates a multifaceted functional utility in certain vessel forms), overall
cross-regional uniformity in the ceramic technology and certain vessel forms highlights a
possible cross-cultural similarity in the functional context. Therefore, although IBB data
in this research are analyzed as a representation of a peripheral community in the context
of emerging early states – in the proto-historic interregional interactive context), IBB cist
burials should not be seen simply as a representation of an isolated community lived in a
remote corner of the early Iron Age south Asian interaction sphere. Instead it should be
seen as a significant socio-cultural marker that shows the extent of the southernmost
boundary of the vast contact zone of the early Iron Age southern regional network where
similarly structured (socially, politically, ideologically) communities perpetuated the
Proto-historic landscape of the region. It is in this regional background that we have to
focus on the archaeological record of the Ibbankatuwa cist burial site in order to gain
insight into the scale of the social complexity of the IBB society prior to the PH-EH
social transformation. An archaeological record from Sigiriya-Dambulla region suggests
that the total cultural complexes associated with megalithic traditions completely went
out of practice somewhere around the third or second century B.C. Complete
abandonment of this mortuary tradition in a quick succession indicates a major
dislocation in socio-political, and ideological belief systems and a sudden change in the
political and economic landscape of proto-historic Sri Lanka.

Thus, based on initial observations of the archaeological record at IBB, it is
plausible to argue that the proto-historic society in the Sigiriya-Dambulla region
consisted of a fragmented social system separated along clan boundaries. Therefore, it is
possible to argue that the IBB mortuary record represents a “segmentary society” and yet
to see a political centralization equivalent to chiefdoms or states. As pointed out before,
for early Iron Age proto-historic communities, the practice of megalithic mortuary rituals
was surely an essential part of the social reproduction process where clan autonomy was
valued and reiterated through the practice of this mortuary tradition. If this position is
correct then the analysis of the IBB mortuary record should reflect certain material
correlates indicative of the operation of specific structural mechanisms of social
reproduction that would reiterate individual clan autonomy within a larger tribal existent.

In the next section I will synthesize mortuary data from IBB in the light of the
eight-mortuary criteria outlined above for mortuary behaviors associated with segmentary
level societies. If IBB archaeological record indicates a materialization process of such
mortuary behavior listed in my criteria, then it is highly logical to conclude that IBB
proto-historic society prior to its transformation consisted of a segmentary social
structure, not a society that was politically centralized under one ruler (chieftain) or
ruling class.
6.3 IBB mortuary record and the funerary archaeological correlates predicted for segmentary societies

The eight mortuary archaeological correlates predicted above are presented with the notion that such patterned materialization could occur due to variable practices (traditions, rituals, sanctions, taboos, etc.) associated with mortuary arena and these practices, particularly in traditional societies, are to a certain extent invariably shaped by the rules of structure. Tribal societies with segmentary lineages are not an exception to this notion, and social structure of such societies serve to maintain the core values of their social existence such as inter clan level socio-political equality and autonomy, intra clan unity and overarching tribal level coexistence, and respect for traditional tribal/clan rights to resources and territory. Therefore, it assumes that in traditional societies, which consists of segmentary type social set up that yet to see political centralization, mortuary practices could directly or indirectly play a role in maintaining the social structure through reiterating norms, values, and rules of their social life. If the IBB funerary record discussed in the previous section is compatible with majority of the mortuary correlates predicted above for possible funerary practices highlighted for segmentary societies then we have a strong case in support of the notion that the early Iron Age proto-historic society at IBB was a segmentary society organized into politically autonomous clan units headed by a group of clan elders. Below I will evaluate each of the eight mortuary archaeological correlates predicted for segmentary societies against the IBB mortuary record to show that the mortuary behavior of IBB community has strong parallels that can be suggested as emanating from behaviors shaped by the segmentary social structure.
The first archaeological correlate predicted above for a segmentary social existence is the clustering of tombs into numerous groups. This notion implies that real life social divisions may be reflected in the spatial arrangement of tombs. It was suggested that if clustering of tombs into separate groups is evident then it could possibly be a reflection that the concerned society was adapted to social segmentation along clan or extended family line. IBB cemetery (Fig. 18a) consists of at least 25 tomb clusters that are distinctly separated from each other. Spatial patterning of tomb distribution within cluster 21 indicates (Fig. 19) further demarcation into smaller social units by the presence of a number of miniature secondary clusters. These spatial patterns indicate that certain levels of social segmentation were a key feature in the social organization of the early Iron Age society at IBB. Out of five different tomb types outlined above, three types (i.e. single cist inserted with two or more large urns (Fig. 18b), single cist with double chambers, and extended multiple chamber cists (Fig. 18c)) give us some insights into possible nuclear family level arrangements. Given that certain burials consisted of two large urns inserted in one cist (e.g. single cist with two main urns), there is a high possibility that the tradition may have allowed husband and wife to be buried in the same cist tomb. Availability of two such cists side by side forming a mini-cluster (cist tomb #1 and # 2) could be considered as a representation of married siblings or direct descendent (two couples) of two generations of the same family (Fig. 18b). Cist # 3 where three urns (Fig. 18c) were deposited in three separate chambers could be counted as tombs of siblings, perhaps of unmarried individuals. Thus overall patterning of tombs in cluster 21 (Fig. 19) indicates the possibility that siblings or nuclear families are represented by mini-clusters. If mini-clusters are a representation of siblings or nuclear family, then we
could infer that the primary clustering could be a representation of extended family or segment of a larger clan. In cluster 21 at least six different mini clusters are visible, while total of fifty-six individuals are represented. Thus it is plausible to conclude that spatial pattern of primary tomb clusters of IBB reflects social segmentation that can be considered as lineages or extended family level social division within a larger tribal level society. This seems to be a serious social reality that was important for the sustenance of social relations and maintain structure, thus for IBB community the mortuary arena was surely a place where tradition was reiterated through mortuary behaviors.

The second archaeological correlate is that there should be a repetition of similarly structured primary tomb clusters within large cemeteries (no inter-cluster hierarchy should be visible). The argument is that in a segmentary society (since all clans enjoy political autonomy and to a considerable extent entitled for more or less equal economic means and excessive wealth accumulation is not encouraged), there shouldn’t be any materialization that indicates inter clan hierarchy. I argued that this social reality could be reflected in the mortuary record through a spatial pattern that display a repetition of similarly structured primary tomb clusters within a cemetery. Based on this argument, If primary tomb clusters represent autonomous clans or clan segments at IBB, then, in terms of individual tomb architecture, tomb sizes, and mortuary treatment all primary clusters should reflect similar physical characteristics and no cluster as a whole should stand out above other clusters in exception for number of tombs present in a cluster. It is plausible to suggest that the variability in cluster sizes in terms of the number of tombs associated with each cluster may not be an indication of unequal power or economic rights, because even the smallest clan segment could be part of a larger clan and shares
equal rights for resources and autonomy. At IBB, although there is variability in terms of number of tombs in a primary cluster, in terms of external appearance (i.e. tomb architecture, tomb sizes, and variability of tomb types) there is no significant difference between them. However, in some of the clusters there are tombs with relatively large capstones but they too are found in different clusters so that one can not single out a certain cluster as consisting of more elaborate tombs than others. Overall each cluster as a whole consists of similar general physical characteristics as they appear on surface. This is clear when examining the cemetery site plan that indicates the distribution of individual clusters. As pointed out elsewhere according to Bandaranayake’s (1989) estimation there are total of 42 clusters at IBB. Nevertheless, if you consider some of the closely located smaller clusters as mini-clusters of a primary cluster, a conservative count would be around 25 primary clusters.

However, to check this pattern, i.e. whether similarly structured clusters are reflected in terms of mortuary rites performed and paraphernalia inserted, further comparative studies need to be done. This cannot be achieved due to limitation of excavation data on other clusters. Other than the data from cluster 21 presented above the only known well excavated primary cluster is cluster 1 located in the northwestern fringe of the burial site (Fig. 18a). This was excavated in 1984, but lacks a preliminary excavation report for comparison. However, it should be highlighted that as revealed from cluster 21 mortuary data analysis (Table 5), the IBB society seemed to have had a practice of inserting only a few ornaments or beads randomly picked from the funerary pyre to insert in the tombs, thus we can not expect a significant variability in terms of mortuary paraphernalia found among tombs or in different clusters (only cist 3B is an
exception to this rule, nevertheless mortuary architecture and its placement in a raw with two other urns similar in mortuary architecture indicates that the individual may not have held a high position than that of the other individuals. However, as highlighted above from the external appearance of clusters and the overall tomb architecture in each primary cluster at IBB indicates a repetition of similarly structured tomb clusters within the cemetery reflecting a materialization of a pattern predicted for segmentary social organization comprised of equality at clan level.

The third mortuary correlate is that there should be evidence for intra cluster variability in tomb construction and mortuary treatment for different individuals. It was pointed out that in tribal level social existence despite the presence of inter clan social equality, within clans individual clan members can have subtle status differences. This may be visible in the form of relatively elaborate tombs representing clan elders and other subordinate clan members with less elaborated tombs. The fact that there are five different types of burials in cluster 21 and the variability in the energy expenditure on tomb construction, it indicates that certain deceased individuals were treated more elaborately than others. In cluster 21 cists #1, #3, #5, #6, and #13, (judging by their physical appearance) are such tombs with more elaborate treatment in terms of energy expenditure than that of the smaller cists such as cist # 9, #14, #20, and other free standing urns (Fig. 19). Furthermore, Cist # 1 contained a square shaped symbol inscribed on the surface of its capstone. The fact that a gold foil was found along with a few fragments of bones in one of the two large urns placed inside cist # 1, presence of numerous exotics beads at cist 3B, and the finding of entire necklace/belt from funerary pyre, indicates that certain individuals had access to exotics than others. Although exotic
beads are relatively abandoned and found in different tombs throughout the site certain
cist tombs and freestanding large urns lacked any exotics. These patterns in the
archaeological record are indication that there may have been certain rules, customs and
traditions in the way in which different individuals (e.g. children and adults, males and
females, elders and subordinates, married and unmarried, initiated and uninitiated
members) should be treated in the mortuary arena. Thus, IBB mortuary record, despite
the reflection of inter clan level equality, certain level of intra cluster hierarchy is present.
This pattern is clearly compatible with the core characteristics of the structure predicted
elsewhere for segmentary level societies.

The fourth possible mortuary archaeological correlate for segmentary tribal
existence is the presence of large cemeteries consisting of numerous tomb clusters and
having additional smaller cemeteries in the same floodplain or other adjacent tribal
regions. Aggregation of numerous clusters within a larger cemetery indicates that there is
an overarching unity between these separate units. Accumulation of such clusters in a
large area could thus be considered as a large tribal level burial ground where individual
clans had their own areas for tomb construction. It also reflects the pattern that has
parallels to close knit extended family or clan units within a larger tribal level
configuration.

Therefore, despite the emphasis on clan level autonomy and unity, which is
reflected through clustering of tombs into numerous groups within a large cemetery, the
fact that numerous clans of the tribe are buried in one large burial ground, or having
separate smaller cemeteries within a close proximity in the same floodplain or adjacent
floodplains is clearly an indication of larger overarching tribal level social existence. As
pointed out above IBB is a large cemetery with approximately 25 different tomb clusters thus qualifies to be called a tribal cemetery. It is a good material manifestation that indicates overarching tribal level unity. Large size of the cemetery, presence of groups of numerous tomb clusters, highly ritualistic nature associated with possible ceremonial type mortuary treatment and necessity of having considerable level of collective labor for the construction of certain tombs indicates possible tribal level large gatherings at mortuary ceremonies of important individuals such as clan leaders or ritual elders.

Furthermore, smaller cemeteries in the same floodplain such as Anakatawa, which is located just 2 miles downriver from IBB, and other cemeteries in the same area within a few miles such as Beliyakanda and Rotavava could also be considered as different clan burial grounds of the same tribe that exploited different floodplains from that of the main resource tertiary around IBB. Although these other small burial sites distributed in smaller river basins could be considered as clans or segments of clans separated from main tribal body to have their own clan territory, the close proximity between each burial grounds suggests a close tribal level network of communication. This pattern including clustering within a larger cemetery corresponds to Sahlins’ basic characteristics suggested for segmentary social organization: i.e. clan autonomy is strictly emphasized within a larger tribal level social existence. Thus spatial distribution of the burial ground at IBB clearly compatible with clustering of tombs into numerous groups within a larger cemetery indicating social segmentation along clan/extended family boundaries within a larger tribal level social setup. Thus segmentation into clusters within a larger tribal cemetery at IBB produces material manifestation relevant to both second and forth archeological correlates predicated for a segmentary system.
The fifth predicted correlate for the mortuary record of segmentary societies is evidence of destruction/sacrifice/discard of high value status objects (Table 7). The argument was that in segmentary societies, since undue power enhancement is not welcomed, one way to solve the problem of inheritance of wealth and status would have been to destroy wealth and status accumulated through social transactions by an individual through his lifetime. Regardless of their value the individual’s family may not be inheriting such items. Burnt carnelian beads have been recovered from cist #3, #12, and # 22 (Table 7). Most of them are excessively burnt and the translucent bright red color has been changed to opaque ivory white. This is a clear indication that the ornaments were subjected to burning at a certain stage of the funerary process. The fact that almost entire necklace/belt (that seem to have been contained extremely valuable status objects as they have come from distant places in the mainland) left in the cremation pit (Fig. 20c) without repossession indicates that the status objects were destroyed/sacrificed and ends its cycle of circulation at the death/cremation of the individual who may have owned it. Necklace/belt found inside the cremation pit indicates the symbolic rituals associated with such discard and sacrifice, e.g. the evidence suggests that rather than cremating the body with ornaments on, the exotic items were thrown into the funerary pyre at the end of the cremation process. This ritual could be an action that signals the termination of circulation and the end of social value of exotics with the death of the individual who owned it. This action clearly signals the fact that the descendents or family members of the deceased is not privy to inherit them. Such patterns of termination or discard of privet property have been observed in ethnographic tribal societies in the mainland India as high lighted above.
At IBB after terminating the social value of exotics with discarding them into funerary pyre, these items seem to gain a new meaning. The fact that a few exotic items were recollected from the pyre to insert in the tombs (Table 7) in a context where almost no biological remains were left to symbolize the dead person, we can assume that the new role of the randomly collected few objects from the pyre is to symbolize the individual inserted in the tomb. Perhaps the reason why the majority of the beads in the necklace found at the cremation pit were not burnt was due to discarding them at the end of the cremation when the fire was put out. The sides of some of the beads were burnt because they may have been directly touching the coals that were still burning. Therefore, without doubt we can conclude that the necklace was thrown in the fire at the end of the cremation process of the body. There may be many other ritualistic meanings associated with this practice, but we can’t deny the fact that this action was clearly signals the end of social circulation or social value regardless of their the transaction value of the item, an action surely symbolizing the rejection of inheritance.

The sixth archaeological correlate predicted for segmentary social system is that when status items (exotics) and other personal objects are present in the tombs they should appear only as tokens of mortuary rites or personified identity objects, and not as power enhancing display items. Such tokens can be identified in the archaeological record in the form of a part(s) of a composite item or as small singular objects belonged to the individual such as body ornaments or other personal items used by the deceased. This pattern is reflected very well from the tombs throughout cluster 21 at IBB. In most cases the norm seems to have been insertion of randomly picked objects such as beads from a necklace, bangles, cloth pins, diadems, or utility items made of iron into the tombs
(e.g. cist # 1, 12, 22, etc. contained burnt items picked from the funerary pyres). Only exception to this is cist 3B where 323 carnelian un-burned beads have been recovered from a smaller pot inserted in the main urn. Thus in terms of exotics Cist # 3 B is a special tomb but (as discussed above) tomb architecture and energy expenditure wise it is not an impressive tomb at all. Overall evidence from cluster 21 shows that only a few randomly picked items from cremation pyre were inserted in the tombs. This behavior is a clear indication that the practice of inserting exotic items in the tombs was a symbolic act relevant to the representation of the individual and not an act associated with the display of accumulated status.

The seventh archaeological correlate was that reusable status items may be found intact in the mortuary context without evidence of disturbances during the time when the cemetery was in use. The argument is that as pointed out above in correlate five, in societies where wealth or status inheritance is a taboo, the exotic items, once entered into the mortuary context looses their value as items of social transaction. Such items become taboo to be scavenged, reprocessed, or reused thus bound to remain with the dead. The archaeological evidence of such exotics remaining intact abundantly in mortuary contexts can be considered as instances of the presence of sanctions preventing reuse of such mortuary goods. The IBB the archaeological record surely depicts such characteristics suggesting that the tombs were securely intact during the time when this mortuary tradition was in practice. The tomb architecture, which contain capstones sealing the mortuary chambers and the steps taken to seal the cremation pit too are good indication that what is left in the tombs were meant to be left undisturbed. Although some of the tombs were reopened in some occasions where another individual of the family was
inserted in the same tomb, exotics were surely left untouched. However, there are number of disturbed tombs within cluster 21, but as stratigraphic and other material evidence suggests these disturbances were clearly due to actions of post cemetery activities. Overall preservation and abundance of exotics that have come from far reaching regions was remarkable that there is no doubt that at IBB the exotics once transferred into the mortuary context had no transaction value in the social context.

According to the eighth archaeological correlate, in the mortuary context of a clan based segmentary society, exotic finished items may be surprisingly common despite their value and distance of origin. This argument suggests that in such traditional societies certain exotics play an important role in social reproduction as mediums of social transactions. The fact that in such societies inheritance is tabooed and circulation of such exotics are terminated with the death of the individual who earned them the sustenance of the social structure requires uninterrupted supply of such materials. As a consequence one could expect to find large numbers of such exotics that were discarded in various stages of the mortuary process. These exotics may be found in all types of burials within a cluster regardless of the status given that such items are not just tied to economic and other status of an individual but among other ordinary individuals too through social transactions associated with social occasions such as marriage, dispute resolution, initiation gifts and so on. Thus specific exotic flow in such societies could be essential for the sustenance of the structure compelling them to continue interaction with neighboring communities and receive such exotics.

As pointed out before, at IBB various types of exotics have been found in number of tombs. Beads made of carnelian, agate, and gold and metal objects such as copper
seemed to be of highly desired rare objects, which are mainly used as ornaments. These items have been recovered from all types of tombs at IBB. Gold fillet was found at cist #1, which is a single tomb with double urns. This cist is one of the most significant tombs in terms of appearance and size. It also contained a symbol on the surface of the capstone. Nevertheless no exotic beads such as carnelian or agates were found. Especially absence of carnelian is significant, which is the most common type of exotic item found in the mortuary context of cluster 21. Biggest collection of carnelian was found at cist number #3 (tomb 3C), which is a multiple chamber tomb. Although cist 3 is unique that it contained three attached tombs in a row, the tomb 3C as pointed out elsewhere is a modest structure. Nevertheless it contained the most elaborate display of exotic collection as depicted in table (3). Cist # 22, which is a single cist with one main urn and was one of the smallest cists had about 15 burnt carnelian beads. Despite the insignificance of mortuary architecture of the tomb 22 - given the trend at IBB where an almost entire necklace/belt was left in the cremation pit and the practice of the insertion of a few beads in the tombs after randomly picking them from the funerary pyre- we can assume that the individual may have possessed a composite ornament with considerable amount of beads. Similarly, carnelian beads have been found in association with solitary urns without stone tomb architecture. Burnt carnelian beads were found in association with the solitary urns located at the grid G2g79, and G2g 100. If different tomb types within a cluster reflect variable social status held by individuals within a clan as argued above in the correlate three, the distribution of exotics indicates that exotics penetrated through out society regardless of the status of individuals. Overall, (in addition to the few gold objects recovered from cremation pit and cist # 1) over five hundred carnelian beads have been
recovered from both the tombs and the cremation pit. Since beads are found as randomly picked few items from the funerary pyre for insertion in the tombs, it is plausible to argue that collectively people buried in cluster 21 may have owned a large number of beads much more than what was found in the excavations. This trend clearly shows that considerable amount of exotics have been regularly removed from circulation at IBB during funerary processions. This compels them to have a steady supply of such items for social transactions. This is a clear indication that social reproduction was considerably depended on the flow of such exotics. Therefore, IBB archaeological record clearly matches with the eighth correlate predicted above.

6.3.1 Synthesis

In my working hypothesis for this chapter I argued that…

IBB society consisted of a collection of small groups segmented along clans or extended families (segmented clan units) headed by a group of clan elders. These clan(s) while controlling their own floodplain land along certain river basins where their cemeteries were located seemed to have shared larger common tribal area comprising a number of river basins through which annual cycles of pastoral mobility took place. The lack of chieftain type burials instead of a number of equally elaborated cists in each burial tomb cluster, indicates the possibility that IBB society was a segmentary lineage system collectively run by a group of clan elders and not by an individual chief.

I further argued that - since mortuary arena would have been an important theater of social reproduction, which reinforced traditional structure through the performance of certain mortuary ritual behaviors - if my hypothesis that segmentary lineage system run by a group of clan elders is correct then the mortuary record of IBB should be reflective of practices that reiterate principles and rules of segmentary lineage structure. Pursuing
along this line of thought, I further emphasized the importance of utilizing ethnographic record from a similar social context to that of IBB society (ethnographic/ethno-historic tribal societies who practice megalithic mortuary constructions) and anthropological theory to construct possible archaeological correlates of behavioral patterns shaped by the rules of segmentary social structure. I pointed out that these correlates in turn could be utilized to identify whether the material patterns in the mortuary archaeological record at IBB are a manifestation of the practices that are predicted to be shaped by the rules of segmentary social structure.

Utilizing both Sahlins’ (1961) conceptual framework for “segmentary lineage systems” and ethnographic tribal mortuary record from mainland India, an archaeological criterion for mortuary record of the segmentary societies is constructed to test my working hypothesis on the social scale of IBB society. This criterion is comprised of eight archaeological correlates associated with the mortuary behaviors shaped by segmentary social structure. These correlates in turn were applied to IBB mortuary record to test whether the patterns predicted for segmentary social systems are reflected in the IBB archaeological record.

As shown above the archaeological record at IBB clearly matches the eight mortuary archaeological correlates predicted for the possible mortuary behaviors of a tribal level segmentary lineage society. The IBB cemetery consists of numerous primary clusters within a larger cemetery indicating the patterns predicted for a large tribal cemetery consisting of individual clan burial areas. Each tomb group is more or less equal in its appearance and there is no significant individual tomb belonging to a single chief or cluster that stands out other tombs or clusters reflective of a dominant clan. Thus
inter clan hierarchy or hierarchy among clan elders can be ruled out. Therefore, we can conclude that the spatial pattern of IBB suggests clan level equality. The fact that the tomb groups are spaced as separate clusters further indicates that these clan groups had considerable autonomy within an overarching tribal level existence. This is further attested by the fact that there are smaller burial-sites within the same floodplain or adjacent floodplains. Thus the pattern indicates that smaller clan units had the choice to be with the main tribe or to break off and live separately. Nevertheless intra cluster hierarchy was clearly depicted from the variability of mortuary treatment. Out word appearance of tomb architecture clearly suggest that some individuals in each clan were given a careful attention than others. Cluster 21 had few such prominent burials, and mortuary paraphernalia associated with some of them suggest that these individuals may have played a significant social role within their own clans. Therefore, it is plausible to conclude that these relatively conspicuous burials are associated with clan elders. This pattern compels us to further conclude that the society may have been led collectively by a group of clan elders. As shown in chapter five the positioning of early Iron Age cemeteries within Sigiriya-Dambulla region over looking adjacent floodplain confirms McInintosh’s (1985) position that megalithic burial grounds may have been served as territorial markers. Such markers can claim clan/tribal rights to the adjacent resource areas traditionally exploited through generations. Furthermore, mortuary paraphernalia, which consisted of exotic items such as ornaments and utility tools at IBB indicates that they were playing an important role in the social reproduction process. As shown from the archaeological data, despite the distance of the resource regions certain ornaments made of exotic material such as carnelian and gold were unusually common at IBB in the
mortuary context. This is a clear indication that these particular items have played an important functional role, perhaps as a medium of social transaction or identity objects symbolic of earned status through one’s lifetime.

The fact that these exotics were constantly removed from circulation through ritual discard or sacrifice indicates that IBB community directly or indirectly prevented inheritance of such exotics by descendents of the deceased, this is compatible with the criteria predicted for segmentary societies suggesting that wealth accumulation and enhancement of undue power may have been curbed.

Furthermore, with a tradition that focused on ritual discard of extremely rare exotics in large numbers, it is plausible to conclude that the sustenance of social reproduction depended on unhindered flow or the ability to maintain access to such exotics without perturbation. Sacrifice of extremely rare items such as carnelian, agate, Onyx, in bulk quantities - as reflected in the cremation pit which had to be obtained through largely extended overland and sea routes - clearly shows that such items were essential for the social reproduction of Proto-historic megalithic society in Sri Lanka. As pointed out elsewhere since these items have been removed from circulation regularly through mortuary rituals, to maintain such practices essential for the social existence of a segmentary system, the supply had to be continues without interruption. Thus it is plausible to assume that abandonment of megalithic mortuary tradition around 3 century B.C. in Sigiriya Dambulla region, which signals the end of the segmentary socio-political system and individual clan autonomy is associated with the disruption of exotic material flow. So along with this disruption we can assume that a major socio-political and ideological dislocation may have occurred at a regional level.
The discontinuation of megalithic tradition highlights a new direction in the socio-political and ideological evolution of traditional Iron Age society of proto-historic Sri Lanka. Subsequent social change associated with rising of chiefdoms elsewhere in the Dry Zone plains must have been a significant strain on the socio-cultural systems of peripheral societies whose social existence based on the activities surrounding megalithic mortuary tradition. Breakdown of proto-historic cultures within relatively quick succession in the beginning of early historic period shows a major external influence or deliberate interference on the affairs of this society. Early historic archaeological evidence does not show a break down of interregional exchange but an intensification of material flow expanding up to Gangetic valley. Thus I argue that the social change on the periphery was partially imposed and partially due to dissemination of new ideologies powerful enough to undermine traditional belief systems associated with megalithic tradition, both as strategies implemented by the rulers of the rising chiefdoms in the Dry Zone plains of Sri Lanka. Introduction of Buddhism seem to have played a major role in this process. Next, in the final chapter I will focus on the issue of PHEH social transformation and socio-political and economic implications on the formation of state level society in the Dry zone plains on the periphery.
CHAPTER 7. CONCLUSION

The data discussed in chapters 5 and 6 suggest that Sri Lanka was inhabited by early Iron Age tribal communities a few centuries before the time of alleged north Indian migrations highlighted in the chronicles. In spite of some evidence of early north Indian contacts running far back into the first part of the first millennium B.C (as depicted from Coningham’s excavations at Anuradhapura ASW2 period J levels), the early Iron Age cultures of Sri Lanka were clearly part of a larger regional cultural complex spread in the southern regions of the peninsular India from around the beginning of the first millennium B.C. and do not reflect a strong north Indian cultural affiliation until the beginning of the 4th century B.C. Many scholars (Bandaranayake 1992, Deraniyagala 1992, Coningham 1995, Seneviratne 1995, Sitrampalam 1980) have observed this southern regional link associated with early Iron Age megalithic tradition, thus there is no disagreement about the positions taken by the above scholars and present writer on the inadequacy of the chronicles as a source of the early settlement history and initial complex socio-political formation on the Island of Sri Lanka. However, as summarized in chapter 2, the difference is more on each scholar’s take on the process of social transformation and level of influence that north Indian interaction had on the early Iron Age proto-historic societies living in the Island.

Therefore, despite rejection of migration as an explanation for the rise of civilization in Sri Lanka, the position of this writer is that the initial political centralization need to be investigated in the light of the political and economic expansion of state societies in the Gangetic valley, several hundred miles away in North India,
Which, in a way is not very different from the view that ancient chroniclers have held. However, based on the archaeological record, I opted for an indigenous growth process triggered by external contacts stemming from the state level societies in the north, the polities of the core interaction sphere centered on the Gangetic valley river basin. Since I consider that the trigger for social change was received from an outside source that had already reached state level complexity, the socio-political process I envision for Sri Lanka is a secondary process. Thus in explaining the internal socio-political process of state development, in chapter 3, I laid out three possible scenarios of secondary state formation: 1. Direct stimulation, which highlights situations comparable to colonial presence where natives completely lose their political independence, 2. Indirect stimulation, where ideas are received and internal social processes are set in motion due to a continued interaction through long-distance channels, in which long-distance trade plays a key role, 3. A mutually inclusive model, which explains both direct and indirect processes operate simultaneously; in this situation external presence is only through non-political agents, thus independent from core political hegemony. Based on the initial analysis of data from the IBB and the Anuradhapura settlement, I opt for the second scenario, the indirect stimulation where internal growth was instigated by an external influence received through long-distance communication.

As pointed out in Chapters 1 and 2, in his conclusion on the data from ASW2, Coningham (1999) has taken a similar view and sees an indigenous development process stimulated by external contacts. However, he rejects both diffusionist theories and internal growth models. Following Renfrew and Cherry’s (1986) early state modules (ESMs) Coningham proposes a model that builds on indigenous developments but
acknowledges the role of external contacts. By taking this path Coningham not only removes Sri Lanka from the rest of the early Iron Age polities in the southern regional sphere of peninsular India (of which it was a part for nearly half a millennium) but also places it in par with northern polities in the Gangetic valley. By doing this Coningham implies an incipient growth process for Sri Lankan early civilization along with the development of mahajanapada states of north India. For Coningham, capturing the idea of “kingship” through external interaction was instrumental in the socio-political evolution in the Island. Acceptance of dominance of the king is seen here as the key factor that made mobilization of energy required for monumental constructions possible. Although such a view is logical for Anuradhapura, it contains many unanswered questions such as how and why only Anuradhapura (despite located several hundred miles from the Gangetic valley interaction system) was able to break away from the polities of southern Indian interaction sphere of which it was an integral part during the early Iron Age prior to alleged linkup with northern India. If the Sri Lankan polity was an incipient state then emergence of Sri Lankan state near the southern tip of the Indian subcontinent would have influenced change in the socio-political structures of non-state polities in the opposite coast. Such archaeological patterns have not been found in the south Indian archaeological record. On the other hand given the fact that many coastal polities in the southern sphere had exposure to the same external network stemming from north, the question arises why only Anuradhapura polity evolved along with northern polities. Without addressing such issues Coningham’s incipient model (which is modeled based on Renfrew’s EMS) for state formation in Sri Lanka cannot stand strong.
Furthermore, Coningham’s own data (1999: 53) indicate that the initial political centralization at Anuradhapura is evident from the construction of a massive rampart surrounded by moats that are parallel to structural period I (c. 360 and 190 cal. B.C.) of the ASW2 excavation. Although there were certain urban sites in the north that constructed fortifications parallel to the time when Anuradhapura was built, many of the key sites of the northern sphere (Fig. 32) have developed into massive urban sites with fortifications, at least by the end of 400 B.C. (Erdosy: 1995). Furthermore, a number of sites that later became key centers of the northern sphere such as Atranjikehra, Rajgir, Campa, Ujain, and Rajghat had fortifications by c. 550 B.C. (Erdosy 1995:110). These observations suggest that several key centers in the north Indian sphere had developed political centralization long before the mid 3rd century B.C. and were on their way to become state level societies before Anuradhapura. By 400 B.C. many of these early urban societies have formed into state societies. We know that the Nanda imperial dynasty was replaced by the Mauryas in the 321 B.C. and if we agree with the general assessment that the Nanda imperial dynasty began somewhere in the mid 4th century B.C., we can see that initial political centralization in Anuradhapura coincides with the rise of the first imperial dynasty in the north. This does not mean that Sri Lanka developed state level societies at this time. Although it is difficult to pin point a time for initial states at Anuradhapura, it can be postulated that initial states emerged somewhere between 325 B.C. and 250 B.C., just before Buddhism was introduced from north India. It was only after the arrival of Buddhism that we see a process of consolidation beginning to operate along with an expansion of hinterland regions of Anuradhapura. Thus, treatment of urban formation at Anuradhapura that runs parallel with other emerging north Indian centers can be
problematic, particularly when explaining the social process associated with state formation. Furthermore, as evident from structural phase I (c.360-190 cal. B.C.) of Coningham’s ASW2 excavation, the initial urban process at Anuradhapura coincided with a clear surge in north Indian contacts. This is clear from the evidence of a steady flow of exotic minerals, punch mark coins, imported ceramics including NBPW, and an increased use of Brahmi script and Prakrit language. The evidence suggests a strong flow of information from the state-level societies of the north towards the tribal areas in the south. Given that the rise of urbanism and political centralization (as depicted from the construction of a massive rampart and a moat at the Anuradhapura settlement) coincide, with this surge in long-distance trade with polities in the northern sphere, we can conclude that the rise of states at Anuradhapura was a secondary process.

In explaining this secondary state formation process in the Dry Zone plain of Sri Lanka, my indirect stimulation model implied two interrelated processes that took place from the beginning of the 4th century B.C. to the end of the 3rd century B.C.: 1. An inter-regional socio-economic and political process, that involved the merging of two main regional spheres (Fig. 29), i.e. polities in the core regions of the Gangetic valley and the tribal areas in the southern regions of peninsula India, instigated irreversible socio-political and economic consequences on the polities of both regions, 2. A local process in which communities in the dominant tribal areas of the southern interaction sphere (in this case tribal communities at Anuradhapura), responding to the transformation in the regional arena, evolved into centralized polities subjugating other less dominant tribal areas, compelling them to become hinterlands of emerging centers.
7.1 The merging of northern and southern regional spheres

As discussed above, the evidence of fortification that involves a construction of a massive rampart and a moat surrounding the urban settlement surely highlights the initial political centralization at Anuradhapura. According to the accounts in the Pali Buddhist canon, the first half of the 4th century B.C. was a time of war among mahajanapada centers/states in the northern sphere until Maghada emerged as the hegemonic power in the mid 4th century B.C. Thus, as pointed out above, the initial political centralization in the Island was contemporaneous with the socio-political process associated with empire formation in the north. Given that trade links between the polities in the northern sphere increased in the fourth century B.C. as depicted from the data from Anuradhapura excavations, rise of Anuradhapura polity should be viewed against this competitive political environment associated with empire formation in the north.

A closer look at the political process in the two regions suggests that these political and economic developments in the polities of the northern sphere and in those of the tribal spheres south of the Gangetic valley, had a feedback impact for each region during the time when the two regional spheres merged. Thus instead of focusing on Anuradhapura as the only urban center in the south, it is logical to consider that the expansion of trade networks and steady communication between mahajanapada centers (states) in the Gangetic valley sphere and tribal areas of the southern sphere stimulated a second wave of urban process in the dominant tribal areas of the southern sphere.

Although we know of Anuradhapura as the only fortified settlement and the earliest urban center in the extreme south, as will be discussed below, there should be other such centers in the southern regions of peninsular India that we know very little about through
archaeological data. The initial political centralization in the tribal regions around northern centers would have facilitated a smooth flow of exotics into the Gangetic valley through these regions. This may have caused an increased competition between *mahajanapada* centers to control trade networks and resource areas. The end result was (as pointed above) the expansion of Maghada, bringing numerous *mahajanapada* polities under its hegemony, which expanded its political dominance south, far beyond the regions of Kalinga. In the second half of the 4 century B.C. the Nanda dynasty (343? - 321 B.C.) ruled all of north India and created the first early Iron Age empire. According to the classical text (Puranas, and various Buddhist and Jain literature), immediately before the rise of the Maurya dynasty, the Nanda Dynasty of Maghada emerged victorious dominating northern communities such as Ashmakas, Haihayas, Ikshvakus, Kashis, Kurus, Maithilas, Pancalas, Surasenas, and Vitihotras. Furthermore, as depicted in the infamous Kharavela inscription written in the first century B.C., Nandas had subjugated the regions of Kalinga three centuries earlier. They also considered to have dominated regions as far as the Godavari River valley. If Nanda political hegemony entered the south beyond Kalinga in the mid 4th century B.C. in order to control mineral resource areas and trade networks heading from the south, then it is plausible to assume a steady interaction process between the northern sphere and the polities in the south from this time onwards. Regions of the southern sphere, further south of Kalinga, are known for exotic resources such as gold, copper, pearl, precious stones, conch shell, turtle shells, ivory, spices, and medicinal herbs, and beads, which have been highly sought-after items by the northern elite. If contacts with competing *mahajanapada* centers of the north during the early 4th century B.C. sparked the initial political centralization as depicted by
the construction of fortifications at Anuradhapura, it is plausible to suggest that the expansion of the Nanda Dynasty in the mid 4th century B.C. into Kalinga was a turning point for further evolution of the socio-political process of southern polities. The contacts were further steadied during the Maurya Dynasty (321-185 B.C.).

As pointed out above if the initial expansion of trade networks stemming from *mahajanapada* polities in the north caused a rapid surge in the inter-regional trade, which triggered an urban process in the south leading to political centralization, the rise of the Maghada empire steadied these contacts and established more stable communication between the two regional spheres through frontier strongholds such as Kalinga, and this set the stage for a further political evolution. One long-distance trade corridor was surely running along the eastern coastal board (Fig. 32) connecting centers such as Sisupalgarh (at modern Kalinga), Samapa (at Jaugada one hundred miles south of Kalinga), and Dhanyakataka (the modern Amarawathi) facilitating the flow of trade goods along a north-south coastal stretch down to Sri Lanka. All these centers were protected by fortifications built within the last few centuries of the first millennium B.C. and contain material characteristics comparable to the Anuradhapura EH/PH transition phase.

According to Allchin (1995: 147) Brahmi inscriptions found on potsherds at Dhanyakataka are remarkably similar to the ones that were found at Anuradhapura. In addition to the Brahmi script and the Prakrit language, excavations at these sites have yielded NBPW sherds and silver punch-marked coins. Therefore, despite the lack of absolute chronology for some of these sites, the parallels reflected in the material record to those of Anuradhapura finds, which has a good set of absolute dates (Coningham
indicate that a north-south communication passage was in operation before the beginning of the Maurya period.

Given the fact that Maurya’s king Asoka had to re-conquer Kalinga after a massive destruction of life (as depicted in Asoka’s rock edicts and Buddhist’s classics) nearly a century after the Nanda conquest of the same area, it is understandable that from around the mid 4th century B.C. onwards, Gangetic centers were continuously pressing southwards to dominate trade routes and resource regions by subjugating key polities in the southern boundary of the northern interaction sphere and beyond. The presence of Asoka’s minor rock edicts inscribed far south during the mid 3rd century B.C. in sites such as Gavimath in modern Mysore (a region known for ancient gold mines), proves this point.

Although present archaeological knowledge on the development of south Indian centers south of the Krisna river is still in its infancy (due to a lack of absolute chronology and a lack of publications), we know well from classical texts and inscriptional data that there may have been a number of other important polities in a few key areas of south India at least by the mid 3rd century B.C. In the Girnar rock edict II (3rd century B.C.), emperor Asoka lists *coda, pada, satiyaputo, ceraputo, tambapanni*, (Chola, Pandyas, Satiyaputra, Keralaputra, Sri Lanka) as polities located beyond his borderlands. The fact itself that these polities are specifically mentioned in the Girinar rock edict II as independent polities is an indication that they held a certain level of politico economic importance worthy enough to mention in important communications made by the powerful emperor who ruled almost all regions of the subcontinent (except for the regions south of the Palar River in south India). Now that we know from the
archaeological record that Anuradhapura state at the time began to exhibit attempts of consolidation, it is plausible to suggest that other interacting southern polities listed along with that of Sri Lanka (Thambapanni) in Asoka’s edicts have had equally complex political and economic standing.

Similarly recent excavations at Korkai (Majeed 1987), the ancient capital of the Panadya kingdom, have revealed evidence of early contacts with the polities of the northern sphere comparable to what was found from the abovementioned fortified urban centers along the coastal trade corridor. However, Korkai lacks fortifications. Its initial settlement phase contains black and red ceramics associated with a Megalithic urn burial site located nearby. The site also contains a cultural phase constituting fine ceramics including NBPW (indicating trade with northern urban centers), Brahmi inscriptions, and other cultural material similar to what was found during period I of Anuradhapura. This ancient port now located six miles interior due to the heavy sedimentation of the surrounding lagoons (Arunachalam et al 2006) by the Tamaraprni River is one of the main ports where pearls and conch cell productions were shipped off. There is no doubt that this site was a main transit point of exotic materials during the proto-historic period as well. Sri Lankan coastal sites such as Pomparippu (Begley 1981) and Kantarodai (Begley 1967) must have been linked to mainland networks of the proto-historic period with sites like Korkai. Thus Korkai is another southern site that continued to be occupied from proto-historic times through the early historic period and an important trade hub linked with the north-south trade relations. This indicates that a number of key south Indian sites have been exposed to the same influence Sri Lanka was receiving from northern polities.
Thus these evidences suggest that the initial political centralization and rise of state level societies in the southern regions should not be treated in isolation from each other. The interactions between other emerging south Indian polities and Sri Lanka cannot be disregarded nor can they be paired (in terms of socio-political evolution) with the incipient urban processes associated with the rise of the Gangetic valley state system of the mid first century B.C. Instead, the rise of centralized polities and eventual development of state level socio-political complexity in Sri Lanka should be viewed parallel to the process of the empire formation in the northern interaction sphere and the subsequent Maghada imperial expansion that led to the conquering of important frontier regions of the south such as Kalinga. Only then a sustained communication with the Gangetic system would have reached far south. The rise of a cohesive state structure reinforced with a strong state ideology is a phenomenon that developed after building contacts with the Maurya dynasty. By sending missionaries, the Maurya Empire not only was able to keep its communication networks intact with distant regions beyond its political hegemony but also taught means of strategic consolidation to emerging state apparatuses in places like the Anuradhapura center. The process of consolidating Anuradhapura state power in the hinterlands like the Sigiriya-Dambulla region should be viewed with this larger inter-regional process in mind.

7.2 The local socio-political process in the northern Dry Zone plain of Sri Lanka

As discussed in chapter 3, Algaze (1989: 572) points out that positive spin-offs can come from economic contacts between societies at different levels of complexity.
Under such circumstances, although a certain amount of institutional restructuring could be seen on both societies, the influence of contact would strongly be felt in the less complex society, given that the society in question is internally equipped to undergo change and on the verge of social transformation. In chapter 3, I rephrased this position by suggesting that…

…when indigenous populations begin sustained relations with complex societies through entering into the trade spheres dominated by core regions, they are destined to undergo considerable internal restructuring. However, due to differential levels of internal structuring of such societies, the extent and the speed of change among them may be variable. This is one reason why we see a wide range in the level of internal complexity in societies in a given region even after they are exposed to the same network of communication.

Above (in the previous section), I pointed out that merging of the two regional spheres, i.e. the northern regional sphere centered in the Gangetic valley and the southern tribal sphere of the peninsula had clear evolutionary consequences on the societies in the tribal areas of the south. Gradual merging of two regional interaction spheres triggered a chain of events through time that eventually led to the rise of state level polities in the southern sphere. In Sri Lanka by about the 5th century B.C. Anuradhapura began to emerge as a dominant, tribal area. In the mid 4th century B.C. it developed characteristic of a centralized polity. At least during first half of the 3rd century B.C. Anuradhapura became an initial state, and after mid 3rd century B.C. it began to consolidate the state apparatus through employing various strategies of integration.

The data retrieved from the final stages of structural period J at ASW2 (Coningham 1999) indicates that Anuradhapura was gradually forming into a dominant tribal area at least from around the beginning of the 5th century B.C. The appearance of
horse bones in the faunal record, the recovery of a few fine gray ware sherds, and the arrival of the Brahmi script, the Prakrit language, along with exotic minerals from far-reaching sources, indicates initial contacts with the north, a trend that we do not see from both the IBB cemetery and settlement data. In comparison to the mortuary data from IBB cemetery, Anuradhapura clan elders were taking a different path in their socio-political process from that of the other less dominant tribal areas.

Coningham (1999, 2006) reports a number of new developments associated with the later phases of Period J, around 400 B.C. Craft waste and finished products from raw materials occurring in sources over 60 km away from the site are now evident from the material record. Evidence of rice (Oryza sativa Linn) appears for the first time from layers corresponding to phase J3 of structural period J at ASW 2. The number of cattle bones found from structural period J was 113 pieces, in comparison to 3 pieces recovered from period K (Coningham 2006: 592), which indicates a considerable increase in pastoral activities. A similar pattern is seen in iron and copper alloy objects. These patterns reflect clear evidence for diversification and intensification of an economic production parallel to a steady increase in population. In chapter 5, I have pointed out how seasonal pastoral camping could lead to the exaggeration of the area of occupation in regard to the initial occupation in the settlement at Anuradhapura. Now, circa 400 B.C., during the later phases of structural period J (510-340 cal. B.C.), along with the evidence of a considerable increase in the site size, there is clear evidence of diversification and increase in the food production and iron implements. This pattern indicates a population increase. This is an advantage for Anuradhapura population to emerge as a dominant tribal group. However, as depicted from the data recovered from IBB cemetery
excavations, the IBB community during the same time (540-400 cal. B.C.) remained as an independent tribal area, which had a smooth access to traditional exotic finished good networks of the southern sphere as reflected by its unusually rich collection of carnelian, agate, copper, and gold present in its mortuary record. Nevertheless it lacks evidence for communication with northern polities that we see from the archaeological record at Anuradhapura. Use of the Brahmi script and the Prakrit language is not evident in the Sigiriya-Dambulla region until mid third century B.C. That too is found only in the monastic context. As evident from phase I (436-226 B.C.) of IBB settlement excavation, the IBB community maintained its traditional socio-political structure and cultural patterns until it became a hinterland in the latter part of 3rd century B.C. Contrary to the IBB community, by the end of the structural period J, the Anuradhapura community was busy restructuring its tribal socio-political organization. As pointed out in chapter 5, in the period that followed period J, i.e. during period I of ASW2 (stratigraphic phase V at ASW3) Anuradhapura intensified its north Indian contacts, while transforming itself into a centralized urban polity with fortifications. During this time along with the continuation of a range of luxuries from northern urban centers, the Brahmi script, and the Prakrit language, Anuradhapura began to receive punch-marked coins, a currency initially issued in many polities of the northern sphere from around the mid fourth century B.C. This pattern is an indication that during period I (360–190 cal. B.C.) Anuradhapura began to receive payments both in luxuries as well as in currency for goods that it exported. Thus evidence of increased craft production during this phase could be an indication that Anuradhapura was not only a receiver of finished products but also an exporter. Evidence of crucible fragments, non diagnostic slags and residues, iron slags, and lapidary work
using local material such as garnet, amethyst, and quartz, are some of the materials that can be associated with craft activities recovered from both ASW2 and ASW3 excavations from the strata associated with this phase. Deraniyagala (1986: 42-3) too reports evidence of lapidary work using both local and imported material at Anuradhapura as early as 500 B.C. Seneviratne (1995: 291) reports evidence of lapidary industry associated with Carnelian (imported raw material) from around the 6th century B.C. from Anuradhapura. If this is correct these data suggest the possibility that, after a period of gradual increase in craft activities, Anuradhapura transformed into a craft center at least by the beginning of the 3rd century B.C. or slightly before the end of 4th century B.C. Most of the raw materials were obtained from hinterland sources, although some were surely imported.

Given that Anuradhapura transformed into a craft center during the proto-historic early historic transition phase, it is plausible to suggest that along with raw materials some of the Anuradhapura craft products may have been intended for export. Following Jacobs (2000) and Algaze (2001), I have highlighted (in chapter 3) that when societies begin to redirect some of its raw imports as exports after transforming them to finished goods they begin to generate a positive growth process, as one can earn more for finished products than for raw materials.

According to Coningham’s data, by structural period I, over two thirds of the 100 ha fortified area was occupied. This is surely in addition to the settlements outside the fortification that we do not know much about. The pattern indicates a massive growth of population in the urban compounds. In chapter 3 I have explained that…

…when polities in a periphery pick up their economic growth and begin to expand through capturing and using external energy increasing production for external markets, certain urban centers can become magnets for
artisans from hinterland and other peripheral polities. Their expanding economies lead to an increase in the population through new waves of migration, creating further asymmetries among the peripheral polities or settlements.

During this period, when Anuradhapura became a craft center, it initiated a number of complex irrigation projects. Most of these early irrigation systems are still surviving due to reconstructions and expansion through time. The sustenance of a large population aggregated in the urban center, may have required an increase in surplus food production. Anuradhapura polity seemed to have met this challenge by constructing reservoirs and canal systems to irrigate the rice fields in the floodplains for year round cultivation. During the formative period several irrigation works have been added by a number of rulers as indicated by literary sources.

The evidence discussed above suggests that during the late 4th and early 3rd century B.C. the Anuradhapura community was rapidly evolving towards a state society. As pointed out above during this time IBB maintained its traditional structure, without much change. It is significant that none of the exotics such as NBPW, gray wares, black slipped wares, Brahmi script, lapis lazuli, coins that Anuradhapura received through its long distance channels from the northern sphere during period I were received at the IBB settlement. Even rouletted ware ceramics, widely known from post 4th century B.C. context in many southern polities, was not present at IBB. However, IBB continued to receive agate, carnelian, and copper, through its long distance channels at least up until the mid 3rd century B.C.

Despite a difference of only 40 miles in distance between Anuradhapura and Ibbankatuwa, the duality present in the pattern of long-distance exchange from the two
sites is striking. As pointed out above, during the time when the process of an initial political centralization took place at Anuradhapura (as depicted from the construction of ramparts around the city) when it developed a steady access to trade networks stemming from polities associated with the northern sphere, IBB continued to remain in its traditional social transaction based exchange sphere (with other tribes) through which it received particular exotic finished goods that it required for its social reproduction. The fact that IBB continued to receive traditionally desired exotics important for its social reproduction (that it received through southern networks), while Anuradhapura was receiving a variety of new luxuries along with punch-marked coins used in the northern sphere, is itself an indication that during the PH/EH transition period there were two different exchange systems operating simultaneously. While social transaction-based traditional exchange systems continued to prevail in the tribal areas in the marginal zones, the emerging urban communities began to be fully involved in a profit-based exchange, where the elite can now accumulate wealth as opposed to maintaining a tribal social structure where clans had equal-level access to resources.

Two scenarios are possible for this difference in the exchange pattern: 1. Certain proto-historic tribes in the hinterland such as IBB were strictly tradition oriented. They, while resisting Anuradhapura hegemony, seemed to have possessed and maintained rigid structures with strong taboos and prescriptions, and thus were compelled to maintain their traditional social transaction-based exchange to receive exotics required for reproduction of their traditional social structures. 2. Anuradhapura, while becoming a centralized polity, developed a monopoly over exotic trade arriving through northern channels into the north central Dry Zone plain. This not only gave access to luxuries of northern urban
polities but also allowed them to build their economic base on a new profit-based exchange system.

The end result of this difference is clear from the outset, i.e. an emergence of a new socio-political and economic system centered at Anuradhapura that was capable of evolving in rapid succession, transforming it into a political and economic hegemony that eventually expanded to dominate previously independent tribal areas. From the time Buddhism had arrived in the island in the mid 3\textsuperscript{rd} century B.C., the way in which Buddhist ideology was used to gain political mileage was remarkable. Immediately after the arrival of Buddhism, the city of Anuradhapura transformed into a sacred space, a political center surrounded by monumental religious symbols. A sampling of the sacred Bo tree under which Buddha attained enlightenment was brought from North India and planted near the southern gate of the city (the tree is surviving to this day and is still one of the most venerated symbols), a large area immediately outside the city walls was allocated for Buddhist monks. Stupas were built along with other sacred spaces as centers of veneration that were surely able to tie hinterland communities to the center. Patronage received for Buddhism by the state was unprecedented that it encouraged spread of monasteries deep into independent tribal areas. As evident from EB inscriptions from monastic complexes such as at Mihintale, Ritigala, and Dambulla, the royalty, followed by the newly emerging elite, were the donors of the first monasteries that emerged in the hinterland. The aim was clear from the start, unifying diverse tribes under one ideology, which created a singular identity tied to the center. The ingenuity of utilizing religion for political ends does not reflect novice political leadership. The way in which space (in the city) was utilized to create a sacred space while converting hinterland communities and
by actively involving them in spreading Buddhism (as seen from the distribution of monastic sites), points to the political sophistication of the state. The trends may have been learned from their contacts with northern polities and these strategies were efficient but imperative. The data recovered from IBB settlement and the early historic Sigiriya-Dambulla region are a testament to the approach made by the rulers of the newly emerged Anuradhapura state.

As discussed in chapters 5 and 6 the strategies used to dominate hinterland areas are apparent from the Sigiriya-Dambulla archaeological record. Although warfare cannot be ruled out as an initial strategy of subjugation, numerous other strategies are most likely from the archaeological evidence. One strategy certainly was colonization of the hinterland. When Anuradhapura initially emerged as a craft cum agrarian center in the late 4th early 3rd century B.C., there was a population aggregation into the center. At the turn of the 3rd century B.C., along with the expansion of Buddhism and irrigation agriculture in the hinterland there was a clear outward population movement. The distribution of monastic sites in far reaching areas from the center beyond the territories previously occupied by proto-historic tribes (Fig. 33) is an indication of this massive outward population flow into the hinterlands from the center. As pointed out in chapter 5, maintenance of such monastic centers needs permanent villages surrounding them. Pilgrims alone are not sufficient for the sustenance of such a dense scatter of monasteries in the hinterland, and this confirms their simultaneous presence through EB inscriptions. Some EB inscriptions highlight incidents of newly created villages and reservoirs in the hinterland areas. IC # 269 (Paranavithana 1970: 21) from Ritigala (twenty miles north of Sigiriya-Dambulla region claims) that four prominent people (Bahike, Phussagutta, Mitta,
and Tissa), who are sons of Mahamata Brahmadatta, have founded the great village Aritta. Another inscription (IC # 268) found in the same area mentions that one of the above siblings (Phussagutta) constructed a Stupa, perhaps for a newly erected monastery. Similarly, another inscription (IC# 846) found at Dambulla’s early historic monastery near IBB, mentions a donation made by an irrigation officer named Tissa. These evidences are surely new developments associated with the colonization of the hinterland in the early historic period that go parallel with the consolidation of state apparatus.

However, the archaeological record at the IBB settlement excavation further suggests that colonization of the hinterland along with the spread of a new religion was not sufficient for complete domination of hinterland communities. Complete integration required dissolving traditional structure. It is clear from the data discussed in chapter 6, that the tribes at IBB felt strongly about maintaining their clan independence. Thus the center may have needed to employ other strategies to undermine the traditional tribal structure. It is in this background that we need to focus on understanding the capricious end in the flow of luxuries into the hinterland regions. It would have been highly plausible for the center to intervene and stop the flow of luxuries altogether in order to undermine the social reproduction of traditional structures of hinterland communities. It surely caused the end of the mortuary tradition, which played a pivotal role in the traditional social reproduction process. It is also argued that traditionally the megalithic mortuary practice is tied to claims on land rights and tribal territories (McIntosh 1985). If this is correct, the emerging center has all the incentives to undermine this tradition, because, as pointed out above, this is a time of colonization of the hinterland. By undermining megalithic mortuary tradition and associated socio-political structure, tribal
land rights may have been undermined to complete the confiscation of tribal territories for irrigation projects and rice fields in the flood-plains. What is significant in the difference in the access to luxury items between Anuradhapura and the hinterland regions, is that when the carnelian flow into IBB stopped completely (after the mid third century B.C.), Anuradhapura received carnelian in larger quantities (more than what they received in the previous period) as depicted from the amount of carnelian recovered from period G (c. 200 cal. B.C. –130 cal. A.D.) at ASW2 (Coningham 2006: 418).

These evidences compel us to suggest that rulers of the center purposely made its hinterland poor in luxuries, which are essential for the maintenance of traditional tribal socio-political structure, which is inherently independent. By encouraging and funding for large number of monasteries in the hinterland, it forced the hinterland populations to divert their surplus into the maintenance of temples and monasteries. With irrigation projects advancing in the hinterland, there may have been a good surplus in the agricultural production. However, the new state strategies seemed to have reduced the people of previously independent hinterland to peasants. Although the hinterland elite continued to display their newly earned status by involving in a competition for donations to newly emerging monastic centers, it is highly plausible that a good portion of them were attracted to living in the state capital, the city of Anuradhapura, because luxuries coming from overseas remained in the center. As pointed out in chapter 5, a lack of nobility visible in the early-historic settlement record in the hinterland could be related to this trend. The movement of the elite into the center may have fitted well with the consolidation agenda of the state, because, now more than ever it was easy for rulers in the center to keep tabs on the hinterland elite. Thus, based on the above discussion, I
suggest that the difference depicted in the early historic archaeological record at
Anuradhapura and IBB was a direct result of consolidation strategies employed by the
initial state apparatus of Anuradhapura. It dissolved traditional tribal structures of
hinterland communities, which created a space for a new ideology to take root among
tribal communities. Rapid spread of Buddhism into the hinterland along with
abandonment of megalithic tradition is a clear testament to this process. This process
made it possible for the previously independent hinterland tribal population to become
peasants. As seen from the evidence of EB inscriptions at monastic sites, it allowed the
elite population to compete between each other for status through which surplus was
spent on temples in return for recognition. This diverted finances away from spending on
subversive activities against the states. Thus what we witness from the archaeological
record of the EHPH period in SL is a clear strategy of consolidation of an evolving state
apparatus. At the same time the competition between the newly emerging elite, as
expressed in the EB inscription, is extremely insightful about the socio-political process
of initial states. Most of the elite who made donations did not forget to highlight their
tribal ancestry. This indicates an extremely competitive environment where both
traditional tribal positions and new titles are often mentioned to elevate individual
donors’ social position. Almost always the individual donor’s lineage was expressed by
mentioning his/her father’s name and title. What is implied in the competition between
the elite (as expressed in the EBI inscriptions) is the social transformation from a
kinbased structure to a class- based structure, which is associated with the rise of states.
Therefore, without a doubt we can argue that the turn of the third century B.C. was a time
of consolidation of initial states.
In this research I have suggested that Sri Lankan state formation during the early Iron Age was a secondary process. I argued that it was an internal process stimulated by external forces mainly due to a surge in the long-distance trade with northern polities of the Gangetic valley, which led to a profit based exchange economy. I have forwarded three alternative models: direct stimulation, indirect stimulation, and a mutually inclusive model (in which both direct and indirect processes contribute to social change) as tools to explain this secondary process. Based on the presence of an archaeological record of proto-historic material, which shows an unbroken continuation of cultural and social transformation, I chose the indirect stimulation model as the best tool to explain the formation of initial states. However, when explaining the process of consolidation of the early state apparatus, the utility of the indirect model gets into a somewhat murky area. The record now indicates direct influences on the state of Sri Lanka when it received missionaries from the Mauryan court of north India. Early Brahmi inscriptions indicates the presence of foreigners, such as Kabojas who were assimilating into the local society as expressed from the local titles held by them in the monastic inscriptions. Although the missionary visits can be seen as a religious event, the way I see it (both from the angle of the Maurya Empire and from the state of Sri Lanka) it was surely a political move. On the one hand the Buddhist ideology was cleverly used by the Mauryan court to consolidate its ties with non-subjugated communities beyond the frontiers by helping to establish a common religious identity. On the other hand, the emerging states beyond the frontiers of the northern interaction sphere used the same ideology internally for consolidation of the state by employing it to bring hinterland communities under the state’s arm. Thus the latter part of the state formation process in Sri Lanka after the mid 3rd century B.C., i.e.
the process of consolidation of the initial states on the Island, can be better explained by using the mutually inclusive model which highlights both external and internal forces working side by side.


KENOYER, J. M. 1995. “Interaction systems, specialized craft and culture change: The Indus valley tradition and Indo Gangetic tradition in South Asia,” in The Indo-Aryans of


RHYS DAVIDS, T. W. 1875. Sigiri, the lion rock. *R. A. S. Journal*, vol. VII. part X.


Figure 1. Satellite image: Peninsular India and the island of Sri Lanka
Image: (Google 2009)
Figure 2. Megalithic cemeteries in Sigiriya-Dambulla region within SARCP survey area (Map from Karunaratne 1994: 105)
High ground

Ancient flood-plain

Anakatawa megalithic cemetery

Ibbankatuwa megalithic cemetery

Ibbankatuwa settlement site

Dambulu Oya River

Stream

Figure 3. Flood-plain landscape surrounding Ibbankatuwa and Anakatawa Cemetery (Image: Google 2009, GeoEye 2009, Digital Globe 2009, TerraMetrics 2009)
Figure 4. Flood-plain landscape surrounding Bellan Oya proto-historic settlement and Rotavava megalithic cemetery (Image: Google 2009)
Figure 5. Location of Anuradhapura proto-historic settlement within Malwathu Oya River flood-plain
Figure 6. Bellan Oya: Settlement deposit is sitting two meters below the surface, sherds shown in Fig. 7 were collected from the freshly dugout soils seen on the right.
Figure 7. Surface ceramic collection from Bellan Oya proto-historic settlement: a. Decorated body sherds and a sherd with a symbol, b. Diagnostic rim-sherds
Figure 8. Ibbankatuwa site plan: Megalithic cemetery and settlement (Karunaratne 1994: 106)
Figure 9. Ibbankatuwa settlement excavation: a. Kiln debris (Context 28), b. Clay pits dug by potters
Figure 11. Terracotta objects from Ibbankatuwa settlement: a. Spindle whorls, b. Perforated discs, c. Spheres, d. Seal handle, e. Lid, f. Dice like object
Figure 13. Metal objects from IBB settlement: a. Copper alloy ingot, b. Lead ingot, c. Copper coin, d. Crucible fragment, e. Iron bar, f. Iron spears
Figure 14. IBB settlement excavation, ceramic collection from context 28, the kiln debris: a. Shallow bowl/athili, b. Cup or deep bowl, c. Lamp, d. Shallow open tray, e. Enclosed tray
Figure 15. IBB settlement excavations: ceramic collection from context 28, the kiln debris: a. Pot/mutti, b. Funerary Jar
Figure 16. IBB settlement excavation: Ceramic collection from context 43 (PH/EH transition period)
Figure 17. IBB settlement excavation: Ceramic collection from context 42

- a. Closed tray
- b. Bowl
- c. Open tray/bowl
- d. Shallow bowl/nambily
- e. Shallow bowl/athili
- f. Bowl
- g. Pot/mutti
- h. Rimless long neck jar
- i. Large pot/mutti
Figure 18 IBB megalithic burial site: a. Tomb clusters (After Bandaranayake 1992) b. Cists with twin urns, c. Triple urns in a single cist.
Figure 19.IBB megalithic burial site excavations: Tomb cluster 21
Figure 20.  a. Sealed cremation pit found at IBB cemetery, b. Chard logs and inverted tray found inside the cremation pit, c. Carnelian necklace found inside the cremation pit
Figure 21. Ibbankatuwa cemetery excavation: a. Copper pins, b. Carnelian beads, c. BRW bowl, d. A cist tomb. e. Red Ware pot
Figure 22. ASW3 excavation at Anuradhapura: south-wall profile
Figure 23. ASW3 excavations at Anuradhapura: stratigraphic phase VI: A segment of a tile paved pathway
Figure 24. Anuradhapura ASW3 excavations: a. Earliest Iron Age cultural surface: (surface of cultural phase III) during excavations, b. Posthole marks of a round hut and kitchen refuse, on the upper left corner is a brick cistern built during the historic period
Figure 27. Finds from ASW3 excavation at Anuradhapura: a. Copper coin and a copper rod, b. a Gold pendant, c. A seal with early Brahmi script, it reads Navika Siha (Mariner by the name Siha), d. Fine red ware rim sherds with Brahmi script, e. NBPW sherd, f. Fine gray ware ceramics
Figure 28.1 Early Iron Age graffiti symbols from ASW 3 excavation at Anuradhapura: Symbol 2, 4, 13, and 14 are from stratigraphic phase IV.
Figure 28.2 Early Iron Age graffiti symbols from ASW 3 excavation at Anuradhapura: Symbols 16 and 17 are from stratigraphic phase IV.
Figure 29. Mid first millennium B.C. regional interaction spheres
Figure 30. Distribution of sixteen mahajanapadas in north India
Figure 31. Distribution of megalithic cemetery sites in Sri Lanka
Figure 32. Urban towns and fortified centers in India and Sri Lanka by c.350 B.C.
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Figure 34. Materialization of Buddhist ideology: a. Maha stupa at Anuradhapura, B. An early Brami monastic inscription
Figure 35. Sri Lanka: Climatic zones and main rivers
Table 2. Chronology of cultural activities at Ibbankatuwa (IBB) and Anuradhapura settlements.

<table>
<thead>
<tr>
<th>Cultural Phase</th>
<th>Ibbankatuwa</th>
<th>Anuradhapura</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cemetery</td>
<td>Settlement Stratigraphic Phase</td>
</tr>
<tr>
<td>Protohistoric C.900-400 B.C.)</td>
<td>Cluster 21 (540-400 Cal. B.C)</td>
<td>K (840-460 Cal. B.C.)</td>
</tr>
<tr>
<td>Protohistoric Early Historic transition (c. 400-250 B.C.)</td>
<td>I (436-226 Cal. B.C.)</td>
<td>I (360-190 Cal. B.C.)</td>
</tr>
<tr>
<td>Early Historic (c.250 B.C.-100 A.D.)</td>
<td>II (200 B.C.-100 A.D.)</td>
<td>G (200-B.C.-130 Cal. A.D.)</td>
</tr>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 3. IBB cluster 21 cist tomb description

<table>
<thead>
<tr>
<th>Cist #</th>
<th>Chamber Type</th>
<th>number of Chambers</th>
<th>Chamber: preservation level</th>
<th>Number of urns</th>
<th># offering Vessels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cist 1</td>
<td>Single</td>
<td>1 Chamber</td>
<td>Undisturbed</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Cist 2</td>
<td>Single</td>
<td>2 Chamber</td>
<td>Disturbed</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Cist 3</td>
<td>Multiple</td>
<td>3 chambers</td>
<td>Undisturbed</td>
<td>3</td>
<td>18 small</td>
</tr>
<tr>
<td>Cist 4</td>
<td>Single</td>
<td>1 Chamber</td>
<td>Undisturbed</td>
<td>1</td>
<td>No</td>
</tr>
<tr>
<td>Cist 5</td>
<td>Single</td>
<td>1 Chamber</td>
<td>Disturbed</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Cist 6</td>
<td>Single</td>
<td>1 Chamber</td>
<td>Undisturbed</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Cist 7</td>
<td>Single</td>
<td>1 Chamber</td>
<td>Disturbed</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>Cist 8</td>
<td>Single</td>
<td>1 Chamber</td>
<td>Disturbed</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cist 9</td>
<td>Single</td>
<td>1 Chamber</td>
<td>Disturbed</td>
<td>?</td>
<td>5</td>
</tr>
<tr>
<td>Cist 10</td>
<td>Single</td>
<td>1 Chamber</td>
<td>Disturbed</td>
<td>1</td>
<td>?</td>
</tr>
<tr>
<td>Cist 11</td>
<td>Single</td>
<td>1 Chamber</td>
<td>Disturbed</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Cist 12</td>
<td>Single</td>
<td>1 Chamber</td>
<td>Disturbed</td>
<td>2?</td>
<td>?</td>
</tr>
<tr>
<td>Cist 13</td>
<td>Single</td>
<td>1 Chamber</td>
<td>Disturbed</td>
<td>1</td>
<td>?</td>
</tr>
<tr>
<td>Cist 14</td>
<td>Single</td>
<td>1 Chamber</td>
<td>Undisturbed</td>
<td>1</td>
<td>?</td>
</tr>
<tr>
<td>Cist 15</td>
<td>Single</td>
<td>1 Chamber</td>
<td>Undisturbed</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Cist 16</td>
<td>Single?</td>
<td>unclear</td>
<td>Disturbed</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>Cist 17</td>
<td>Single</td>
<td>1 Chamber</td>
<td>Disturbed</td>
<td>1</td>
<td>?</td>
</tr>
<tr>
<td>Cist 18</td>
<td>Single</td>
<td>1 Chamber</td>
<td>Disturbed</td>
<td>1</td>
<td>?</td>
</tr>
<tr>
<td>Cist 19</td>
<td>Single?</td>
<td>1 Chamber</td>
<td>Disturbed</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Cist 20</td>
<td>Single</td>
<td>1 Chamber</td>
<td>Disturbed</td>
<td>1</td>
<td>1?</td>
</tr>
<tr>
<td>Cist 21</td>
<td>Single?</td>
<td>1 Chamber</td>
<td>Disturbed</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Cist 22</td>
<td>Single</td>
<td>1 Chamber</td>
<td>Disturbed</td>
<td>1?</td>
<td>1</td>
</tr>
<tr>
<td>Cist 23</td>
<td>Single</td>
<td>1 Chamber</td>
<td>Undisturbed</td>
<td>1</td>
<td>?</td>
</tr>
<tr>
<td>Cist 24</td>
<td>Single</td>
<td>1 Chamber</td>
<td>Disturbed</td>
<td>1</td>
<td>?</td>
</tr>
</tbody>
</table>
### Table 4. IBB Cluster 21 Remarks on cists

<table>
<thead>
<tr>
<th>Cist #</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cist 1</td>
<td>This is a remarkably well-preserved chamber. The capstone has symbols inscribed on the surface. Two large urns capped with BRW trays are placed inside the tomb along with eight small offering pots. Two large urns indicate that the tomb is associated with mortuary rituals performed for two different individuals.</td>
</tr>
<tr>
<td>Cist 2</td>
<td>The chamber is completely destroyed, slabs are looted, and two walls remain in situ. The distribution of granite ruble indicates that this cist tomb was much larger than cist 1. Bases of two shattered urns indicate that the tomb was sheltering two large urns similar to the pattern reflected from cist 1. Traces of two small offering pots are also found inside the tomb.</td>
</tr>
<tr>
<td>Cist 3</td>
<td>Three chambers are joined together forming a long rectangle shaped single tomb. Two chambers (3A &amp; 3B) were built at one time while the 3rd, the chamber 3C, was added at a different time. Eighteen small pots were found placed within and outside the chambers. There is no doubt that the tomb represents mortuary activities associated with three different individuals.</td>
</tr>
<tr>
<td>Cist 4</td>
<td>The capstone of the tomb is slid to a side from the chamber, however slab walls are intact, a shattered single urn is present in the middle of the chamber.</td>
</tr>
<tr>
<td>Cist 5</td>
<td>The chamber walls remain intact. Capstone is missing. The main urn is shattered into pieces. Three small offering pots are present inside the tomb. Traces of three more offering pots are found outside the chamber wall.</td>
</tr>
<tr>
<td>Cist 6</td>
<td>The tomb chamber is well preserved, and walls are intact. Two urns (one large and one relatively small) are placed in the middle along with 6 small offering pots. Outside the north-wall of the chamber 5 large urns are placed in a raw. They could be representing mortuary rituals performed for different individuals.</td>
</tr>
<tr>
<td>Cist 7</td>
<td>The Chamber walls remain intact. The capstone is missing and the interior of the chamber is looted.</td>
</tr>
<tr>
<td>Cist 8</td>
<td>The chamber walls remain intact. The capstone is missing. A base of a shattered urn is located near the west wall of the chamber. On the southeastern corner a small offering pot remains intact.</td>
</tr>
<tr>
<td>Cist 9</td>
<td>The chamber walls remain intact. The capstone is missing. The tomb is completely looted. However, five small offering pots placed in a cluster outside the east wall of the chamber have survived the disturbance. Three more large urns are found placed outside the walls of this chamber. These urns may represent mortuary rituals performed for different individuals.</td>
</tr>
<tr>
<td>Cist 10</td>
<td>This chamber is disturbed considerably. Two walls are missing and one shattered urn remains hugging the remaining two walls.</td>
</tr>
<tr>
<td>Cist #</td>
<td>Remarks</td>
</tr>
<tr>
<td>---------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Cist 11</td>
<td>This is a large tomb, similar in size and type to cist 1 and cist 2. The capstone and the parts of the chamber walls are missing. Traces of two large urns and 3 small offering pots are found in association with this cist.</td>
</tr>
<tr>
<td>Cist 12</td>
<td>The walls of the chamber are intact from 3 sides. The capstone is missing, and the interior content is disturbed. The urns and offerings pots are shattered into pieces.</td>
</tr>
<tr>
<td>Cist 13</td>
<td>The capstone of this chamber is missing, but chamber walls remain intact. Pieces of the urn remain in the bottom of the tomb, but no traces of offering pots are present.</td>
</tr>
<tr>
<td>Cist 14</td>
<td>This is a small chamber erected with pieces of granite rocks placing around an urn. The chamber walls are intact. Main urn is shattered but remain intact. In addition four small offering pots were found from the tomb.</td>
</tr>
<tr>
<td>Cist 15</td>
<td>This is a remarkably well-preserved cist. It contains one large urn, a medium size urn and five small offering vessels.</td>
</tr>
<tr>
<td>Cist 16</td>
<td>Chamber disturbed and capstone is missing.</td>
</tr>
<tr>
<td>Cist 17</td>
<td>This is a small cist tomb. It is completely disturbed. Two granite pieces (used as tomb walls) are the only feature left in this tomb structure.</td>
</tr>
<tr>
<td>Cist 18</td>
<td>This is a very small tomb comparable in size to cist 17. Extends within an area not more than half a square meter. The tomb was constructed by placing a few granite pieces around the urn. The urn was capped with a small granite piece.</td>
</tr>
<tr>
<td>Cist 19</td>
<td>Cist tomb structure is completely disturbed. However the extent of the (square shaped) cist is clear through the scattered granite pieces. The granite slabs used for walls are crushed perhaps for building material. Furthermore, sherds from a large urn remain in the middle of the chamber. One complete</td>
</tr>
<tr>
<td>Cist 20</td>
<td>A small cist tomb, comparable in size to cist 14, 18, and 17. Capstone is missing, walls intact, and traces an urn and offering pots can be seen through the shattered pots.</td>
</tr>
<tr>
<td>Cist 21</td>
<td>Similar to cist 19 this cist tomb is completely shattered into pieces. Traces of two large urns and a small offering pot remains within the tomb.</td>
</tr>
<tr>
<td>Cist 22</td>
<td>This chamber has only three walls, northern wall and capstone is shattered pottery pieces from an offering vessel is present close to the southern wall</td>
</tr>
<tr>
<td>Cist 23</td>
<td>This cist chamber, although small in size compared to other large cist such as 1,2, 5, 6, 11, and 3, contains one of the largest urns recovered from the cluster 21. Cist was remarkably well preserved.</td>
</tr>
<tr>
<td>Cist 24</td>
<td>Two small granite pieces are placed touching a medium sized urn (no real tomb construction is evident).</td>
</tr>
</tbody>
</table>
Table 5. Special finds associated with cist tombs

<table>
<thead>
<tr>
<th>Cist #</th>
<th>Find types</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cist 1</td>
<td>One Gold foil, Beads, Bone fragments</td>
</tr>
<tr>
<td>Cist 2</td>
<td>Mica strip and a copper object found in association with one of the urns; fragmented bone, and a copper pin was found on one of the offering pots; 323 barrel shaped carnelian beads found in a small pot inserted in an urn; glass paste, agate, quartz beads, and several burned carnelian (spacer and barrel) shaped beads were found inside the urn, a fragmented incisor from a chilled; an iron fragment were also found from this cist</td>
</tr>
<tr>
<td>Cist 3</td>
<td>Two terracotta ring beads</td>
</tr>
<tr>
<td>Cist 4</td>
<td>An iron spear head, and a chisel</td>
</tr>
<tr>
<td>Cist 5</td>
<td>Paste beads, 1 carnelian bead</td>
</tr>
<tr>
<td>Cist 6</td>
<td>1 burnt carnelian bead</td>
</tr>
<tr>
<td>Cist 7</td>
<td>Copper Bangle, copper pin, iron object, 2 carnelian beads</td>
</tr>
<tr>
<td>Cist 8</td>
<td>Large urns placed outside chamber 9 contained 5 carnelian beads, 2 terracotta beads and 2 paste beads, and an iron object</td>
</tr>
<tr>
<td>Cist 9</td>
<td>Copper pin outside the pot</td>
</tr>
<tr>
<td>Cist 10</td>
<td>15 burnt carnelian beads (13 barrel beads and 2 spacer beads) found in the urn located within the cist including 1 orange red unburnt carnelian bead, 2 fragmented bones were found</td>
</tr>
<tr>
<td>Cist 11</td>
<td>An iron object, two carnelian barrel beads</td>
</tr>
<tr>
<td>Cist 12</td>
<td>Paste bead, 2 iron objects</td>
</tr>
<tr>
<td>Cist 13</td>
<td></td>
</tr>
<tr>
<td>Cist 14</td>
<td></td>
</tr>
<tr>
<td>Cist 15</td>
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<tr>
<td>Cist 16</td>
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<td>Cist 17</td>
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<td>Cist 18</td>
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<td>Cist 19</td>
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<td>Cist 20</td>
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<tr>
<td>Cist 21</td>
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<tr>
<td>Cist 22</td>
<td></td>
</tr>
<tr>
<td>Cist 23</td>
<td></td>
</tr>
<tr>
<td>Cist 24</td>
<td></td>
</tr>
</tbody>
</table>
Table 6. Special finds associated with cremation pit

<table>
<thead>
<tr>
<th>Beads</th>
<th>Form</th>
<th>Quantity</th>
</tr>
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<tbody>
<tr>
<td>Carnelian</td>
<td>Barrel</td>
<td>91</td>
</tr>
<tr>
<td>Carnelian</td>
<td>Spacer</td>
<td>2</td>
</tr>
<tr>
<td>Gold beads</td>
<td>Spherical</td>
<td>8</td>
</tr>
<tr>
<td>Paste beads</td>
<td>Disc</td>
<td>27</td>
</tr>
<tr>
<td>Terra Cotta</td>
<td>Ring</td>
<td>100&gt;</td>
</tr>
<tr>
<td>Agate</td>
<td>Barrel</td>
<td>10</td>
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Table 7. Distribution of Burnt Carnelian Beads

<table>
<thead>
<tr>
<th>Find #</th>
<th>Grid</th>
<th>Association</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBB/88/27</td>
<td>G1D/10</td>
<td>Cist 3B</td>
<td>Inside urn</td>
</tr>
<tr>
<td>IBB/88/28</td>
<td>G1D/10</td>
<td>Cist 3B</td>
<td>Inside urn</td>
</tr>
<tr>
<td>IBB/90/9</td>
<td>G1A/55</td>
<td>Cist 12</td>
<td>found inside cist #12</td>
</tr>
<tr>
<td>IBB/90/10</td>
<td>G2H/91</td>
<td>(Pot #3) in G2G/100</td>
<td>found close to a free standing urn (pot # 3)</td>
</tr>
<tr>
<td>IBB/90/17</td>
<td>G1H/73</td>
<td>Cist 22</td>
<td>Inside urn</td>
</tr>
<tr>
<td>IBB/90/18</td>
<td>G1H/84</td>
<td>Cist 22</td>
<td>located outside cist #22</td>
</tr>
<tr>
<td>IBB/90/20</td>
<td>G1H/84</td>
<td>Cist 22</td>
<td>located outside cist #22</td>
</tr>
<tr>
<td>IBB/90/21</td>
<td>G1H/90</td>
<td></td>
<td>surface find</td>
</tr>
<tr>
<td>IBB/90/22</td>
<td>G1H/83</td>
<td>Cist 22</td>
<td>Located in the urn found inside cist # 22</td>
</tr>
<tr>
<td>IBB/90/24</td>
<td>G1H/83</td>
<td>Cist 22</td>
<td>Located in the urn found inside cist # 22</td>
</tr>
<tr>
<td>IBB/90/26</td>
<td>G1H/83</td>
<td>Cist 22</td>
<td>Located outside cist # 22</td>
</tr>
<tr>
<td>IBB/90/27</td>
<td></td>
<td></td>
<td>surface find</td>
</tr>
<tr>
<td>IBB/90/29</td>
<td></td>
<td></td>
<td>surface find</td>
</tr>
<tr>
<td>IBB/90/35</td>
<td>G1H/83</td>
<td>Cist 22</td>
<td></td>
</tr>
<tr>
<td>IBB/90/36</td>
<td></td>
<td></td>
<td>Location not recorded</td>
</tr>
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Table 8. IBB burial cluster 21 1988 & 1990 Excavations: Iron objects

<table>
<thead>
<tr>
<th>Iron Objects</th>
<th>special find#</th>
<th>location</th>
<th>z</th>
<th>cist #</th>
<th>Pot #</th>
<th>remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unidentified</td>
<td>IBB/88/4</td>
<td>G1B/Y</td>
<td>9</td>
<td>1-III</td>
<td></td>
<td>on top of a pot</td>
</tr>
<tr>
<td>nail</td>
<td>IBB/88/22</td>
<td>G1B/Y</td>
<td>9</td>
<td>8</td>
<td></td>
<td>Found in a pot</td>
</tr>
<tr>
<td>nail</td>
<td>IBB/90/02</td>
<td>G2H/95</td>
<td>169.92</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>nail</td>
<td>IBB/90/03</td>
<td>G1B/17</td>
<td>169.91</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>nail</td>
<td>IBB/90/04</td>
<td>G2G/80</td>
<td>169.92</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>nail</td>
<td>IBB/90/25</td>
<td>F-1A/31</td>
<td>169.43</td>
<td>74</td>
<td></td>
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</tr>
<tr>
<td>nail</td>
<td>IBB/90/41</td>
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<td></td>
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</tr>
<tr>
<td>knife</td>
<td>IBB/89/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Found inside an urn</td>
</tr>
<tr>
<td>chisel</td>
<td>IBB/89/B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Found inside an urn</td>
</tr>
<tr>
<td>Spear head</td>
<td>IBB/89/C</td>
<td></td>
<td></td>
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### Table 9. IBB burial cluster 21 1988 & 1990 Excavations: Beads

<table>
<thead>
<tr>
<th>beads</th>
<th>special find#</th>
<th>location</th>
<th>z</th>
<th>cist #</th>
<th>Pot #</th>
<th>remarks</th>
<th>condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paste</td>
<td>IBB/88/1</td>
<td>G1D/z</td>
<td>1</td>
<td>1</td>
<td></td>
<td>inside the pot</td>
<td></td>
</tr>
<tr>
<td>Paste</td>
<td>IBB/88/2</td>
<td>G1B/y</td>
<td>9</td>
<td>1-I</td>
<td></td>
<td>inside the pot</td>
<td></td>
</tr>
<tr>
<td>Paste</td>
<td>IBB/88/3</td>
<td>G1B/y</td>
<td>9</td>
<td>9-1-III</td>
<td></td>
<td>inside the pot</td>
<td></td>
</tr>
<tr>
<td>Paste</td>
<td>IBB/88/5</td>
<td>G1B/y</td>
<td>9</td>
<td>9-1-III</td>
<td></td>
<td>inside the pot</td>
<td></td>
</tr>
<tr>
<td>Carnelian</td>
<td>IBB/88/6</td>
<td>G1B/y</td>
<td>9</td>
<td>9-1-I</td>
<td></td>
<td>inside the pot</td>
<td></td>
</tr>
<tr>
<td>Carnelian</td>
<td>IBB/88/7</td>
<td>G1B/y</td>
<td>9</td>
<td>9-1-I</td>
<td></td>
<td>inside the pot</td>
<td></td>
</tr>
<tr>
<td>Carnelian</td>
<td>IBB/88/8</td>
<td>G1B/y</td>
<td>9</td>
<td>9-1-I</td>
<td></td>
<td>inside the pot</td>
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<tr>
<td>Paste</td>
<td>IBB/88/9</td>
<td>G1B/y</td>
<td>9</td>
<td>9-1-III</td>
<td></td>
<td>inside the pot</td>
<td></td>
</tr>
<tr>
<td>Paste</td>
<td>IBB/88/12</td>
<td>G1B/y</td>
<td>9</td>
<td>9-1-III</td>
<td></td>
<td>inside the pot</td>
<td></td>
</tr>
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<td>IBB/88/15</td>
<td>G1D/z</td>
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<td></td>
<td></td>
<td>inside the pot</td>
<td></td>
</tr>
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<td>Paste</td>
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<td>G1D/z</td>
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<td>IBB/88/19</td>
<td>G1B/y</td>
<td>9</td>
<td>3</td>
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<td>Found inside the urn</td>
<td></td>
</tr>
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<td>Carnelian</td>
<td>IBB/88/20</td>
<td>G1D/10</td>
<td>3B</td>
<td>2</td>
<td></td>
<td>Found inside the urn</td>
<td></td>
</tr>
<tr>
<td>Carnelian</td>
<td>IBB/88/23</td>
<td>G1D/10</td>
<td>3B</td>
<td>2</td>
<td></td>
<td>found inside the pot</td>
<td></td>
</tr>
<tr>
<td>Agate</td>
<td>IBB/88/24</td>
<td>G1D/10</td>
<td>3B</td>
<td>2</td>
<td></td>
<td>found inside the pot</td>
<td></td>
</tr>
<tr>
<td>Bead</td>
<td>IBB/88/25</td>
<td>G1D/10</td>
<td>3B</td>
<td>2</td>
<td></td>
<td>found inside the pot</td>
<td>fragmented</td>
</tr>
<tr>
<td>Glass?</td>
<td>IBB/88/26</td>
<td>G1D/10</td>
<td>3B</td>
<td>2</td>
<td></td>
<td>found in side the pot</td>
<td></td>
</tr>
<tr>
<td>Carnelian</td>
<td>IBB/88/27</td>
<td>G1D/10</td>
<td>3B</td>
<td>2</td>
<td></td>
<td>found in side the pot</td>
<td>burnt</td>
</tr>
<tr>
<td>Carnelian</td>
<td>IBB/88/28</td>
<td>G1D/10</td>
<td>3B</td>
<td>2</td>
<td></td>
<td>found in side the pot</td>
<td>burnt</td>
</tr>
<tr>
<td>beads</td>
<td>special find#</td>
<td>location</td>
<td>z</td>
<td>cist #</td>
<td>Pot #</td>
<td>remarks</td>
<td>condition</td>
</tr>
<tr>
<td>----------</td>
<td>---------------</td>
<td>----------</td>
<td>----</td>
<td>--------</td>
<td>-------</td>
<td>------------------------------</td>
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</tr>
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<td>Quartz</td>
<td>IBB/88/30</td>
<td>G1D/10</td>
<td>3B</td>
<td>2</td>
<td></td>
<td>found in side the pot</td>
<td></td>
</tr>
<tr>
<td>Carnelian</td>
<td>IBB/88/31</td>
<td>G1D/10</td>
<td>3B</td>
<td>2</td>
<td></td>
<td>found in side the pot</td>
<td></td>
</tr>
<tr>
<td>Quartz</td>
<td>IBB/90/5</td>
<td>G2H/95</td>
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<td>located next to the free</td>
<td></td>
</tr>
<tr>
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<td></td>
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<td>standing pot in G2H 95</td>
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</tr>
<tr>
<td>Carnelian</td>
<td>IBB/90/9</td>
<td>G1A/55</td>
<td>12</td>
<td></td>
<td></td>
<td>found inside cist #12</td>
<td>burnt</td>
</tr>
<tr>
<td>Carnelian</td>
<td>IBB/90/10</td>
<td>G2H/91</td>
<td></td>
<td></td>
<td></td>
<td>located close to a free</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>standing urn in G2G/100</td>
<td>burnt</td>
</tr>
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<td>Carnelian</td>
<td>IBB/90/11</td>
<td>G2G/79</td>
<td></td>
<td></td>
<td></td>
<td>located close to a freestanding</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>urn in G2G/79</td>
<td></td>
</tr>
<tr>
<td>Paste</td>
<td>IBB/90/12</td>
<td>G2G/100</td>
<td></td>
<td></td>
<td></td>
<td>located close to urn in G2G/100</td>
<td></td>
</tr>
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<td>Bone</td>
<td>IBB/90/14</td>
<td>G2G/78</td>
<td></td>
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<td></td>
<td>located close to a free standing</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>urn in G2G/79</td>
<td></td>
</tr>
<tr>
<td>Carnelian</td>
<td>IBB/90/17</td>
<td>G1H/73</td>
<td>22</td>
<td>109</td>
<td></td>
<td>located close to cist #22</td>
<td>burnt</td>
</tr>
<tr>
<td>Carnelian</td>
<td>IBB/90/18</td>
<td>G1H/84</td>
<td></td>
<td></td>
<td></td>
<td>located close to cist #22</td>
<td>burnt</td>
</tr>
<tr>
<td>Carnelian</td>
<td>IBB/90/20</td>
<td>G1H/84</td>
<td></td>
<td></td>
<td></td>
<td>located close to cist #22</td>
<td>burnt</td>
</tr>
<tr>
<td>Carnelian</td>
<td>IBB/90/21</td>
<td>G1H/90</td>
<td></td>
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<td></td>
<td>located close to cist #22</td>
<td>burnt</td>
</tr>
<tr>
<td>Carnelian</td>
<td>IBB/90/22</td>
<td>G1H/83</td>
<td></td>
<td></td>
<td></td>
<td>located close to cist #22</td>
<td>burnt</td>
</tr>
<tr>
<td>Carnelian</td>
<td>IBB/90/23</td>
<td>G1H/83</td>
<td>22</td>
<td>109</td>
<td></td>
<td>located close to cist #22</td>
<td></td>
</tr>
<tr>
<td>beads</td>
<td>special find#</td>
<td>location</td>
<td>21</td>
<td>cist #</td>
<td>Pot #</td>
<td>remarks</td>
<td>condition</td>
</tr>
<tr>
<td>---------</td>
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<td>----------</td>
<td>----</td>
<td>--------</td>
<td>-------</td>
<td>---------</td>
<td>-----------</td>
</tr>
<tr>
<td>Carnelian</td>
<td>IBB/90/33</td>
<td>G2G/98</td>
<td>169.4</td>
<td>91 carnelian barrel beads, 2 carnelian spacer beads, 10 agate beads and 100+ paste beads were found inside the cremation pit</td>
<td></td>
<td>burnt</td>
<td></td>
</tr>
<tr>
<td>Paste</td>
<td>IBB/90/34</td>
<td>G2G/98</td>
<td>169.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carnelian</td>
<td>IBB/90/35</td>
<td>G1H/83</td>
<td>22</td>
<td>119</td>
<td></td>
<td>found inside the pot</td>
<td>burnt</td>
</tr>
<tr>
<td>Carnelian</td>
<td>IBB/90/36</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>found 2 beads during vet seaving</td>
<td>burnt</td>
</tr>
<tr>
<td>Carnelian</td>
<td>IBB/90/39</td>
<td>G1H/98</td>
<td></td>
<td></td>
<td></td>
<td>cremation pit</td>
<td></td>
</tr>
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<td>Paste</td>
<td>IBB/90/49</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Gold</td>
<td>IBB/90/50</td>
<td>G2G/97</td>
<td>169.2</td>
<td></td>
<td></td>
<td>two beads found inside the cremation pit (additional six found during wet seaving)</td>
<td></td>
</tr>
</tbody>
</table>
Table 10. Distribution of beads made of exotics

<table>
<thead>
<tr>
<th>Mineral type</th>
<th>Find #</th>
<th>Grid location</th>
<th>Cist #</th>
<th>Pot #</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carnelian</td>
<td>IBB/88/6</td>
<td>G1B/24</td>
<td>9</td>
<td>9-1-1</td>
<td>inside an urn found near cist 9</td>
</tr>
<tr>
<td>Carnelian</td>
<td>IBB/88/7</td>
<td>G1B/24</td>
<td>9</td>
<td>9-1-1</td>
<td>inside an urn found next to cist 9</td>
</tr>
<tr>
<td>Carnelian</td>
<td>IBB/88/8</td>
<td>G1B/24</td>
<td>9</td>
<td>9-1-1</td>
<td>inside an urn found next to cist 9</td>
</tr>
<tr>
<td>Carnelian</td>
<td>IBB/88/20</td>
<td>G1D/10</td>
<td>3B</td>
<td>2</td>
<td>Found inside the urn</td>
</tr>
<tr>
<td>Carnelian</td>
<td>IBB/88/23</td>
<td>G1D/10</td>
<td>3B</td>
<td>2</td>
<td>found inside the pot</td>
</tr>
<tr>
<td>Agate</td>
<td>IBB/88/24</td>
<td>G1D/10</td>
<td>3B</td>
<td>2</td>
<td>found inside the pot</td>
</tr>
<tr>
<td>Burnt Carnelian</td>
<td>IBB/88/27</td>
<td>G1D/10</td>
<td>3B</td>
<td>2</td>
<td>found in side the pot</td>
</tr>
<tr>
<td>Burnt Carnelian</td>
<td>IBB/88/28</td>
<td>G1D/10</td>
<td>3B</td>
<td>2</td>
<td>found in side the pot</td>
</tr>
<tr>
<td>Carnelian</td>
<td>IBB/88/31</td>
<td>G1D/10</td>
<td>3B</td>
<td>2</td>
<td>found in side the pot</td>
</tr>
<tr>
<td>Burnt Carnelian</td>
<td>IBB/90/9</td>
<td>G1A/55</td>
<td>12</td>
<td></td>
<td>found inside cist #12</td>
</tr>
<tr>
<td>Burnt Carnelian</td>
<td>IBB/90/10</td>
<td>G2H/91</td>
<td></td>
<td></td>
<td>located near urn at G2G/100</td>
</tr>
<tr>
<td>Carnelian</td>
<td>IBB/90/11</td>
<td>G2G/79</td>
<td></td>
<td></td>
<td>located near urn</td>
</tr>
<tr>
<td>Burnt Carnelian</td>
<td>IBB/90/17</td>
<td>G1H/73</td>
<td>22</td>
<td>109</td>
<td>located close to cist #22</td>
</tr>
<tr>
<td>Burnt Carnelian</td>
<td>IBB/90/18</td>
<td>G1H/84</td>
<td></td>
<td></td>
<td>located close to cist #22</td>
</tr>
<tr>
<td>Burnt Carnelian</td>
<td>IBB/90/20</td>
<td>G1H/84</td>
<td></td>
<td></td>
<td>located close to cist #22</td>
</tr>
<tr>
<td>Burnt Carnelian</td>
<td>IBB/90/21</td>
<td>G1H/90</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Burnt Carnelian</td>
<td>IBB/90/22</td>
<td>G1H/83</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carnelian</td>
<td>IBB/90/23</td>
<td>G1H/83</td>
<td>22</td>
<td>109</td>
<td></td>
</tr>
<tr>
<td>Burnt Carnelian</td>
<td>IBB/90/24</td>
<td>G1H/83</td>
<td>22</td>
<td>109</td>
<td></td>
</tr>
<tr>
<td>Burnt Carnelian</td>
<td>IBB/90/26</td>
<td>G1H/83</td>
<td>22</td>
<td>109</td>
<td></td>
</tr>
<tr>
<td>Burnt Carnelian</td>
<td>IBB/90/27</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carnelian</td>
<td>IBB/90/28</td>
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<td>Burnt Carnelian</td>
<td>IBB/90/29</td>
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Table 10. Distribution of beads made of exotics, continued

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<tr>
<th>Mineral type</th>
<th>Find #</th>
<th>Grid location</th>
<th>Cist #</th>
<th>Pot #</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold</td>
<td>IBB/90/31</td>
<td>G2G/97</td>
<td>169</td>
<td></td>
<td>found in the cremation pit mixed with charcoal</td>
</tr>
<tr>
<td>Carnelian</td>
<td>IBB/90/33</td>
<td>G2G/98</td>
<td>169</td>
<td></td>
<td>91 carnelian barrel beads, 2 carnelian spacer beads, 10 agate beads were found from cremation pit</td>
</tr>
<tr>
<td>Burnt Carnelian</td>
<td>IBB/90/35</td>
<td>G1H/83</td>
<td>22</td>
<td>119</td>
<td>found inside the pot</td>
</tr>
<tr>
<td>Burnt Carnelian</td>
<td>IBB/90/36</td>
<td></td>
<td></td>
<td></td>
<td>found 2 beads during wet seaving</td>
</tr>
<tr>
<td>Carnelian</td>
<td>IBB/90/39</td>
<td>G1H/98</td>
<td></td>
<td></td>
<td>cremation pit</td>
</tr>
<tr>
<td>Gold</td>
<td>IBB/90/50</td>
<td>G2G/97</td>
<td>169</td>
<td></td>
<td>two beads found inside the cremation pit (additional six found during wet seaving)</td>
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</tbody>
</table>
Table 11. Special finds from ASW3 excavations at Anuradhapura

**Early Proto-historic Phase**

<table>
<thead>
<tr>
<th>Object</th>
<th>No</th>
<th>Context</th>
<th>Field #</th>
<th>Description</th>
</tr>
</thead>
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<tr>
<td>Iron object</td>
<td>2</td>
<td>220</td>
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<td>Nail?</td>
</tr>
<tr>
<td>Burnt clay</td>
<td>4</td>
<td>188</td>
<td>787</td>
<td></td>
</tr>
<tr>
<td>½ Terracotta disc</td>
<td>1</td>
<td>188</td>
<td>825</td>
<td>Diameter 3.5cm, thickness: 1cm</td>
</tr>
<tr>
<td>Iron ore</td>
<td>1</td>
<td>188</td>
<td>852</td>
<td></td>
</tr>
<tr>
<td>Smokey quartz core</td>
<td>1</td>
<td>188</td>
<td>826</td>
<td>6cmx 5cmx2.5cm</td>
</tr>
<tr>
<td>Iron objects</td>
<td>2</td>
<td>188</td>
<td>843</td>
<td>Unidentified</td>
</tr>
<tr>
<td>Stone waste</td>
<td>1</td>
<td>188</td>
<td>860</td>
<td>Quartz.</td>
</tr>
<tr>
<td>Terracotta disc</td>
<td>1</td>
<td>188</td>
<td>861</td>
<td>Broken. Red ware, diameter: 3cm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>thickness: 7mm</td>
</tr>
<tr>
<td>Paste bead</td>
<td>1</td>
<td>209</td>
<td>791</td>
<td>Truncated circular cylinder</td>
</tr>
</tbody>
</table>

**Late Proto-historic Phase**

<table>
<thead>
<tr>
<th>Object</th>
<th>No</th>
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<th>Field #</th>
<th>Description</th>
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<tbody>
<tr>
<td>Stone waste</td>
<td>1</td>
<td>187</td>
<td>748</td>
<td>Clear quartz</td>
</tr>
<tr>
<td>Lump of red ocher</td>
<td>1</td>
<td>200</td>
<td>773</td>
<td>Fragmented</td>
</tr>
<tr>
<td>Clear quartz scraper</td>
<td>1</td>
<td>200</td>
<td>774</td>
<td>With one sharp edge</td>
</tr>
<tr>
<td>Painted red ware disc</td>
<td>1</td>
<td>200</td>
<td>779</td>
<td>Shaped from a potsherd: a symbol on one side and incised grooves on the other side, diameter: 2.6cm, thickness: 1cm</td>
</tr>
<tr>
<td>Terracotta disc</td>
<td>1</td>
<td>200</td>
<td>781</td>
<td>One side has a circular depression, Diameter: 3.8cm, thickness: 1.1cm</td>
</tr>
<tr>
<td>Stone waste</td>
<td>1</td>
<td>200</td>
<td>792</td>
<td>Clear quartz</td>
</tr>
<tr>
<td>Terracotta disc</td>
<td>1</td>
<td>203</td>
<td>855</td>
<td>BRW, diameter: 2.5cm, Thickness: 5mm</td>
</tr>
</tbody>
</table>
Table 11. Special finds from ASW3 excavations at Anuradhapura, continued

<table>
<thead>
<tr>
<th>Object</th>
<th>No</th>
<th>Cont.</th>
<th>Field #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stone waste</td>
<td>1</td>
<td>201</td>
<td>770</td>
<td>Clear quartz</td>
</tr>
<tr>
<td>Terracotta discs</td>
<td>3</td>
<td>199</td>
<td>827</td>
<td>BRW potsherd: Diameters 2 4.3cm and 3.8cm.</td>
</tr>
<tr>
<td>Bead-paste</td>
<td>1</td>
<td>198</td>
<td>782</td>
<td>Broken, circular disc</td>
</tr>
<tr>
<td>Terracotta disc</td>
<td>1</td>
<td>198</td>
<td>775</td>
<td>Diameter 4.5cm, 2cm thick.</td>
</tr>
<tr>
<td>Terracotta discs</td>
<td>2</td>
<td>196</td>
<td>862</td>
<td>Red ware, diameter 3.5cm, thickness:14mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>BRW, diameter 3cm, thickness:5mm</td>
</tr>
<tr>
<td>Terracotta discs</td>
<td>2</td>
<td>195</td>
<td>777</td>
<td>Diameter 5.5cm, 1cm thick diameter 3.5cm, 1.2cm thick. Course texture.</td>
</tr>
<tr>
<td>Stone waste</td>
<td>1</td>
<td>195</td>
<td>778</td>
<td>Clear quartz</td>
</tr>
<tr>
<td>Beads-paste</td>
<td>2</td>
<td>195</td>
<td>761</td>
<td>1 Anular, 1 Barrel.</td>
</tr>
<tr>
<td>Terracotta disc</td>
<td>1</td>
<td>195</td>
<td>858</td>
<td>BRW, diameter 2.9cm, thickness: 0.5cm</td>
</tr>
<tr>
<td>Copper fragment</td>
<td>1</td>
<td>195</td>
<td>762</td>
<td>Unidentified</td>
</tr>
<tr>
<td>Beads- paste</td>
<td>4</td>
<td>190</td>
<td>763</td>
<td>2 Anular, 2 Cylinder discs</td>
</tr>
<tr>
<td>Bead- glass</td>
<td>1</td>
<td>190</td>
<td>764</td>
<td>Blue, Short truncated circular biconvex: short truncated circular (s.t.c)</td>
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<tr>
<td>Stone waste</td>
<td>1</td>
<td>190</td>
<td>765</td>
<td>Clear quartz</td>
</tr>
<tr>
<td>Terracotta disc</td>
<td>1</td>
<td>190</td>
<td>743</td>
<td>Red ware, 3.5cm in diameter, thickness:1.2cm</td>
</tr>
<tr>
<td>Bead-paste</td>
<td>1</td>
<td>193</td>
<td>766</td>
<td>Cylinder</td>
</tr>
<tr>
<td>Stone waste</td>
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<td>193</td>
<td>746</td>
<td>Clear quartz</td>
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<tr>
<td>Red polish ware</td>
<td>1</td>
<td>193</td>
<td>776</td>
<td>Shaped from a potsherd. Diameter 6cm, thickness: 1cm</td>
</tr>
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<td>Terracotta disc</td>
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<td>193</td>
<td>780</td>
<td>3cm in diameter, thickness: 1cm</td>
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</table>
Table 11. Special finds from ASW3 excavations at Anuradhapura, continued

<table>
<thead>
<tr>
<th>Object</th>
<th>No</th>
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<th>Field #</th>
<th>Description</th>
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<tbody>
<tr>
<td>Terracotta disc</td>
<td>2</td>
<td>189</td>
<td>828</td>
<td>Red ware: Diameter 5.3cm</td>
</tr>
<tr>
<td>Bead-paste</td>
<td>1</td>
<td>189</td>
<td>747</td>
<td>Anular, broken</td>
</tr>
<tr>
<td>Stone waste</td>
<td>2</td>
<td>189</td>
<td>760</td>
<td>Clear quartz. 1 coated with calcium</td>
</tr>
<tr>
<td>Bead-glass</td>
<td>1</td>
<td>171</td>
<td>750</td>
<td>Blue, s.t.c biconvex</td>
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<tr>
<td>Stone waste</td>
<td>1</td>
<td>171</td>
<td>751</td>
<td>Garnet fragment</td>
</tr>
<tr>
<td>Copper object</td>
<td>1</td>
<td>171</td>
<td>713</td>
<td>Unidentified</td>
</tr>
<tr>
<td>Bead-paste</td>
<td>1</td>
<td>178</td>
<td>719</td>
<td>Cylinder disc</td>
</tr>
<tr>
<td>Stone waste</td>
<td>1</td>
<td>178</td>
<td>720</td>
<td>Clear quartz</td>
</tr>
<tr>
<td>Copper fragment</td>
<td>1</td>
<td>178</td>
<td>721</td>
<td>Object unidentified</td>
</tr>
<tr>
<td>Beads-paste</td>
<td>2</td>
<td>185</td>
<td>793</td>
<td>Cylindrical disc s.t. cylinder with a coppery sheen</td>
</tr>
<tr>
<td>Stone waste</td>
<td>1</td>
<td>185</td>
<td>795</td>
<td>Clear quartz</td>
</tr>
<tr>
<td>Fine glass fragments</td>
<td>185</td>
<td>803</td>
<td></td>
<td>Pale green</td>
</tr>
<tr>
<td>Terracotta discs</td>
<td>2</td>
<td>185</td>
<td>842</td>
<td>1 Red ware, diameter: 4cm, 1.5cm thick. 1 BRW, diameter: 4 cm, thickness:7mm</td>
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</table>

**Proto-Historic- Early Historic Transition phase**

<table>
<thead>
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<tbody>
<tr>
<td>Stone waste flakes</td>
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<td>850</td>
<td>Clear quartz</td>
</tr>
<tr>
<td>Copper object</td>
<td>1</td>
<td>177</td>
<td>714</td>
<td>Unidentified</td>
</tr>
<tr>
<td>Bead-paste</td>
<td>1</td>
<td>183</td>
<td>783</td>
<td>Disc</td>
</tr>
<tr>
<td>Bone tool (?)</td>
<td>1</td>
<td>183</td>
<td>788</td>
<td>3.2cm long</td>
</tr>
<tr>
<td>Bead – paste</td>
<td>1</td>
<td>183</td>
<td>784</td>
<td>Disc</td>
</tr>
<tr>
<td>Hearth fragment</td>
<td>1</td>
<td>183</td>
<td>863</td>
<td>3.5cm thick</td>
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</table>
Table 11. Special finds from ASW3 excavations at Anuradhapura, continued

<table>
<thead>
<tr>
<th>Object</th>
<th>No</th>
<th>Cont.</th>
<th>Field #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper fragments</td>
<td>3</td>
<td>183</td>
<td>785</td>
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<tr>
<td>Stone waste</td>
<td>1</td>
<td>176</td>
<td>846</td>
<td>Milky quartz</td>
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<tr>
<td>Iron objects</td>
<td>3</td>
<td>176</td>
<td>847</td>
<td>1 nail?</td>
</tr>
<tr>
<td>Terracotta disc</td>
<td>1</td>
<td>176</td>
<td>848</td>
<td>Red ware, diameter 4.5cm</td>
</tr>
<tr>
<td>Iron fragments</td>
<td>5</td>
<td>176</td>
<td>722</td>
<td>Object unidentified</td>
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<tr>
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<td>1</td>
<td>166</td>
<td>723</td>
<td>Clear quartz</td>
</tr>
<tr>
<td>Bead-paste</td>
<td>1</td>
<td>166</td>
<td>731</td>
<td>Circular biconvex</td>
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<tr>
<td>Copper object (coin?)</td>
<td>1</td>
<td>166</td>
<td>732</td>
<td>2.3cm x 1.5cm</td>
</tr>
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<td>Beads-paste</td>
<td>2</td>
<td>138</td>
<td>650</td>
<td>Circular discs</td>
</tr>
<tr>
<td>Copper fragment</td>
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<td>138</td>
<td>738</td>
<td>Unidentified</td>
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<tr>
<td>Bead-paste</td>
<td>1</td>
<td>129</td>
<td>621</td>
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</tr>
<tr>
<td>Terracotta disc</td>
<td>1</td>
<td>141</td>
<td>615</td>
<td>Diameter c. 7cm, c. 1.5cm thick</td>
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<tr>
<td>Grinding stone</td>
<td>1</td>
<td>141</td>
<td>617</td>
<td>Granite, c. 7.5cm x 3cm</td>
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<tr>
<td>Grinding stone</td>
<td>1</td>
<td>139</td>
<td>680</td>
<td>Granite (fragment)</td>
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<tr>
<td>Bead fragment-stone</td>
<td>1</td>
<td>139</td>
<td>611</td>
<td>Clear quartz, hexagonal facets.</td>
</tr>
<tr>
<td>Iron object</td>
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<td>153</td>
<td>749</td>
<td>Unidentified</td>
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<tr>
<td>Bead- stone</td>
<td>1</td>
<td>137</td>
<td>427</td>
<td>Carnelian: Barrel</td>
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<tr>
<td>Grinding stone</td>
<td>1</td>
<td>137</td>
<td>390</td>
<td>Granite. 7.5cm long, 2.5cm wide and 2 cm high</td>
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<tr>
<td>Bead- paste</td>
<td>1</td>
<td>131</td>
<td>618</td>
<td>Circular disc</td>
</tr>
<tr>
<td>Bead- paste</td>
<td>1</td>
<td>131</td>
<td>610</td>
<td>Anular (Fragment)</td>
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<td>Bead-paste</td>
<td>4</td>
<td>121</td>
<td>627</td>
<td>2 circular discs</td>
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<td>Silver wire</td>
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<td>121</td>
<td>417</td>
<td>7cm long</td>
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<tr>
<td>Bead-paste</td>
<td>1</td>
<td>118</td>
<td>626</td>
<td>Circular disc</td>
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Table 11. Special finds from ASW3 excavations at Anuradhapura, continued

<table>
<thead>
<tr>
<th>Object</th>
<th>No</th>
<th>Cont.</th>
<th>Field #</th>
<th>Description</th>
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<tbody>
<tr>
<td>Stone fragment</td>
<td>1</td>
<td>118</td>
<td>772</td>
<td>Bead blank, clear quartz.</td>
</tr>
<tr>
<td>Terracotta disc</td>
<td>1</td>
<td>118</td>
<td>450</td>
<td>Perforated, diameter: 4cm</td>
</tr>
<tr>
<td>Bead-glass</td>
<td>1</td>
<td>118</td>
<td>451</td>
<td>Dark blue with horizontal white line, s.t.c biconvex</td>
</tr>
<tr>
<td>Stone waste</td>
<td>1</td>
<td>123</td>
<td>408</td>
<td>Clear quartz</td>
</tr>
<tr>
<td>Bead – paste</td>
<td>1</td>
<td>123</td>
<td>409</td>
<td>Circular disc</td>
</tr>
<tr>
<td>Bead – stone</td>
<td>1</td>
<td>123</td>
<td>410</td>
<td>Carnelian, circular barrel</td>
</tr>
<tr>
<td>Bead- paste</td>
<td>1</td>
<td>115</td>
<td>433</td>
<td>Circular biconvex, red-brown</td>
</tr>
<tr>
<td>Bead-paste</td>
<td>1</td>
<td>100</td>
<td>396</td>
<td>Cylinder disc</td>
</tr>
<tr>
<td>Bead-paste</td>
<td>1</td>
<td>100</td>
<td>162</td>
<td>Disc</td>
</tr>
<tr>
<td>Iron object</td>
<td>1</td>
<td>100</td>
<td>163</td>
<td>Arrow head?</td>
</tr>
<tr>
<td>Bead-paste</td>
<td>1</td>
<td>98</td>
<td>159</td>
<td>Disc</td>
</tr>
<tr>
<td>Glass bangle (frag.)</td>
<td>2</td>
<td>101</td>
<td>403</td>
<td>1 dark blue, 1 clear</td>
</tr>
<tr>
<td>Iron object</td>
<td>1</td>
<td>101</td>
<td>851</td>
<td>Nail</td>
</tr>
<tr>
<td>Stone waste</td>
<td>1</td>
<td>101</td>
<td>404</td>
<td>Clear quartz</td>
</tr>
<tr>
<td>Stone waste</td>
<td>1</td>
<td>101</td>
<td>405</td>
<td>Garnet</td>
</tr>
<tr>
<td>Hearth</td>
<td>1</td>
<td>101</td>
<td>854</td>
<td>Blackened interior</td>
</tr>
<tr>
<td>Beads-paste</td>
<td>7</td>
<td>101</td>
<td>406</td>
<td>Circular disc, 3 c. biconvex, cylindrical, irregular c. disc</td>
</tr>
<tr>
<td>Bead-paste</td>
<td>1</td>
<td>96</td>
<td>420</td>
<td>Disc</td>
</tr>
<tr>
<td>Beads-paste</td>
<td>2</td>
<td>94</td>
<td>158</td>
<td>Disc</td>
</tr>
<tr>
<td>Bead-paste</td>
<td>1</td>
<td>94</td>
<td>116</td>
<td>Disc</td>
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<td>Iron objects</td>
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<td>73</td>
<td>553</td>
<td>Unidentified,</td>
</tr>
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<td>Terracotta figurine</td>
<td>1</td>
<td>93</td>
<td>588</td>
<td>Broken</td>
</tr>
<tr>
<td>Bead-stone</td>
<td>1</td>
<td>93</td>
<td>117</td>
<td>Carnelian: Barrel</td>
</tr>
</tbody>
</table>
Table 11. Special finds from ASW3 excavations at Anuradhapura, continued

<table>
<thead>
<tr>
<th>Object</th>
<th>No</th>
<th>Cont.</th>
<th>Field #</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Bead-paste</td>
<td>1</td>
<td>88</td>
<td>73</td>
<td>Disc</td>
</tr>
<tr>
<td>Bead fragment-glass</td>
<td>1</td>
<td>88</td>
<td>74</td>
<td>Greenish-grey?</td>
</tr>
<tr>
<td>Iron objects</td>
<td>5</td>
<td>88</td>
<td>52</td>
<td>Unidentified</td>
</tr>
<tr>
<td>Bone tool</td>
<td>1</td>
<td>77</td>
<td>95</td>
<td>4.2cm long, grooves on one side</td>
</tr>
<tr>
<td>Bead-stone</td>
<td>1</td>
<td>77</td>
<td>101</td>
<td>Garnet, spherical</td>
</tr>
<tr>
<td>Beads-paste and 12 fragments</td>
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<td>77</td>
<td>102</td>
<td>Disc</td>
</tr>
<tr>
<td>Stone flake</td>
<td>1</td>
<td>77</td>
<td>106</td>
<td>Brown color</td>
</tr>
<tr>
<td>Coin?</td>
<td>1</td>
<td>77</td>
<td>112</td>
<td>Copper</td>
</tr>
<tr>
<td>Paste beads</td>
<td>3</td>
<td>77</td>
<td>113</td>
<td>Disc</td>
</tr>
<tr>
<td>Iron object</td>
<td>1</td>
<td>76</td>
<td>551</td>
<td>Unidentified</td>
</tr>
<tr>
<td>Copper fragment</td>
<td>1</td>
<td>175</td>
<td>718</td>
<td>Unidentified</td>
</tr>
</tbody>
</table>

**Gravel Foundation Fill**

| Mica                            | 1  | 74    | 51      |                                             |
| Paste Beads                     | 2  | 74    | 522     | Disc                                        |
| Paste Beads                     | 1  | 74    | 471     | Disc                                        |

**Major Brick Constructional Phase-collapsed debris**

| Paste Beads                     | 1  | 54    | 368     | 0.9diameter                                  |
| Copper coin                     | 1  | 44    | 574     | Diameter 2cm                                 |
| Paste Beads                     | 2  | 44    | 201     | Disc                                        |
| Paste Beads                     | 44 | 16    | 320     | Disc bead fragments                          |
Table 12. $^{14}$C dating from IBB settlement (Karunaratne 1994) and Aligala cave at Sigiriya (Karunaratne and Adikari 1994; Mogren 1994)

<table>
<thead>
<tr>
<th>Site: Aligala</th>
<th>Context 8</th>
<th>Sample: 5</th>
<th>Lab no: Ua 5502</th>
<th>Uncal: 2745 +/- 75BP</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cal: 924 +/- 78BC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cum 1: 998-848BC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cum 2: 1120-812BC</td>
</tr>
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<td></td>
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<td></td>
<td></td>
<td>Den1: 985-955 (18.2%)</td>
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<td></td>
<td></td>
<td>944-829 (81.8%)</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Site: IBB settlement</th>
<th>Context 28</th>
<th>Sample: 91</th>
<th>Lab no: Ua 5566</th>
<th>Uncal: 2275 +/- 80BP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td>Cal: 338 +/- 126BC</td>
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<td>Cum 1: 436-226BC</td>
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<td>Cum 2: 721-137BC</td>
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<td>Cum 2: 436-226BC</td>
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<td>Den 1: 404-338BC (38.4%)</td>
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<td>324-203BC (61.6%)</td>
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<tr>
<th>Site: IBB settlement</th>
<th>Context 5</th>
<th>Sample: 7</th>
<th>Lab no: Ua 5564</th>
<th>Uncal: 1645 +/- 60BP</th>
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<tbody>
<tr>
<td></td>
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<td></td>
<td></td>
<td>Cal: 396 +/- 69AD</td>
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<td></td>
<td>Cum 1: 311-483AD</td>
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<td>Cum 2: 252-542AD</td>
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<td>Cum 2: 311-483AD</td>
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<td>Den 1: 262-286AD (11.1%)</td>
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<td>330-453AD (84.4%)</td>
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<td>487-498AD (4.5%)</td>
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<table>
<thead>
<tr>
<th>Site: IBB settlement</th>
<th>Context 16</th>
<th>Sample: 28</th>
<th>Lab no: Ua 5565</th>
<th>Uncal: 1605 +/- 60BP</th>
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<tbody>
<tr>
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<td>Cal: 422 +/- 92AD</td>
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<td>Cum 1: 347-534AD</td>
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<td>Cum 2: 252-603AD</td>
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<td>Cum 2: 347-534AD</td>
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<td>Den 1: 349-358AD (3.9%)</td>
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<td>374-547AD (96.1%)</td>
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