

# Archaeological investigations, interpretations, and theories

The cases of Sri Lanka and Sweden compared

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The focus of this chapter is how field studies of the history of settlements and land use, including the history of agriculture and metallurgy, are more advanced for Europe than for Asia. This is not merely a question of a difference in the number of documented sites of a specific type. There is also a discernible difference in the types of former activities that has been searched for.

One example of this phenomenon is premodern iron production (using direct and indirect production techniques), an undertaking which consumes charcoal (trees). Historical sources and field observations have given us every reason to believe that South Asia was an important area for the production of iron as early as the mid-first millennium BCE, and for export of iron and steel at least from the mid-first millennium CE (Bronson 1986: 19–21; Forenius & Solangaarachchi 1994: 135–142; Juleff 1998: 2). This research potential has however not been followed up, in contrast to the survey coverage and close reading of the iron production landscape in Northern Europe. This has resulted in a mapping of the landscape of iron production with a low resolution in South Asia, and a high resolution in Northern Europe.

A wide range of interesting questions arises from a detailed coverage of iron production sites if there is also good survey coverage of settlements and other production sites. These include the environ-

mental impact, control of raw material resources, how production and trade were organized, and the possible presence of groups of people controlling the labour of others.

Such studies could contribute to a global perspective on, for example, the long-term environmental impact of human activities. On the other hand lack of field data constitutes a problem when comparative or global perspectives are sought for, and if inequivalence between sets of data is not acknowledged, the end result will naturally be slanted and biased.

This is the more disturbing because as far as we can infer from historical sources, intensively surveyed case-study areas, and casual remarks regarding the field situation, large parts of Western, Southern and Eastern Asia should have a richer source material of ancient remains pertaining to settlement patterns and land use through time than most of Europe. In the case of what is now Sweden on the northwestern periphery of the Eurasian continent, this is definitely the case.

When certain types of data and perspectives of research pass unnoticed by mainstream actors in the field, they will remain almost invisible to the broader public of research consumers (including those who write global history) – in spite of the fact that they may represent lived experience for millions outside the academy.

A node for a close and comparative reading of field data, which has no equivalent on the Asian continent, is constituted by the bi-annual conferences of RURALIA (held since 1995). Here the focus is on the archaeology of settlement and rural life in Europe, 500–1700 CE. An introductory comment by Eva Svensson in the proceedings of RURALIA VI, “Arts and Crafts in Medieval Rural Environment”, can serve as a sounding board for the South Asian studies discussed below:

Archaeology has the potential to challenge the stereotyped image of the medieval peasant. But it demands that we open our minds to the possibilities of the archaeological material, and not restrict ourselves to “prove” statements made by historians on the basis of written documents (Svensson 2007: 189).

What is suggested below is that quite apart from Europe having a better coverage of archaeological surveys than Asia, the questions differ in focus. Tentatively, I refer to this difference as a problem of a social bias and I will discuss the implications of this below. I will also discuss the impact the concrete colonial experience may have had on the retrieval and documentation of ground truth and of archaeological field data in South Asia as compared to Europe. The view taken here is that this has had a bearing on the development of fieldwork practices such as surveying for maps, and for the development of antiquarian practices. This refers mainly to how governmental practices in these fields have developed. The concrete examples are from Sweden and Sri Lanka respectively.<sup>1</sup>

A few basic remarks pertaining to “Sweden” and “Sri Lanka” introduce the comparative discussion, in “Setting the stage”. The section “Documentation of ground truth – maps in Sweden and Sri Lanka” introduces a discussion of the collection of field data in the nation state as compared to the former colony. This discussion is followed up in “Documentation of ancient remains in the field: Sweden and Sri Lanka”, indicating that what was created as archaeological ground truth under these different regimes has had a bearing on how mainstream research perspectives have developed.

In the section “A comparative perspective”, a more detailed account is given of the state of the art regarding studies of past land-use such as agriculture and iron production.

The inequivalence of the sets of data will be returned to in the concluding discussion, as this has a direct bearing on the possibilities for discussion on a global level.

### Setting the stage

The lower time limits for this discussion are when mankind first migrated to Sri Lanka and Sweden and the upper time limit is the present.

The oldest dated remains of human occupation in Sri Lanka found to date (2016) come from the 28,500 BP (before present) habitation site of Batadomba-lena (Deraniyagala 1992: 118). Stray finds of Palaeolithic implements have been documented, but no sites have been found and dated.

The oldest dated remains of human occupation in Sweden found thus far (2015) are from the Aareavaara site, a Mesolithic campsite of reindeer hunters dated to *c.*8700 BCE (10,700 cal. yr BP), situated in the most northeastern area of Sweden, in the Pajala municipal region (Möller et al. 2012: 110). This site is representative of people coming from the east or northeast, following the retreating ice sheet. An almost contemporaneous site of a late Palaeolithic reindeer-hunting camp of the Bromme culture in the far south has been dated to 8500 BCE (*National Atlas of Sweden* 1994: 7). This is representative of people tracking the Ice Age fauna migrating northwards as the ice sheet retreats.

Size in terms of square kilometres may be another factor to bear in mind when aiming at a comparative perspective. Sri Lanka covers an area of 65,610 km<sup>2</sup>. The area of Sweden is 450,295 km<sup>2</sup> (CIA). However, since the end of the last Ice Age, the size and shape of the Sweden's land area has undergone dramatic change. The main trend over time (decreasing in speed) is an increase in the land area available for human habitation.

Depending on the particular situation, human habitation and land use may be identified as either an asset or a problem in relation to the planning and realization of fieldwork. Population censuses have been carried out for the whole of Sri Lanka almost every tenth year since 1871 (*National Atlas of Sri Lanka* 1988: 62). In 2013, Sri Lanka had a population of 21,675,648. The average population density was 323 per km<sup>2</sup>. In 1950 the numbers were 123 per km<sup>2</sup>. The population of Sweden in 2013 was 9,647,386. The average population density was 20.6 per km<sup>2</sup>. In 1950 the population density was 16 per km<sup>2</sup>.

Today's figures give a rough understanding of Sweden as a country which is comparatively large in area, but with low population density, while Sri Lanka is the opposite, a comparatively small country with high population density. The figures for 60 years ago imply a similar situation, though the increase in population, and population density, is more dramatic in the case of Sri Lanka (United Nations; CIA).

These average figures have to be complemented by more area-specific data in order to reflect different conditions in a fieldwork situation. A general observation is that intensified and mechanized use of

the landscape for agriculture or forestry threatens the possibility to learn the history of the area later, if it is not combined with relevant antiquarian practices of documentation in parallel. Likewise, local knowledge of the cultural landscape is an asset for field research, whereas a situation where people with this local knowledge been forced to move constitutes a loss of knowledge, and interviewing people who have had to move in adds a source-critical aspect to interpretation of the information retrieved.

The amount of arable land will vary over time. Which factors were of importance for the increase or decrease of arable land in Sri Lanka and Sweden, and to what degree the amounts changed over time, is a field of study in its own right. However, the amount of arable land partly reflects what climate and geology permit. There are areas in both countries which have never been suitable for agriculture, and which remain so today.

In Sri Lanka, the Dry Zone has witnessed agrarian colonization based on artificial irrigation from c.300 BCE until the thirteenth century CE: irrigation facilities were abandoned between the thirteenth and the late nineteenth centuries, before re-utilization and construction of facilities for artificial irrigation took place during the twentieth century (see for example Myrdal-Runebjer 1996). The thirteenth century decline of irrigated agriculture and the demographic shift towards the western coastal areas has been a focus of academic and politically motivated discussion (Indrapala 1971 and further references). The census indications of an unstable demographic situation and the decrease of inhabitants during the nineteenth century, after British colonial power established itself in the entire island, have been very little discussed (see for example Farmer 1976: 11–12). Neither of these presumed demographic shifts has been approached from a detailed reading of field data, which is why these issues have a direct bearing on the questions raised in this chapter, and will be returned to in the discussion of the state of the art.

Today, arable land in Sri Lanka constitutes 18.3 per cent of the total area (12,000 km<sup>2</sup>) and 980 km<sup>2</sup> are covered by water. In Sweden, arable land constitutes 5.8 per cent (26,117 km<sup>2</sup>) of the total area, with water covering 39,960 km<sup>2</sup>. However, it is important to

bear in mind that with artificial irrigation, the same field for staple crops such as rice may be harvested two to three times per calendar year in Sri Lanka, a possibility created by climate and labour input. This gives a support potential (and potential of appropriation) that should also be considered in a historical perspective. The same goes for the seed/yield proportions. The wet-rice seed/yield proportion before modern high-yielding varieties of paddy rice were introduced has been given as 1:100 (Bray 1989: 15). For Sweden, the seed/yield rate for the staple crops wheat and barley during the fifteenth century has been estimated at 1:3–4 (Myrdal J. 1999: 235).

### Documentation of ground truth: Maps

As is stated in the introduction to this volume, the task of writing global history implies using mainly secondary sources. The following examples raise the question of who authored what, and why.

Fieldwork is necessary at some stage in most data-gathering undertakings aimed at advancing knowledge of past physical processes and events. Maps are crucial to any fieldwork, and maps are most often drawn to be used in economic, military or legitimizing contexts.

The oldest maps known today which show Sri Lanka are those of Ptolemy (127–151 CE) and Al-Idrisi (1100–1166), produced by foreigners who had not visited the island themselves (*National Atlas of Sri Lanka* 1988: 8). Al-Idrisi's map of "The Island Serendib" (*gezira sarandib*) depicts and names the central highlands, as well as eleven coastal and four inland settlements, of which one inland settlement lacks a name (*National Atlas of Sri Lanka* 1988: 8; Idrisi). These early maps reflect Sri Lanka's central geographical position for map-producing societies active on the ancient trade routes across the Indian Ocean.

The oldest maps depicting the Scandinavian peninsula have a character similar to the oldest maps of Sri Lanka, being small-scale maps initiated by people operating outside the area itself and thus not drawn from ground truth. However, the Scandinavian maps are 1,300 and 300 years younger than the Sri Lankan ones (Nicolaus Germanus' *Cosmographia* 1482; Olaus Magnus' *Carta Marina* 1539, published in Venice). The later date reflects Scandinavia's peripheral geographical position for early map-producing societies.<sup>2</sup>

As maps always have an author, and were often made to order, it may be useful to consider on whose behalf, or under what circumstances, the small-scale maps of Sri Lanka and Sweden made during the following seventeenth to nineteenth centuries were drawn.

In the case of Sweden, we may note that from the state authorities' point of view, the country had never been occupied and ruled by foreign forces. Before 1658, border areas of what now constitutes Sweden belonged, in fact, to a neighbouring king, and additional neighbouring territory was subject to the Swedish crown. The present borders were established in 1809 when Russia conquered Finland.

Historical experience in Sri Lanka before 1948 was different. Increasing areas of territory had been lost to colonial powers since the first arrival of the armed Portuguese in 1517. The process continued through the period of Dutch colonization and the subsequent British colonial warfare from 1796, with British victory over the last king of Kandy coming in 1815. The process finally culminated in the defeat of the all-island uprising in 1817–1818 (Emerson Tennet II 1977: 547–622; Davy 1983: 246–247).

After the various colonial powers had established themselves on the island, they initiated the drawing up of maps of Sri Lanka, based on some physical knowledge. Early examples of small-scale maps produced in a colonial context are those of Cypriano Sanchez (in 1560–1566), Knox (in 1681) and John Davy (in 1821).

In Sanchez' map, produced during the early Portuguese rule of part of the island, the focus is on demography, with several remarks referring to "deserted land", such as, for example, in the southeastern part which is said to have been deserted for 300 years because of disease.<sup>3</sup> Roads and many additional named inland settlements have been added to this map as compared to Idrisi's. Information regarding economically important resources is also to be found. South of the central highlands a note refers to "Serra de Ferro", Iron Hill (*National Atlas of Sri Lanka* 1988: 8). This relates to an area where iron production was carried out from the Early Historic period to colonial times (Coomaraswamy 1956: 190–193; Juleff 1998, see further below). Just east of the note "Reino de Candea", the Kingdom of Kandy, reference is made to "Cardamome" which was an export item. (*National Atlas of Sri Lanka* 1988: 8). Geographical

information on “iron” and “cardamom” has not been a key factor when historians have told the “grand narrative” of Sri Lanka.

The geographically more correct outer contour of the island is easily recognized in Robert Knox’ (1641–1720) late seventeenth-century map. The map is an illustration in his book about his almost twenty years of captivity in the Kingdom of Kandy, and his flight to the coast and back home to England. He was not a subject of the then colonial power (the Dutch) and he named the map “A new map of the Candy Uda in the Island of Ceylon”. A more detailed depiction of named inland and coastal settlements, roads and rivers can be noted compared to previous maps. The focus is on political boundaries between the Kingdom of Kandy, the Dutch and the Vanniyars in the North (Knox 1981).

The map by John Davy (1790–1868) from 1821 approaches ground truth in relation to settlements, roads and rivers to such a degree that it is possible to use it for at least an approximate orientation in the field. John Davy (M.D., F.R.S.) was an army surgeon and physician and in Sri Lanka he was in attendance on the British governor, Sir Robert Brownrigg. In 1817–18 Davy accompanied him and British troops in the field during the all-island uprising against the colonial power. The map he produced has the title “Map of the Island of Ceylon. Showing military routes, Out posts and Forts of Early British Times” (*National Atlas of Sri Lanka* 1988: 10).

A brief overview of map production in Sweden can help us to reflect over how the colonial situation exerted an influence on the production of maps and their subsequent use in Sri Lanka.

Andreas Bure (1571–1646) was commissioned by the king to produce a map over Sweden, and it was published in 1636. Two years later, he was received a royal commission to organize the Survey Department. The maps were produced in the interest of the State authority, the small-scale maps should be seen in the context of the crown’s interest in expansion to the north and east, while the large-scale maps were made with effective taxation in mind.

From the time of Gustaf III (1771–1792), the armed forces took over the responsibility for geographical mapping. A field corps of surveyors was organized at the beginning of the nineteenth century and it was not until 1937 that the work came under civil

administration. The maps were made available to the general public from 1857.

One important difference between Sweden and Sri Lanka is the production of large-scale cadastral maps, in Sweden from the seventeenth century and in Sri Lanka from 1800, and in whose interest they were made.

During the late eighteenth and early nineteenth centuries, the focus in Sweden was on large-scale cadastral maps as an aid to the state-initiated land reforms re-parcelling the agricultural land of the villages. The fieldwork was organized by the Survey Department. In parallel with this, personnel from the Swedish Navy triangulated the coastal areas in their entirety.

As a basis for better statistics on agricultural produce, economic mapping started in the mid-nineteenth century. A mapping project which has a direct bearing on the organization of the antiquities survey (see below) was the "Economic map" started in 1935 and completed in 1978. Revisions and a change of scale have followed. This is a mapping project involving the whole of Sweden except the high mountains and their adjoining forest land in the far north and northwest of the country. The map was produced on the scale of 1:10,000 for the southern part of the country and on the scale 1:20,000 for forested areas of inland northern and mid-Sweden. Buildings, homesteads, roads, footpaths, agricultural land, ancient remains and the names of farms and villages are depicted. The work was undertaken by "Rikets allmänna kartverk", the national mapping office.

Four years after the British colonial power took the colonized part of Sri Lanka from the Dutch in 1796, land alienation and land settlement made it necessary to conduct cadastral surveys. The first cadastral maps were produced at the inception of the Survey Department in 1800. The objective was to separate state lands from private lands. Private land was not individually surveyed (*National Atlas of Sri Lanka* 1988: 12).

In 1897 the colonial power decided to conduct a topographical survey of the entire country, and to produce a map on the scale one inch to one mile. In 1908, an adequate field methodology had been worked out for producing a contour map, necessary for the

planning of railways and roads. The one inch to one mile contour map of Sri Lanka was completed in 1924.

A map publication project in a different political set-up was the *National Atlas of Sri Lanka*, published in 1988. A quotation from the introduction by the chief editor T. Somasekaram, Deputy Surveyor General of the Survey Department, may help to highlight the difference as compared to the colonial period. He formulates the national agenda of the project and concludes the introduction with a statement on how to put the Atlas to use:

The Atlas depicts graphically, as no words or tables can, the uneven distribution of people, resources and services in the country. How could a balanced development be achieved? ... If the National Atlas enables people to ask such questions and seek answers, this labour of love of four years by a dedicated team would have been worth the effort (Somasekaram 1988: VII).

The Agricultural Base Mapping Project (ABMP) was started in 1977 with the aim of producing a map series on the metric scale 1:50,000 with 5 meter contours, using the old maps and aerial photography, and revised by surveyors in the field. The maps were to be used in planning for self-sufficiency in foodstuffs (*National Atlas of Sri Lanka* 1988: 12).

## Documentation of ancient remains in the field in Sweden and Sri Lanka

### *Sweden*

The short overview of the history of documentation of ancient remains in Sweden given below focuses on the initiators and the results in terms of spatial and social coverage.

The first antiquities law in Sweden was passed in November 1666 and the registration of antiquities (in Swedish “Rannsakingar efter antikviteter”) started in 1667 after an initiative by the Director General of the National Heritage, *Riksantikvarie* Johan Hadorph (1630–1693). He argued that the memorials to the nation’s ancestors were under threat of destruction. A request was sent from the

state authorities to the Archbishop and the Bishops in which they were urged to contact all the parish clergymen in the country. The priests were requested to involve the churchwardens and the six laymen trustees in each parish in helping them to establish lists over all antiquities to be found in the parish. The lists were to be sent to the Committee for Antiquities (*Antikvitetskollegiet*). The Rannsakingar continued until 1693 (Rannsakingar).

The types of remains to be registered, and thus protected, were castles, hill forts and other types of fortification, runestones, tumuli, the graves of Kings or other aristocratic persons, all graves in churches and in churchyards, and anything else that might serve as a memorial to historic achievements, persons, towns or families. Later, Hadorph added holy wells, old books, coins and folk songs.

The archive contains material from 1,200 parishes, none of them situated in the northernmost provinces of Norrbotten, Västerbotten and Lappland. Burial grounds, tumuli and hill forts from the Iron Age are among the registered remains. Very few remains older than the Iron Age were documented. Documentation, of runestones and sometimes of legends and traditions connected with them, dominate the material. Further documentation of the immaterial cultural heritage exists in the form of legends regarding the building of parish churches, of holy wells and of various folk customs and traditions.

It is obvious that the survey was socially biased, not only in terms of results but also in terms of intentions. Nevertheless, the actual people working in the field were priests and laymen from parishes lying mainly in rural areas. The priests obviously prioritized written records (runestones) but to some extent what the locals related in connection to these and other objects has also been recorded.

The geographical bias, with a total lack of material from the northern half of what is now Sweden, might partly be the result of the types of remains specified.

The antiquities law of 1867 established that physical encroachment on ancient remains was punishable by law. It should be noted that ancient monuments are not private property in Sweden.

During the eighteenth and nineteenth centuries, antiquarian activity was conducted through regional and local initiatives. Apart from priests with an interest in local history, regionally-based civil

organizations were important initiative-takers in compiling antiquarian documentation during this period, until the state organized the antiquities survey of 1938. Among these civil organizations were the Rural Economy and Agricultural Societies (started in 1791 on Gotland and established in all counties in 1850), the Swedish Antiquarian Society (established in 1869) and the Swedish *Hembygdsrörelse* (home district movement, started in the early twentieth century).

This is not the place for a thorough discussion of this development<sup>4</sup>. What is important, given the questions at issue here, is to note the presence of the Royal Swedish Academy of Letters, History and Antiquities (RSALHA, founded 1786) on the one hand – the Secretary of which was also the *Riksantikvarie*. On the other hand there were also a rich variety of regional and local practices which were organized but not tied to specific religious, political or economic interests, which however, is not to say that they were ideologically neutral.

State-organized antiquarian practices developed through the RSALHA from 1826, when the Academy was established as the highest state authority for ancient remains in the country. The Swedish National Heritage Board was established in 1938 as an independent government agency. When the national antiquities survey started as a collaboration with the national mapping office for the production of the Economic Atlas the same year, it had the previous local and regional inventories as a basis for the field survey. The field personnel were also in communication with the local civil community during the surveys. With ancient monuments marked on the map, the landowners had an enhanced possibility of following the Antiquities law.

The field surveys and production of the first edition of Economic maps ran from 1938 up until 1978. Over time there was development in relation to the types of remains that were registered. This was partly linked to the revised Antiquities law (1942) that allowed for registering new types of remains such as production and settlement sites from historical times (Selling 1989: 17–18). However, the dominating categories of registered ancient remains during this period were hill forts, runestones and prehistoric graves. The latter represent a spatial and chronological overview of settlements

for some historic periods and regions, though the focus on visible burials involves a social bias (Jensen 1997: 115).

As the survey covered new areas, additional types of remains were added: trapping pits for moose in the northern part of the country were noted as from the late 1950s, receiving the status of protected monuments in 1965. Stone Age settlement sites were incorporated into the register when the survey covered the rivers and lakes in Norrland in the 1960s, these having been separately registered from 1942<sup>5</sup> in relation to the building of hydro-electric power plants. The remains of agricultural land use had been noted on the field maps from the start, and some remains such as the prehistoric stonewalls were given the status of protected monuments in the 1940s. Finally, in the county of Jämtland the remains of farmsteads abandoned not later than the sixteenth century, including adjoining infield areas, were registered as protected monuments from the late 1960s (Seling 1989: 20). An antiquarian interest in remains related to low-technology ironworks (bloomery furnaces, slag heaps etc.) is documented from at least 1874 when Hans Hildebrand, the *Riksantikvarie* at the time, documented slag along the river Dalälven and in the province of Västergötland (Magnusson 1986: 28). These types of remains were noted on field maps from the start of the antiquities survey, but they gained the status of protected monuments in the 1960s during the survey of Dalarna and Norrland (Seling 1989: 18). Since the early twentieth century, low-technology ironworks formed part of the archaeologists' research agenda, more or less intensively, and parallel studies of the medieval and later historical ironworks were undertaken (Magnusson 1986: 28–29).

When the survey accompanying the revision of the Economic map started in 1974,<sup>6</sup> a new and broader programme for the antiquities survey had been formulated (Jensen 1997: 116). The broadened view of what constitutes ancient remains worth preserving was a result of communication between the public, after many local and regional studies had been undertaken since the eighteenth century, and the government agencies in the field of cultural heritage management, as observed by K-G Seling (Seling 1989: 21).

The revised survey thus had the ambition to register as many types of cultural remains as possible, not only those with the status

of protected ancient monuments. Today there are 155 types of remains mentioned in the list used by the National Heritage Board.

When actually working in the cultural landscape, it is apparent that the register gives a biased picture. There is still better coverage of the southern half of the country than of the northern half. There is better coverage of open agrarian landscapes than of forested areas. Also, the remains related to abandoned agricultural land, to preindustrial production, to the dispossessed section of the rural population in historic times, and to the Saami population, are less well covered. Many of the latter remains are to be found in present-day forested areas. The need for a complementary survey was felt since most forests in Sweden are actively used for highly mechanized forestry production, which, according to reports, is destructive towards protected ancient monuments as well as other cultural remains (protected by the Forestry Act of 1994, though this is not as strongly formulated). For details of the impact of forestry on the cultural landscape, see, for example, Myrdal-Runebjer 1998; Aronsson 1998; Hällström et al. 2001.

The Forest and History survey of cultural heritage sites was initiated by the County Forestry Board in Värmland-Örebro in 1995, in close co-operation with the National Heritage Board and the County Antiquarian Agency. In the beginning of 2000, Forest and History surveys were under way in 14 counties (Myrdal-Runebjer 1999; Myrdal-Runebjer 2002). Today 115,000 cultural heritage sites are digitalized in the Swedish Forestry Agency's register on a national level, and relevant remains are being included in the National Heritage Board's digitalized register of ancient remains at the pace allowed by available resources.

To conclude this overview, one may observe that the initiative to conduct the antiquities survey was taken within a national, ruling-class context, but with a strong focus on oral tradition and "Griffter och Ättebacker" (burials and burial-grounds), the specific and local came to form part of the documentation from the beginning. The various local initiatives that were subsequently undertaken and the continuous dialogue between laymen and the antiquarian professionals and later the Ministry of Culture and Parliament, have enabled field studies of land use history with both "castle" and "cottage" perspectives. For research purposes it should be possible

to develop syntheses of the local and the specific when it comes to analyses of power relations and the control of resources and the labour of others.

The development from the 1930s of one centrally-managed register for ancient remains should be noted, as it forms a common ground for discussions of perspectives and evaluation.

### *Sri Lanka*

The documentation of ancient remains in the field, before the Archaeological Department was formed in 1890, was carried out by representatives of the colonial power whose main duties were other than antiquarian documentation and cultural heritage management. The pioneers during the early nineteenth century were British military personnel.

In 1818, Lieutenant Fagan, a British officer, was the first European to visit the ruined city of Polonnaruwa from the Middle Historic Period. He arrived there in pursuit of some “rebels” during the military campaign of 1817–1818. He published an account of his observations in the *Ceylon Gazette* in 1820 (Ievers 1899: 213).

The Collector of Mannar, T. Ralph Backhouse, had taken part in Fagan’s military expedition the previous year, 1817. During this field campaign he had also visited Anuradhapura, the site of the ancient capital, and Mihintale and Kavuduluväva (“väva” means irrigation tank), measuring and describing ruins and tank bunds (Ievers 1899: 213; Silva 1969: 1162).

The ancient capital had been abandoned as the main administrative centre as early as the eleventh century. However, as with most once-settled areas in the world, the area itself continued to be used by people in various ways. In 1679, six hundred years after it had ceased to be the seat of kings, Robert Knox came to visit the site during his flight from the Kingdom of Kandy. He had been advised to go to Anuradhapura to procure meat. He describes the area as follows:

It is a vast great Plain, the like I never saw in all that Island: in the midst whereof is a Lake, which may be a mile over, not natural but made by art, as other Ponds in the Country, to serve them to water their

Corn Grounds. This Plain is encompassed round with Woods, and small Towns [villages] among them on every side (Knox 1981: 353).

He further describes how people outside the area perceived of the site as a former centre “where they say Ninety Kings have Reigned” (Knox 1981: 100).

The army surgeon Dr. John Davy never visited the site of Anuradhapura during the military campaign of 1817–18. However, he gathered some information from “natives” and an officer who were there during the rebellion, and he mentions that Anuradhapura 140 years after the visit by Knox was “a small mean village in the midst of a desert”. He also writes that the site with its ruined dagobas was considered a sacred spot and a place of pilgrimage (Davy 1983: 225).

The Assistant Agency of Nuwarakalawiya was located at Anuradhapura in 1833. It initiated some clearing of jungle, bringing to light previously undocumented ancient remains such as stone inscriptions (Silva 1969: 1162). Lieutenant (later Major) Skinner was the first to give more reliable accounts of what was to be found above ground in Anuradhapura, based on a field survey in 1832–33. During the work he was able to gather information on the “traditional names” of specific buildings (Ievers 1899: 213). This is another indication that the site at the time was part of a cultural landscape in use.

In their proceedings of March 1831, the Board of Kandyan Commissioners notes the reuse of ancient constructions and warns against using local information on names:

From this period onwards many of the caves and abandoned vihares were re-occupied by priests – generally natives of the Seven Korales. These priests frequently pretended to know the ancient names of the places they occupied, and gave names which their reading of the chronicles suggested. Thus it is not safe to rely on the names without further evidence (Ievers 1899: 213–214).

The various operators in the Anuradhapura cultural landscape had of course different objectives. The “priests – natives of the Seven Korales” were part of the local social network, as Buddhist priests having to be fed by others. They had taken advantage of

the overthrow of the King of Kandy by the British troops, and they now claimed the right to live in and name the structures. The representatives of the colonial administration, on the other hand, were in the process of finding ways of putting the colony to use, and were gathering various types of information for later practical and legitimizing ends.

Using the Buddhist chronicles to identify structures in the field was a practice continued by the colonial rulers. In 1842, Major Skinner gave the plan of Anuradhapura to the British civil servant George Turnour (1799–1843) (Ievers 1899: 214). Turnour was the first European to study the Pali Buddhist chronicles of Sri Lanka, and his translation of the *Mahavamsa* was published in 1837.

Major Forbes was able to give an improved description of the site of Polonnaruwa (the capital in the eleventh to mid-thirteenth centuries) during a visit in 1831. He was also the first European to document a visit to Sigiriya, which for a short period of time in the fifth century was the site of the capital (Paranavitana 1983: ii).

From the mid-nineteenth century onwards, representatives of the colonial power other than military personnel become more visible in the documentation work. In 1848, Sir James Emerson Tennent, the Colonial Secretary of the British colony in Ceylon at the time, was obliged to tour the colony because of an uprising. The news that the monarchy had been overthrown in France and a republic established had been used by some people in the former Kandyan territories to raise awareness among the local people of the new taxes imposed by the colonial power on for example shops, firearms and dogs. They were aiming, in Emerson Tennent's words, "for the restoration of their national independence" (Emerson Tennent 1977: 1009).

During his tour, Tennent was able to visit various ancient sites, among them Sigiriya. He and his group were hindered from penetrating the ruined galleries at the foot of the rock towards the Mirror wall by "insufferable heat" and "the oppressive smell caused by the bats that inhabit them in thousands". Numbers of snakes and a bear added to the uncomfortable survey situation (Emerson Tennent 1977: 1018).

T.H. Blakesley from the Public Works Department was the first to conduct a more detailed survey of the site of Sigiriya, including

part of the remains of the reservoir south of the moat and the city rampart (Blakesley 1876: 53–62). Not being a trained historian, his dating and historical interpretation of the site were incorrect, but the plan is useful.

Surveys of ancient abandoned reservoirs and canals, once used for artificial irrigation, were undertaken from the latter half of the nineteenth century. The surveyors were either engaged in ordinary surveys for the one-inch map or later specific surveys of particular irrigation systems with a view to renovation. This was not a field of study for antiquarians. The Superintendent of Surveys, R.L. Brohier, wrote the first comprehensive report on the ancient irrigation systems in Sri Lanka in 1934 (Brohier 1979).

Was it, however, the representatives of the colonial power who were first to claim an interest in the ancient remains of the country? In Anduradhapura we note that pilgrims had been coming to the site long before the surveying and clearing work began, and that religious remains were reclaimed by Buddhist priests in parallel with the surveying and building of an Assistant Agency. The site of Sigiriya likewise formed part of a cultural landscape through time. The capital city was abandoned in 495 CE, but archaeology indicates various activities at the site until the thirteenth century. From the sixteenth century to the early nineteenth century (that is, until the British colonization) Sigiriya village and the surrounding settlements formed an outpost of the kingdom of Kandy according to the historical records. Surface finds of material from the seventeenth and eighteenth centuries have also been documented (Bandaranayake 1984: 6). The site was not only used in a physical sense. For a period of 700 years after the city was abandoned as a capital, it was reflected upon and formed a site of fame and glory in a secular sense in the minds of at least the literate elite from various parts of the island. This is evidenced by poems scribbled by visitors to the site between the fifth and thirteenth centuries.

The epigraphist, Archaeological Commissioner and first Research Professor of Archaeology in Sri Lanka Senarat Paranavitana copied, deciphered and interpreted 685 of the verses dating from the eighth to the tenth centuries. They were published in 1956 (Paranavitana 1983).

The overwhelming majority of the edited poems, 666 of them,

refer to the paintings on the rock above. Twelve of the published poems were written by women, and 556 certainly by men. Sixty-five different villages in four different provinces are mentioned as the places of origin of the visitors, and fifty family or clan names are given. More than thirty of these early tourists were monks and nuns. The others were clerks, physicians, superintendents of slaves, military officers, merchants, keepers of elephants, ladies and wives (Gooneratne et al. 1984: 219–228). But in the thirteenth century a visitor states:

I am Jalaka a drummer by profession, who visited this place (Priyanka 1990: 215).

So we can conclude that before the Archaeological Department was inaugurated in 1890 there were two types of remains documented by two different types of colonial representatives. The remains relating to religion and the elite were documented by military personnel and later on by high colonial civil servants; and the large-scale abandoned constructions for artificial irrigation from 300 BCE to 1200 CE were documented by the Survey and Public Works Departments. Some of the irrigation structures were left in an abandoned state, but some were renovated and especially the minor tanks and irrigation schemes in particular were often renovated without any, or any further, documentation (Myrdal-Runebjer 1996: 21).

The religious and elite-related buildings were later considered protected ancient monuments. To interpret the constructions with regard to dating and usage, antiquarians were in communication with representatives of the Buddhist sangha, and later with Orientalist researchers who had read and translated the Buddhist chronicles. The compilation of the chronicles has been dated from the fifth century CE (the Mahavamsa), up to and including 1815, when the British ousted the King of Kandy.

An Archaeological Commission was appointed in 1868 with the aim of investigating the possibilities of preserving the architectural structures of ancient monuments and of collecting copies of inscriptions. A programme for clearing ancient monuments and their surroundings in Anuradhapura was set up. Monuments with

stone carvings and sculptures came to light and personnel from the Public Works Department drew them to scale. In the following years, some government initiatives were made for the collection and study of ancient inscriptions, and the Ceylon Civil Service conducted excavations of buildings in the ancient cities of Anuradhapura and Polonnaruwa, followed by conservation.

The former District Judge of Kegalle, H.C.P. Bell, was appointed Archaeological Commissioner in 1890, and his first task was to conduct a complete survey and excavation of Anuradhapura and to survey the remains on and around the Sigiriya rock.

No legislation governed the protection of ancient monuments until The Antiquities Ordinance was passed in 1900. It was considered ineffective since there were, for example, limited measures to prevent the unscientific restoration of monuments on private land. Privately owned monuments gained extended protection through the Antiquities Ordinance of 1940 and the Ordinance passed in 1955 facilitated the procedure for declaring an area an Archaeological Reserve (Silva 1969: 1162–1175).

In the *National Atlas of Sri Lanka* there are two maps presenting the acknowledged state of the art regarding the ancient cultural landscape: “Archaeological Sites and Monuments” and “Ancient Cities and Settlements” (*National Atlas of Sri Lanka* 1988: 56–59). These maps are discussed below.

### A comparative perspective

To follow up on the suggested high and low resolution of archaeological field data and the social bias in data collection, an overview of the types of remains registered and mapped in Sweden and Sri Lanka through time is given below. Two tables are used to frame the question: “Archaeological sites” and “Architecture and cultural environment”. The designations of types of cultural remains are taken from the national atlases of Sweden (1994) and Sri Lanka (1988) respectively, and all designations from the respective works have been included.

Table 1. Archaeological sites.

Sweden: <i>National Atlas</i>	Sri Lanka: <i>National Atlas</i>
The History of the Settlement of Sweden	Prehistoric sites (67 sites)
Early Hunting Cultures	
Stone Age Peasants	
Bronze Age Settlement	
Rock Art (prehistoric)	
Graves and Iron Age settlement	Proto- and Early-Historic period (49 sites)
Agriculture during the Iron Age and Middle Ages	Settlements
Strongholds and Power	Cities
	Other urban cities
Runic inscriptions	Early Brahmi Inscriptions
	Early and Middle Historical Period Inscriptions
Routes and Fairways	Ports and important landing centres
The Cultural Landscape of Iron	
Traps and Trapping	
The Saami Cultural Environment	
Places of Sacrifices and Popular Belief	

What is of interest here are examples of social bias, in that there are remains appearing in the Swedish atlas which are absent from the Sri Lankan atlas. This is not because these types of remains are not to be found in Sri Lanka, but because they have not been included in what is considered to be “the heritage”. The tables further give examples of the low resolution of field data in the Sri Lankan case.

Table 1 shows archaeological sites that have been grouped together in the atlases under these specific designations. “The Cultural Landscape of Iron” is discussed as the first comparative example. In the Swedish atlas this refers to remains of direct and indirect production processes such as Iron Age furnaces, charcoal pits, slag heaps, and so on. Medieval mining, ironworks and tilt hammers, and nineteenth-century ironworks are included. As discussed in the introduction, there are such sites in the field in Sri Lanka, very

Table 2. Architecture and cultural environment.

Sweden: <i>National Atlas</i>	Sri Lanka: <i>National Atlas</i>
Our Churches	Dagoba (Buddhist)
	Image-houses (Buddhist and Hindu)
	Halls and dwellings of monks
	Bathing places for royalty and monks
	Hospitals
	Sculpture: Buddha Image
	Sculpture: Boddhisattva image
	Other important Sculptures
	Moonstone (first ornate step of a flight of steps at the entrance of religious buildings)
	Guardstones (decorated stones placed on either side of the Moonstone)
	Paintings (wall- and rockpaintings of the historic period in elite or religious contexts)
Buildings and Farms in Rural Areas	
Castles, Palaces and Manor Houses	
Public Buildings	
Towns, The Cultural Environments of Townships	
Industrial Monuments	
Place names	

few of which have been registered, and even fewer excavated and dated.

During the British colonial period in South Asia, the then prevalent low-technology, direct process iron and steel production were commented upon, and documentation was undertaken, for example, in the course of mapping raw material resources. Af Geijerstam observes that in pre-1900 observations, approximately 150 locations of traditional iron production within the boundaries of today's India are mentioned (Geijerstam 2004: 71).

From the seventeenth century to the early twentieth century there

are many published accounts of low-technology iron and steel production in Sri Lanka (Knox 1981; Davy 1983; Baker 1983; Emerson Tennent 1977; Coomaraswamy 1956).

Until the 1990s, the dating of ancient iron or steel production was not related to the production sites (Ghosh 1990: 328). It was in settlement layers or burials where iron objects or indications of iron production were found and given dates. From the 1990s onwards, a growing number of iron production sites have been excavated in South Asia, including furnaces.

The generally agreed-upon beginning of iron production in India is now set in the fifteenth century BCE (Eran) and the thirteenth century BCE (Hallur), in the southern part of the country. By the sixth century BCE, iron was regularly used (Juleff 1998: 9). In Sri Lanka, tenth-century BCE slag contexts from the inner city of Anuradhapura constitute the earliest dating of inferred iron production, followed by the ninth-century BCE dating of slag contexts at the Aligala protohistoric site in the Sigiriya region (Juleff 1998: 14; Karunaratne and Adikari 1994: 58–60).

At the fifth-century BCE to fourth-century CE Proto-Early historic settlement site Ibbankatuva in Sri Lanka, furnaces were located within the settlement itself (Karunaratne 1994: 107–108). During the SARCP archaeological survey (1988–1994) of the Sigiriya hinterland (45×35 km), thirty-three iron production sites were registered. The late second-century BCE to fourth-century CE Dehigaha-āla-kanda iron production site south of Sigiriya represents a specialization, with its huge quantities of slag from the production of tens of thousands of tons of iron, and its unusually large furnaces of which only five have been excavated (Forenius & Solangaarachchi 1994: 140).

In Gillian Juleff's archaeological survey of a 78 km<sup>2</sup> area in the southern foothills of the Central Highlands in 1988–1996 two hundred and fifty sites were registered in an area that had been described as having little historical importance. Of these, one hundred and twenty-three were sites for the production of iron or crucible steel (wootz). The dates obtained represent ironworking in the area from the fourth century BCE to modern times (Juleff 1998: 53, 98). She remarks that, as there is a lack of field data, few models

have been developed to explain the nature and chronology of iron production in South Asia (Juleff 1998: 21).

During the latter half of the twentieth century, proto-historical and historical archaeology in Europe gathered round a close and comparative reading of particular spheres of production, such as the production of iron. From the 1960s to about 2005 the *Comité pour la Sidérurgie Ancienne* helped archaeologists to keep in contact and gather at conferences, building a “research environment”.

This type of research has helped to develop a more holistic view of premodern times in Europe. In Norway, for example, several large projects relating to outland use during the Iron Age and early medieval period have changed perceptions of the inhabitants, at that time on the periphery of what is now a part of Norway (Narmo 1997; Rundberget 2007).

The archaeology of iron production is now well established in Europe, but the *Comité* is no longer active. An Asian-based conference focusing on the technological development of metallurgy, the “Beginnings of the Use of Metals and Alloys” (BUMA), was founded in 1981 by a Chinese and an American archaeometallurgist. The conference meets every fourth to sixth year in Eastern Asia with a focus on the production and use of metals. It also takes an interest in cultural interactions and evolutions over time and space, especially between the West and Asia. Most certainly, this will enhance the possibilities of a future “global perspective” on history. Archaeologists from both India and the West have presented research on material from India.

“Traps and Trapping” in the Swedish atlas refers to remains of trapping pits for moose, reindeer and wolves. The spectrum of trapping devices includes permanent fishing devices. Documentation of hunting, trapping and fishing show that similar types of traps are found in Sri Lanka even today, for other kinds of animals of course. Trapping pits for deer and wild boar are examples of trapping devices which must have had a history and which are potentially visible after abandonment, though dating would constitute a problem (Myrdal-Runebjer & Yasapala 1994: 267–268).

About 3,000 registered inscriptions have been systematically documented in the field in Sri Lanka, which is clearly seen in the

wide distribution of registered sites for “Early Brahmi Inscriptions” and “Early and Middle Historical Period Inscriptions”. Similar types of remains (“Runic inscriptions” sixth to eleventh century, c. 3,400 registered) have been the focus of field documentation in Sweden since the seventeenth century.

To follow up on the suggested social bias, we may note “Routes and Fairways” in the Swedish atlas. This refers to ancient routes and roads still visible in the terrain, constructed roads with milestones, road maintenance stones marking the stretch of the road which were the responsibility of specific landowners, stone-arched bridges, transport canals, harbours, beacons, remains of fishing huts, light-houses and shipwreck sites. The Sri Lankan map lists “Ports and important landing centres”.

The entry “The Saami Cultural Environment” represents a start for acknowledging the remains of a traditionally non-agrarian and partly nomadic Fennoscandic population in the cultural heritage of Sweden. This practice started in earnest as late as the 1980s, and much fieldwork still remains to be done before coverage similar to other areas of Sweden will be reached. The remains listed are rectangular hearths, cot foundations, early Saami graves, Saami metal hoards and (forest Saami) fenced enclosures. For Sri Lanka there is no similar entry, but it would be possible to discuss whether or not the remains pertaining to the activities of semi-sedentary swidden, hunting and trapping communities could form the basis for such an entry.

“Places of Sacrifices and Popular Belief” lists votive offerings, prehistoric and protohistoric cult sites with traces of cult buildings, traditional names indicating cult activities, sacrificial and holy wells that are in use even now, in modern times. Apart from these, indications of cult practices or popular beliefs not related to the mainstream practices of the Christian church include guardian trees and heaps of votive stones or branches that are still being added to and thus are not exactly abandoned remains in the strict sense. Folklore and popular religion have been documented by ethnographers and social anthropologists in Sri Lanka, but although such practices will have had a history of development and change, the physical remains of the activities and place names indicative of specific locations for

practices are not included in the heritage on a par with, for example, “Image houses” (Table 2).

Field data is being gathered, though. By way of introduction, the project researching the Anuradhapura hinterland recognized the social bias of previous research which relied on the Buddhist chronicles (Coningham & Gunawardhana 2013: 10, see below). This awareness allowed analysis of new types of sites – for example dating the (end first millennium CE) non-Buddhist cult practices related to the terracotta objects of what has been termed the “Tabbova-Maradanmaduva-Culture” (Coningham & Gunawardhana 2013: 144–149, 464).

Turning to entries where similar types of remains found in both the Swedish and Sri Lankan lists, we start with settlements. “The History of the Settlement of Sweden”, “Early Hunting Cultures” and “Stone Age Peasants” have their equivalent in “Prehistoric sites” on the Sri Lankan map. The low resolution of field data is shown in the number of sites compiled for the map in the atlas, but “Stone-Age archaeology” in South Asia already has a global focus. Remains of human activities technologically related to the “Stone Age” are acknowledged and researched in Sri Lanka and in the rest of South Asia in cooperation with natural and environmental scientists (Deraniyagala 1992). Since the 1980s, a number of archaeological field studies in South Asia have approached the question of the domestication of cultivars and the dating and spatial development of the introduction of agriculture by using methods developed by the natural sciences (Kajale 1988; Premathilake 2003; Saxena et al. 2006; Pokharia 2008; Fuller 2006). This links up with a growing interest in the environmental history of Asia (see e.g. Grove et al. 1998). To date, no remains of “Stone Age Peasants” have been identified in Sri Lanka.

Turning to settlements dating from after the introduction of agriculture in Sri Lanka, a few words must be said on how to identify rural settlement sites in Sweden and Sri Lanka. In both countries, for most locations and periods, constructions such as houses on the settlement site itself will not be visible above ground. Thus other constructions which are visible above ground have been used to identify a settled area in both countries.

Constructions for burials have been used in both countries to identify areas settled during the iron-using, prehistoric period. “Graves and Iron Age settlement” on the Swedish map has its counterpart in “Proto- and Early-Historic period” on the Sri Lankan map. Again it is evident that the Sri Lankan data has a low resolution, and field research related to the period has only just begun.

The suggested social bias is even more visible in Table 2 relating to the architectural and environmental cultural heritage. The map and text of “Archaeological sites and Monuments” in Sri Lanka refers exclusively to the environment of the lay and religious elite, and to material culture related to institutionalized religious practices.<sup>7</sup> In the *Swedish National Atlas*, “Buildings and Farms in Rural Areas”, “Public buildings”, “Industrial Monuments” and “Place names” are acknowledged parts of the cultural heritage.<sup>8</sup>

In Sweden, the number and variety of sites documented during the antiquities survey helps in planning for land use studies. Regarding the equivalent of the Historic Period (Late Iron Age and Medieval times in Sweden), several large projects over recent decades have approached the history from the village and rural household point of view (Svensson 1998; Andersson & Svensson 2002; Emanuelsson et al. 2003; Lagerstedt 2007; Svensson et al. 2013).

“Agriculture during the Iron Age and Middle Ages” in Sweden refers mainly to constructions on the ground related to the field systems or the movement of cattle from the village sites to pasture land, but also to the sites of the farmhouses. Most of the pre-medieval sites of buildings are not visible above ground, but are inferred from other contemporary remains or stray finds and documented through excavation. Though invisible above ground, they are protected monuments under the legislation.

Palaeobotanical remains from excavations in the central settlement of the citadel of Anuradhapura indicate that agriculture in the form of rice cultivation was practiced in the ninth to sixth centuries BCE (Deraniyagala 1992).

The entry “Settlements” in the Sri Lankan atlas is based on the location of irrigation works such as reservoirs and the c. 25,000 minor village tanks, and not on registered settlements sites. The time frame for this map is the Early and Middle Historic Period (300 BCE to

1300 CE). The source-critical aspects of the distribution thus shown are discussed by the author Senake Bandaranayake (Bandaranayake 1988: 58). They are: the lack of chronological control (1,000 years projected on one map); the “white spots” in the central mountains and in the southwest where rain-fed agriculture was undertaken; and in the north where well irrigation dominated.

An entry specifically highlighting the exceptional remains, nowadays often restored, of the huge pre-thirteenth century irrigation constructions would have added to their visibility in a global comparative perspective, especially if their chronology could be demonstrated. Included here are bunds of reservoirs with a storage capacity of up to 98.6 million m<sup>3</sup> of water and transbasin canals up to 80 km long traversing an almost level plain. An entry describing the known c.25,000 village tanks, chronologically ordered, would put the large structures into context. As has been observed above, field documentation of such remains has almost exclusively been the work of surveyors and irrigation engineers. Historians, not archaeologists, have tried to interpret the constructions from the perspectives of technological development and social context (Gunawardana 1971, 1978, 1979, and 1982; Siriweera 1978, 1986, 1989).

As shown in a few case-studies, mapping and sampling the tank and canal bunds and their bottom sediments gives opportunities for dating the construction and utilization phase (-es) of the irrigation works (Abeyratne 1990: 19–29; Deraniyagala 1992: 732–733; Myrdal-Runebjer 1996: 128–133; Risberg, Myrdal-Runebjer & Miller 2002: 41; Gilliland et al. 2013: 1024). It would thus be possible to develop a field practice for identifying, registering and gaining a spatial overview of irrigated agriculture through time.

Apart from the “low resolution of field data” there is also the problem of the “social bias”. Questions of different types of agrarian land use have been raised in South Asia, also based on natural scientific methods, but a close reading is lacking when it comes to the relations between the human beings who once created what is now the archaeologists’ material (Petralgia & Allchin 2007; Kingwell-Banham & Fuller 2011). One of the few examples of palaeo-ecological research combined with the latter type of study in India, is the close reading of the agricultural landscape surrounding the city

of Vijayanagara in Karnataka, India, c.1330–1650 CE (Morrison 2000; Morrison 2009).

The author of the Ancient settlement map was one of the leading archaeologists in Sri Lanka in post-colonial times, Professor Senake Bandaranayake. Regarding previous priorities in historical and archaeological research relating to the Early and Middle Historical Period (300 BCE to 1300 CE) he remarked in 1990 that it had been “largely confined to the study of structural remains, royal and official inscriptions and political and religious history – almost all of it relating to the apex or superstructure of the historical society.” (Bandaranayake 1990: 15).

On Bandaranayake’s initiative a multidisciplinary archaeological project (SARCP) was run from 1988 to 1994 “to investigate the settlements and settlement network of a small but representative part of the archaeological landscape of the northern Dry Zone, the principal area of settlement during the Anuradhapura and Polonnaruwa periods”.<sup>9</sup> He defined the project as an experiment of the archaeology of the village, focusing “the vast rural base” (Bandaranayake 1990: 15). A number of research projects with similar broader perspectives have been undertaken since then, not only in Sri Lanka but in other parts of South Asia.

The field results furthermore made it clear that the cultural landscape had been in a state of flux. Settlements moved, and tank bunds built by cultural layers from previous settlements were abandoned. There were also the remains of paddy-fields, some in the beds of dry village tanks now in scrub jungle, and some on land in other succession stages of the swidden cultivation landscape (Myrdal-Runebjer 1996: 72). The presumed depopulation and/or migration during the thirteenth century, parallel to the abandonment of the large-scale irrigation structures, has been mentioned above. Together with these earlier indications of abandonment, there are some texts from later centuries that could help to formulate questions for field research pertaining to the abandonment of settlements.

The seventeenth-century remark by Robert Knox regarding the Kingdom of Kandy may be noted. He writes that “[t]owns ... lie desolate, occasioned by their voluntary forsaken them.” Adding that “some will sometime come back and re-assume their Lands again”

(Knox 1981: 102). Here he mentions sickness and superstition as reasons for moving away, but further on in the text he states: “But if any find the Duty to be heavy, or too much for them, they may leaving their House and Land, be free from the King’s Service, as there is a Multitude do.” (Knox 1981: 167).

Alternative food procurement strategies as indicated in this and later texts from the nineteenth century, including the Sigirya settlement study itself, have been swidden, hunting and trapping, and harvesting other forest produce such as honey (Myrdal-Runebjer 1994: 246–260). The un-stratified village life as envisioned by twentieth century historians in the “tank-stupa-village synchronism” seems questionable, considering the seventeenth-century observation that people who did not have good paddy-land “are fain to sow on dry Land, and Till other mens Fields for a subsistence” (Knox 1981: 167).

John Davy described the methods used by the British army in the crushing of the rebellion of 1817–1818. These included the burning of houses, chopping down of fruit trees, and putting to death of “all who made opposition” (Davy 1983: 246f). In 1819 he travelled through the country noting deserted fields, houses in ruin, depopulated villages and famine (Davy 1983: 298–302, 319).

We might further reflect over the remark made in 1833 by Thomas Skinner, the Commissioner of Public Works that the population of the Anuradhapura region (Nuwarakalawiya) was rapidly decreasing due to disease and drought (Farmer 1976: 11). Thus to obtain a chronology of settlements in this landscape in a state of flux would be one important step towards understanding its history from a village point of view.

The research developed in the Sigiriya hinterland from 1990 was followed by hinterland studies around the ancient city of Anuradhapura (Coningham et al. 2007; Coningham & Gunawardhana 2013). Beginning in 2005, hundreds of sites were documented and a selected number excavated and dated. An overall dating of the usage phase of irrigation facilities was obtained, approximately following the dating of the development of the central settlement, Anuradhapura (Gilliand et al. 2013). The approach further made it possible to introduce the concept of “change” in the analyses of the Anuradhapura hinterland (Coningham & Gunawardhana 2013: 464–468).

So what is standing in the way of a mainstream reorientation in the field and, regarding societal interpretation, putting “the apex or superstructure of the historical society” into context?

Another senior Sri Lankan archaeologist, Professor Sudarshan Seneviratne, has commented on how available data has been interpreted. He identifies as a problem the fact that the narrative of the “peopling of the island” and “the emergence of civilization” related in the Buddhist chronicles were accepted at face value “by the Orientalists, the Antiquarians, the colonial administrators, and the twentieth-century Nationalists.” This he argues has resulted in “an ethno-religious history with a sectarian bias.” (Seneviratne 1996: 266).

Without a critical reading of ground truth, settlement studies could fit well in to this view of the Sri Lankan past. Seneviratne notes that “*the tank-stupa-village synchronism*” has been identified as the roots of a “national culture” which requires preservation and perpetuation and is thus not to be questioned (Seneviratne 1996: 273).

One hypothesis might be that this perspective fits well into the view of the world inherited from the Orientalist tradition by many researchers in Europe and North America. Thus the emerging picture does not “ask for” further questions among the dominant researchers of either research community.

## Concluding discussion

It is not surprising that there will be different types of remains in Sweden and Sri Lanka. Sri Lanka has been inhabited for almost three times as long as Sweden. Sweden has been thinly populated through time, rural, and, up until the nineteenth century, very poor, whereas Sri Lanka shows clear indications of early high population density areas, early central settlements and an affluent lay and religious elite, consuming monumental architecture, but not constructing it themselves. Sweden is located in the boreal forest, stretching up to and beyond the Polar circle, on the northwestern periphery of earlier major areas of high population density, far from the ancient trade-route highways. Sri Lanka, on the other hand, is located just north of the equator, directly on the early marine highway across the Indian Ocean. One may also note that in Sweden, Christian

churches belong to the architectural heritage, and in Sri Lanka, Buddhist stupas and Hindu temples. But this is not the focus of the comparative perspective discussed in this chapter.

What has been discussed above is how a historically determined difference in data capture creates a problem for research with a world-history-perspective. Examples were taken from Europe (Sweden) and South Asia (Sri Lanka).

Two problems were identified in this chapter: high and low resolution of field data and a social bias in selection of sites for documentation. The expression high and low resolution of field data relates to a difference in degree of coverage in the respective areas of similar types of activities relevant for world history researchers. The "social bias" relates to a disregard of the primary producers in historical archaeological research in South Asia.

One disturbing result of this social bias is how the creative, reflective, active local population come forward in recent interpretations of the archaeological record in Europe, in contrast to the anonymous, silent contributors to the affluence and glory of kings and religious elites (and colonial powers) in South Asia.

Archaeological and palaeo-ecological field data has increased during the past four decades in Northern Europe. It includes data with a bearing on social organization and, hence, differential access to various resources, including the labour of others. It also includes a greater emphasis on research regarding rural settlements and production sites. Thus the possibility has increased to also understand the social dynamics behind changing land use patterns.

When these types of field data have been collected in South Asia, the same questions are seldom asked. When scholars do ask such additional questions, and even succeed in showing a picture differing from the one inherited from the Orientalist research tradition, the work is not taken up as part of the grand narrative or the mainstream, commonly agreed upon, story.

This being systematically so, what has been attempted here is not primarily to suggest types of fieldwork that could help fill the lacunae seen in comparisons to the rich archaeological database for settlement and land use history in Western Eurasia. It is not a lack of

awareness among the archaeological community in South Asia that constitutes the problem, as the Sri Lankan examples showed. The aim is instead to underline the necessity of being on source-critical red alert when attempting to write global history. This necessity exists irrespective of whether the focus is on the environmental impact of land use or on human society as such. The social context of data collection in colonized countries during the nineteenth and twentieth centuries constitutes a heavy legacy. The incorporation of preconceived colonial ideas of class and gender in national research agendas today does not make the task any easier.

If secondhand source consumers such as the writers of global history were to take into account the reports from the scattered but more holistic projects and the published suggestions of alternative research agendas, an account of the inequivalent sets of data could at least be presented openly and explicitly.

## Notes

- 1 Throughout the text “Sweden” signifies the area within this state’s present-day borders. Sri Lanka is now an island, and its area has been constant within the time limits and resolution of interest in the present discussion.
- 2 Even if the interpretation that “Sweden” is marked in the VIIth climatic zone on Al-Idrisi’s map (which has not survived as an original) is accepted, the distorted geography represented on this part of the map and lack of place-names still makes the point valid. This part of the world was not a focus of the Mediterranean world in the twelfth century.
- 3 Later maps produced during the Portuguese colonial rule such as those by Plancius (1592) and General Constantine de Saa Noronha (early seventeenth century) also mentioned that the southern part of the country had been depopulated by “sickness” 300 years earlier. These maps have been cited to in the discussions of the causes of “the downfall of the Rajarata civilization”.
- 4 See for example Baudou 2001; Bertilsson & Winberg 1978; Selinge 1989.
- 5 And in the southwest of Sweden by archaeologists during the so-called “Göteborgsinventeringen” 1880–1923. The argument for the initial decision not to include them on the Economic map was the lack of visible boundaries for Stone Age settlement sites (Selinge 1989: 17).
- 6 The survey ended in 1995.
- 7 The entry “Hospitals” in Sri Lanka should be noted in a comparative perspective. It represents the much earlier development of institutions for medical treatment in Sri Lanka as compared to Sweden.
- 8 A Swede with a critical mind might reflect over the entry “Our churches” in the

*National atlas.* Who are “we” and what sets the churches apart from rural farms in rural areas, public buildings and industrial monuments?

9 c. 500 BCE–1300 CE.

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