

Fiber Spinning During the Mapungubwe Period of Southern Africa: Regional Specialism in the Hinterland

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Abstract

The Middle Iron Age (MIA) of southern Africa is a period characterized by increased social complexity centered on the polity of Mapungubwe. This article considers the role that fiber spinning played in the regional political economy of the period. At Mutamba and other sites in the southern hinterland of Mapungubwe, spinning was a significant economic activity. Evidence from 187 spindle whorls from the site suggests that intensive spinning of cotton was practiced by households. This enabled hinterland communities to actively participate in regional trade networks and acquire trade goods, including objects that were often restricted in the Mapungubwe heartland. This casts hinterland communities as active participants, rather than passive bystanders, in the regional economy.

Keywords Mapungubwe . Iron Age . Hinterlands . Spindle whorls . Craft production . Trade

Introduction

Between the tenth and thirteenth century AD, farming societies of northern South Africa, southwestern Botswana, and southeastern Zimbabwe experienced significant changes in social organization. During this period, commonly referred to as the Middle Iron Age (MIA), control over ritual, political power, and trade intertwined and also defined sacred leadership and elite status. Social status was associated with the distribution of trade goods, which included exotic items from Asia such as glass beads and Chinese celadon as well as locally produced gold, iron, and cuprous objects. On a regional level, elites from cities like Mapungubwe exerted their influence through control over the distribution of these items. Of all the items that shaped the political economy and defined status, metals and beads are the most prominent in the archaeological record because of better preservation factors. These have therefore attracted more attention than the less *visible* items—such as cloth, animal products (e.g., skins, feathers, horns), slaves, and food (Freeman-Grenville 1975; Gibb 1959)—although these also played an important role in the local political economy. Observers, travelers, and historians of early trade with the African east coast indeed made it clear that cloth, in particular, was highly valued (Barbosa 1866, p. 60; Freeman-Grenville 1975; Theal 1900). Unfortunately, only a handful of archaeological cloth samples have been recovered, and these post-dated the MIA (e.g., Fagan et al. 1969; Huffman 1971). However, spindle whorls are a good indicator of cloth production as they are essential tools in the fiber spinning process. Yet, these are rarely considered beyond what they indicate about yarn or cloth production for personal use. The distribution of this class of artifacts in southern Africa's MIA archaeological record is, however, useful for understanding the organization of cotton fabric production and how this related to the regional trading networks, political economy, and social status. The distribution pattern of spindle whorls at Mutamba and other sites suggests that an intensive local spinning industry existed in some locations of the larger

Mapungubwe hinterland. This activity, I argue, enabled communities in the Mapungubwe hinterland to participate in regional exchange networks.

Background

During the MIA, Mapungubwe's political elite consolidated power through the centralization of trade (Huffman 2015), the monopolization of metalworking (Calabrese 2000, 2007), and community-wide rituals such as rainmaking (Murimbika 2006; Schoeman 2009). In the Mapungubwe heartland (the region around the confluence of the Shashe and Limpopo rivers), trade goods and non-utilitarian metals are restricted to large elite sites (Calabrese 2000, 2007). However, the ongoing research at hinterland sites shows a less-restricted pattern in the distribution of items that were regarded as prestige goods in the heartland (Antonites 2012, 2014; Antonites and Ashley 2016). This pattern not only demonstrates regional socio-political and economic variability during the MIA but also highlights the significant role of hinterland communities in regional commerce.

One such hinterland site of the Mapungubwe polity is Mutamba. It is situated, along with two neighboring MIA settlements (Vhunyela and Princess Hill), approximately 80 km southwest of Mapungubwe on the northern foothills of the Soutpansberg Mountains (Fig. 1). Princess Hill is characterized by a higher status hilltop residential zone with a cattle kraal (byre) around the base, which marks it as a likely elite settlement. Mutamba and Vhunyela, on the other hand, conformed to a typical underclass settlement in which there is a centrally located cattle kraal with households spread around it. All three sites share a distinctive Mapungubwe ceramic style and are therefore believed to fall within the Mapungubwe polity's larger interaction sphere.

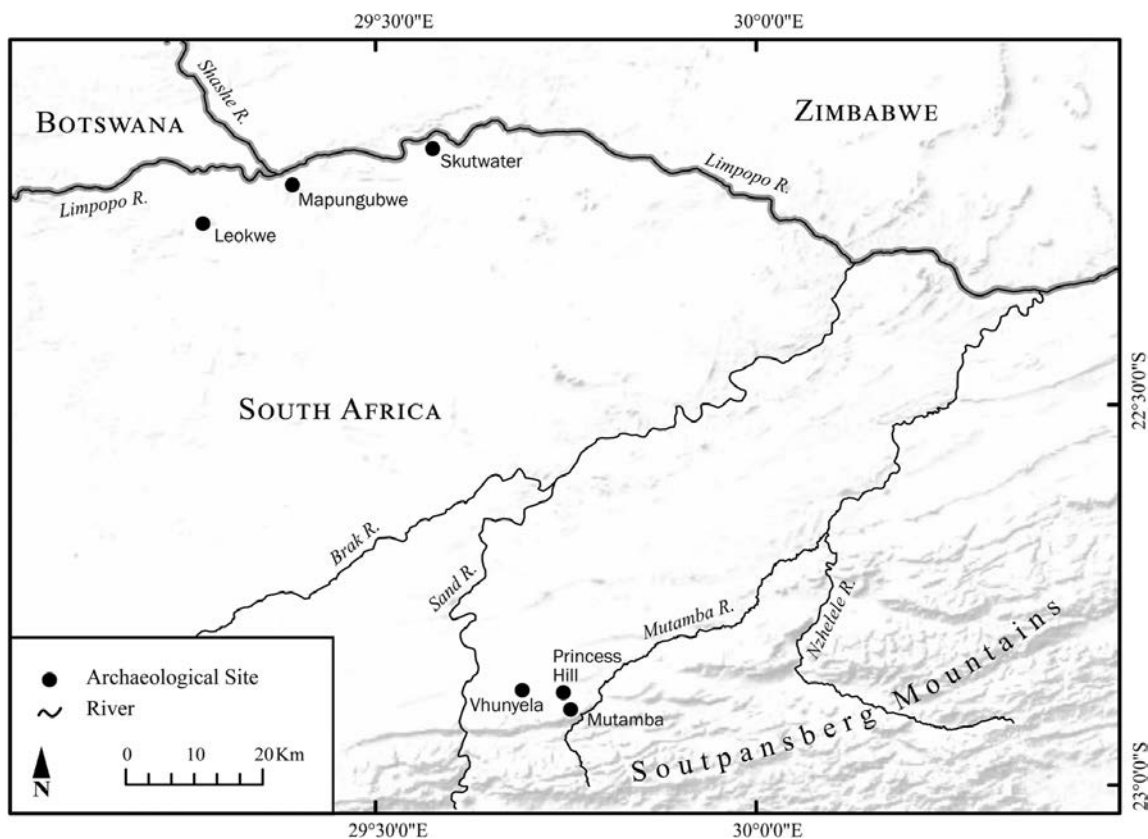


Fig. 1. Regional map with sites mentioned in the text

Initial excavations at Mutamba, Princess Hill, and Vhunyela were conducted by Loubser (1991) in the 1970s and 1980s. Finds from MIA levels in these initial excavations include 16 spindle whorls from Mutamba, nine from Princess Hill, and ten from Vhunyela, in addition to metal artifacts and shell beads (Loubser 1991). More substantial excavations at Mutamba in 2010 and 2011 recovered a further 187 spindle whorls (Antonites 2012). The increased sample size and the use of fine-grained recovery techniques such as flotation also resulted in a greater recovery of other small finds. These include 342 imported drawn glass beads, four rare wound glass beads, a single gold bead, two cowrie shells, as well as a range of cuprous and iron objects. A large number of whorls and a range of trade goods thus raise questions regarding the role of fiber spinning and cotton production in the region's economy (Antonites 2012).

Fiber Spinning in Southern Africa

Most first-hand accounts of traditional cotton spinning in southern Africa were written in the nineteenth and twentieth centuries when cheap mass-produced fabric comprised the bulk of cloth in circulation. The comparison between these first-hand descriptions (e.g., Crowfoot 1931; Du Toit 1968; Huffman 1971; Ruwita 1998; Van Warmelo 1940) and those by early explorers and traders suggests a large degree of historical continuity in technique and technology (e.g., Gamito 1960). This apparent continuity also points to a general level of applicability of the ethnographic accounts of spinning and weaving to the more distant, archaeological past (c.f. Davison and Harries 1980).

Ethnographic sources that detail spinning from southern Africa typically only refer to the spinning of indigenous or *wild cotton*, without mention of the specific species (e.g., Junod 1927; Krige and Krige 1943; Stayt 1968; Van Warmelo 1940). The fact that observers specifically use the term cotton suggests they likely refer to *Gossypium herbaceum* var. *africanum* (African wild cotton), which closely resembles the domesticated tree cotton *Gossypium arboreum* and also occurs throughout southern Africa as an indigenized species (Arnold and de Wet 1993). The Ditsong National Museum of Cultural History in Pretoria houses a collection of ethnographic spinning implements, thread, and raw materials collected across southern Africa prior to the 1960s. The pods and unspun fibers in this collection are *G. herbaceum*. There are, however, several other plants that produce fibrous seed pods that could have been spun into yarn (see Ruwita 1998 for a complete list). In addition, there are accounts of the spinning of fibrous tree bark such as baobab—*Adansonia digitata* (Bent 1895, p. 310; Gardner 1963, p. 88). Cotton though seems to have been the most important and widely used plant fiber throughout most of sub-Saharan Africa (Iseki 2010, p. 9). Regardless of the source, preparing and spinning fibers is a labor-intensive process (Strand 2012). Southern African historical records state how cotton and other wild fibers first need their seeds to be removed, after which the fibers are then teased out by plucking it on a small bow (Van Warmelo 1940, p. 102). A straight stick typically serves as a spindle to which fibers are secured by means of a small twig or metal hook inserted through a perforation at its end (Du Toit 1968; McAdams and Howman 1940; Ruwita 1998). The spindle is passed through the hole in the spindle whorl (Fig. 2). When spinning, the whorl acts as a flywheel that adds weight and stabilizes the spindle and prolongs the initial spin (Barber 1991, p. 303). In 1831, the Portuguese envoy Gamito (1960, pp. 82–83), traveling through regions around the Zambezi River, described the spinning process as follows:

...to twist the cotton, they sit on the ground, tie it to their feet and securing one end to the hook on the spindle...they draw out a piece three spans long, then with the palm

of the right hand and on the right thigh they impart a rapid movement to the spindle holding it in the air and at the same time they hold the cotton between the thumb and the index finger of the left hand, controlling it and drawing it out where it shows some unevenness. When the thread is well-twisted they roll it round the spindle near the top plate (spindle whorl) (refer to Crowfoot 1931 for detailed images of this method in practice; Fig. 3 for an example of rolled up yarn on a spindle).



Fig. 2. 1-4 Spindle whorl mounted on a spindle. 5, 6 The final cob of spun yarn twisted around the spindle



Fig. 3. Examples of spindle whorls from Mutamba: Rows 1-5, ceramic whorls; Row 6, stone whorls

This early description closely mirrors the later ethnographic accounts in Southern and Eastern Africa (e.g., Crowfoot 1931; Davison and Harries 1980; Du Toit 1968; Huffman 1971; McAdams and Howman 1940; Ruwita 1998;). Once spun, the yarn was used in weaving and sewing as well as the stringing of beads and amulets. Rare first-hand accounts of weaving in the region describe the use of a fixed, single-heddle ground loom (Davison and Harries 1980, p. 181; Huffman 1971, p. 15). Weaving on this type of loom takes a long time (Huffman 1971; Selous 1890, p. 456) but requires minimal infrastructure and can produce both narrow and wide cloth (Davison and Harries 1980, p. 181).

Archaeological Evidence

Given that both looms and cloth are made from organic materials, spindle whorls typically provide the only evidence for fiber spinning. Spindle whorls in southern African archaeological contexts are typically made from ceramic fragments that have been rounded and perforated in the center. Other materials such as tortoise plastron (e.g., Huffman 1971), wood (e.g., Ruwita 1998), and stone have also been used, albeit infrequently. Alternative interpretations of perforated ceramic disks include markers, game board pieces, mouse traps, or net weights; however, ethnographic and historical evidence overwhelmingly suggests their function as spindle whorls (for a critique of such interpretations, see Ruwita 1998).

Spindle whorls were present in Swahili trading communities such as Shanga and Kilwa by AD 1000 (Horton 2004, p. 74). In the southern African interior, whorls first appeared at thirteenth-century sites in the Limpopo River valley (Calabrese 2000; Gardner 1963; Van Ewyk 1987). Gardner (1963, p. 17), one of the early excavators at Mapungubwe, specifically mentions the abundance of whorls in the thirteenth-century layers at the site. He contrasts this abundance to their conspicuous absence from earlier layers on Mapungubwe Hill and the nearby tenth- through twelfth-century K2/Bambandyanalo, the precursor settlement to Mapungubwe. Spinning and weaving technology therefore likely reached the southern African interior during the first half of the thirteenth century—coinciding with the development of Mapungubwe as a regional political and trading center.

As spinning was being integrated into the local economy in southern Africa, spindle whorls at coastal Swahili sites became increasingly rare after AD 1300. This decline in production on the coast is likely a result of the import of mass-produced cloth from Western India. Not only were the imported fabrics cheaper, but they were also dyed with colors that were not locally available (Horton 2004, p. 74). Barbosa (1866, p. 6), for example, noted in 1517 that merchants on the coast would unravel imported colored cloth to obtain yarn that could be incorporated in their own textiles and through its trade, “gain much gold.”

The Mutamba Spindle Whorl Assemblage

Of the 187 spindle whorl fragments from 2010 to 2011 excavations at Mutamba, all save two were ceramic—the remaining two were made from stone and resembled the ceramic examples in both shape and size (Fig. 3). In subsequent analysis, all efforts were made to refit and identify fragments from the same whorl. These were counted as a single whorl. Some whorls were still clearly unfinished with partially completed holes. In one case, a ceramic sherd with a spout was shaped to serve as the spindle hole (Fig. 4). Only four whorls incorporated decorations from the original ceramic vessel, and these only covered a small portion of the whorl itself (Fig. 4). It therefore appears that decoration was not an important consideration in the manufacture of whorls (contra Tiley-Nel 2017).

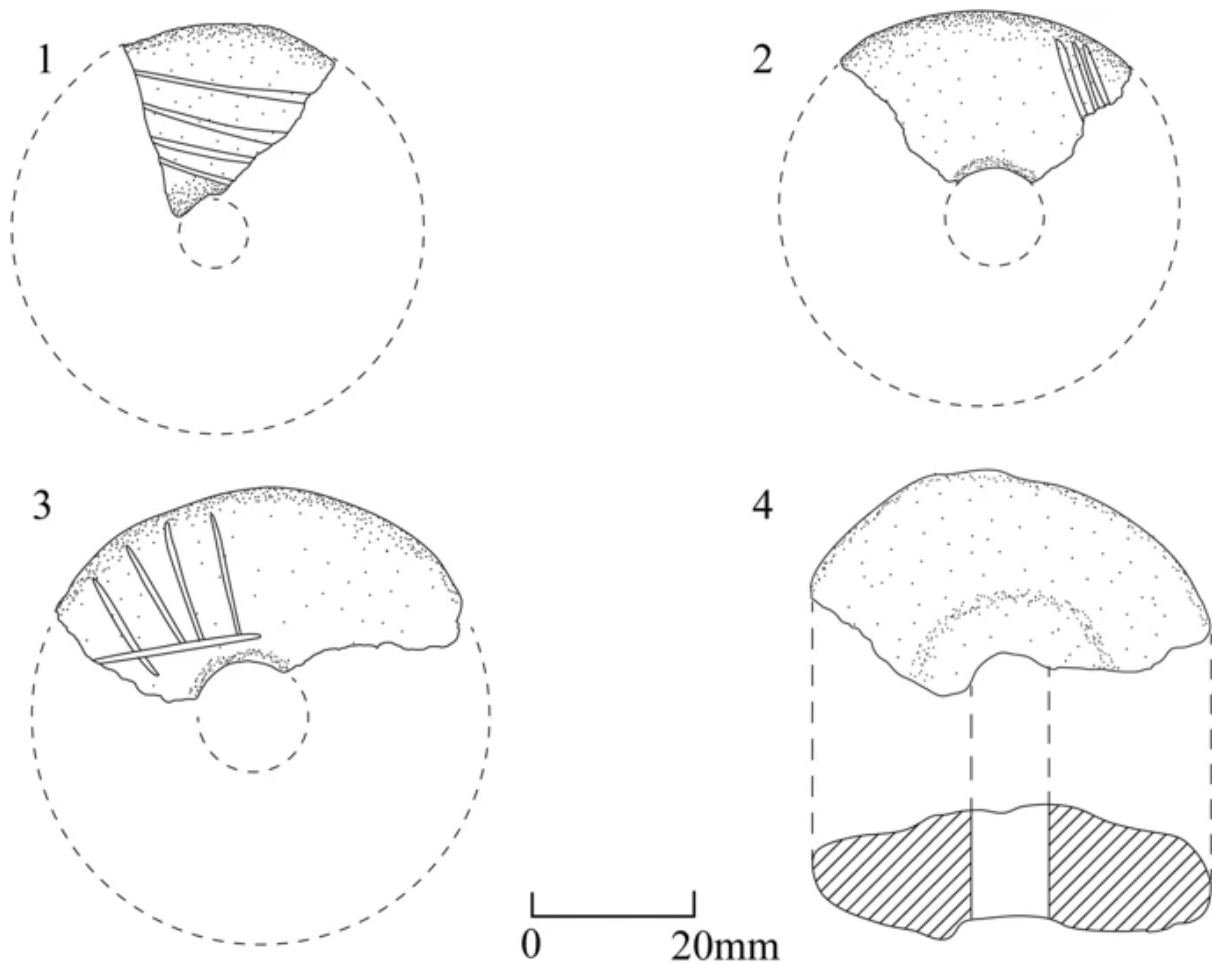


Fig. 4. Decorated spindle whorls from Mutamba

The spindle whorl assemblage was mostly associated with the household areas of the site. Around 50% ($n = 94$) of whorls were from household middens, and a further 13% ($n = 24$) were associated with domestic spaces such as house floors, domestic courtyards (*lapas*), and under the rubble of a burnt house. The remainder were from undetermined archaeological deposits and fill ($n = 65$; 35%), while four whorls (2%) were found in a unit at the edge of the central cattle kraal. A household context for spinning is also suggested by the location of 11 *G. herbaceum* seeds collected from the floor of a burnt and collapsed residential unit (Steyn and Antonites forthcoming).

Although no complete whorl was found, the diameter was estimated using a diameter chart. This measurement also allowed the fragment to be calculated as a percentage of the original, which was, in turn, used to estimate the weight of the original whorl. Only the fragments with a proportion of 25% and above were used for descriptive measurements. This conservative constraint resulted in a sample of 67 whorls, from which descriptive weight and diameter measurements were calculated.

The diameter of whorls at Mutamba ranges between 25 and 65 mm, yet almost 90% ($n = 60$) of the whorls fall between 42 and 62 mm (Table 1, Fig. 5). In contrast, there is much greater variation in whorl weight (Fig. 6) as seen in values of variance and coefficient of variation (CV), which, in both cases, are more than double that of diameter. The significance of this variation is unclear. Some studies have suggested a positive correlation between the weight and diameter of spindle whorls and the length and thickness of the thread produced (Alt

1999; Anawalt 2000; Barber 1991; Halperin 2008; Keith 1998). The Mutamba assemblage could therefore indicate that different weights were used and experimented with. However, a preference for specific weights would likely also result in a bimodal distribution whereas the Mutamba data suggest a unimodal, but tailed spread (Fig. 6). The variation could be due to the expedient nature of whorls made from broken ceramics.

Table 1 Weight and diameter measurements for spindle whorls from Mutamba. Only finished whorls with a diameter greater than > 25% were used

	Diameter (mm)	Weight (g)
<i>N</i>	67	67
Min	25	15
Max	65	92
Mean	52	37
Variance	66.2	194.7
Standard deviation	8.1	13.9
Median	50	35
Coefficient of variation	15.75	38.02

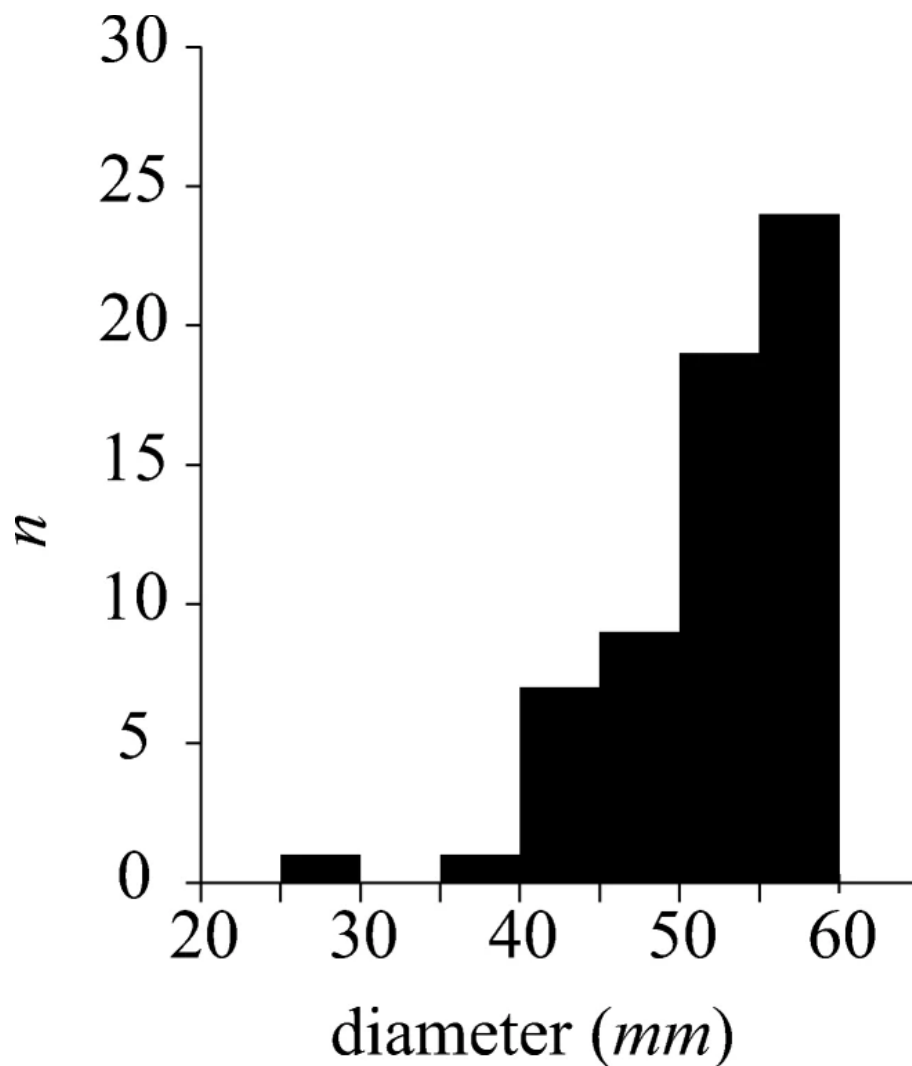


Fig. 5. Histogram of Mutamba spindle whorl diameters

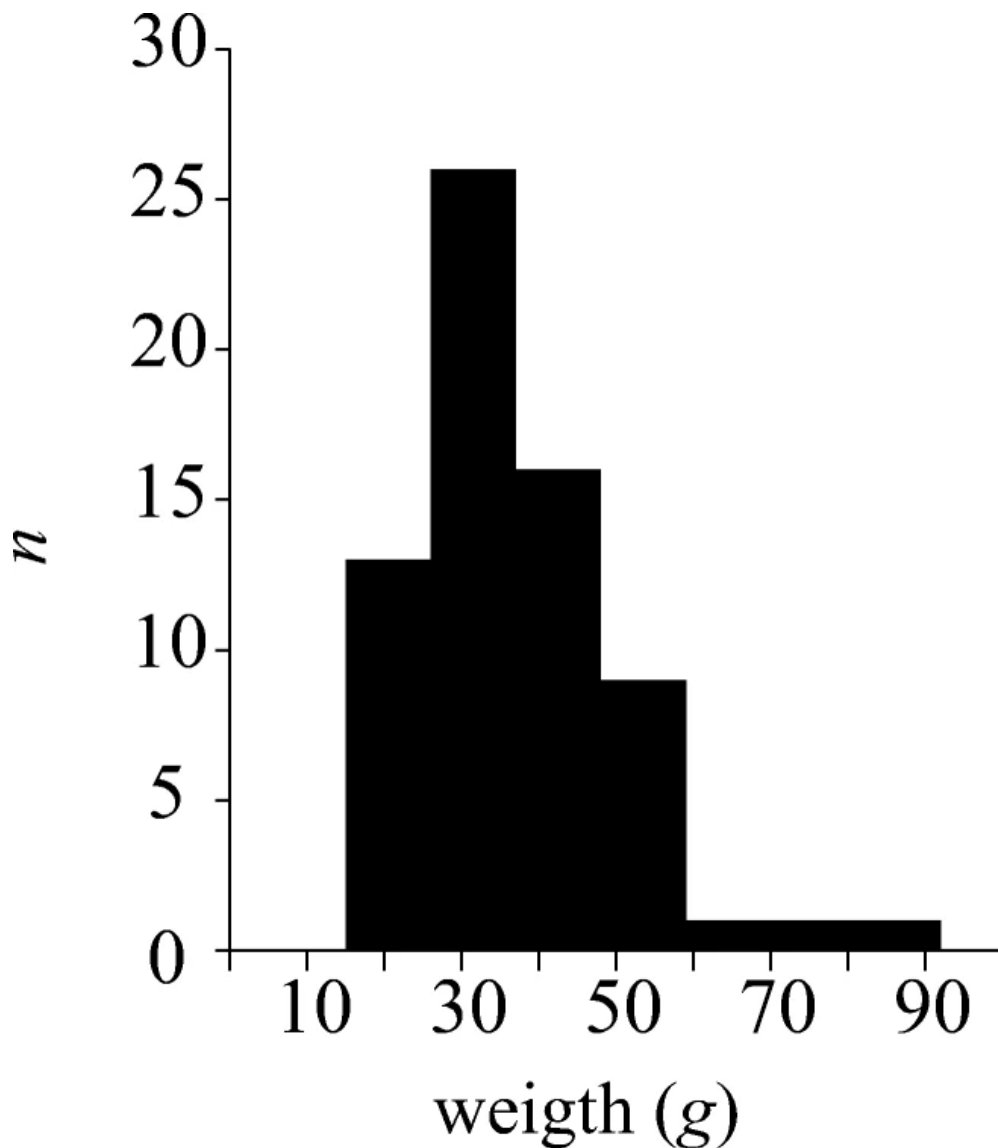


Fig. 6. Histogram of Mutamba spindle whorl weights

Comparative Analysis of MIA Spindle Whorls

Only a few sites in the northern part of South Africa have yielded spindle whorls from thirteenth-century contexts. However, there is great variability in the number of whorls between these sites. Mutamba, with its 187 whorls, is the largest assemblage by number but also one of the most extensively excavated sites. To compensate for the variation in excavation sizes, the density of spindle whorls per volume of excavated soil (m^3) was calculated. This allows for a minimal comparison of the number of spindle whorls between sites—albeit at a gross site level. This number should, however, not be construed as a measurable scale of spinning intensity. Instead, it provides a generalized estimate of the relative degree of spinning activities at the regional level.

Only whorls from well-excavated thirteenth-century contexts are used in this regional comparison. These include the samples from the Soutpansberg sites of Mutamba, Princess

Hill, and Vhunyela (Loubser 1991, pp. 204, 228) and the Shashe-Limpopo Confluence region—Mapungubwe, Skutwater, and Leokwe (Northern Terrace) (Calabrese 2007; Van Ewyk 1987). Where not stated explicitly, volume estimates are calculated from published data using section and plan drawings. For multi-component sites, only those levels associated with thirteenth-century ceramic styles are included.

At Mapungubwe itself, the estimate of the number of spindle whorls from archaeological sites is hampered by unsystematic collection methods in the earlier studies (see Meyer 2000; Nienaber and Hutton 2006). In the 1930s and 1940s, excavators often discarded objects they regarded as mundane or insignificant, and excavations were mainly concentrated in the elite sections of the settlement. Gardner (1963, p. 87), who excavated the site in the 1940s, noted that spindle whorls were “very numerous” at Mapungubwe. The University of Pretoria Museums which house the materials from the early Mapungubwe excavations have 24 whorls on record, all from the elite Hill area. However, haphazard collection strategies of early excavations mean that the total number may have been much higher. This is borne out by findings from the 2003 Mapungubwe Stabilization Project where exposed excavation trenches (mostly those from 1933 to the late 1970s) that had caused erosion of remaining in situ deposits were rehabilitated (Nienaber and Hutton 2006). The old trenches were stabilized with sandbags filled with deposits from the spoil heaps mostly dating from the 1930s. Prior to filling the sandbags, the ex situ deposits were screened to recover material that had been discarded or missed during the earlier excavations. In the process, 29 additional whorls were found (Table 2). The largest number ($n = 15$) was from the “Northern Dump”—the spoil heap formed by the excavations of the high-status area on Mapungubwe Hill (Nienaber and Hutton 2006, p. 28). Whorls were also found on the Hill itself when erosion from the slumped trench walls of “Western Excavation” ($n = 5$) and “Eastern Excavations” ($n = 1$) was cleared prior to sandbagging. In addition, eight fragments were found during the clean-up of JS2 (b), a poorly documented excavation of the 1930s that covered a royal court and approach to the “Western Ascent” to Mapungubwe Hill (Nienaber and Hutton 2006, p. 32–33). The reclamation project also cleaned the exposed reference profile of the K8 excavation on the Southern Terrace—a commoner area below the Hill (Meyer 1998). One whorl was recovered from there as well. Although it is an imperfect sample with limited contextual information, the whorls from the rehabilitation project provide a semblance of spindle whorl spatial distribution at Mapungubwe. Of the 29 whorls recovered from the reclamation project, all but one (from K8) were associated with the high-status Hill and its associated areas. What is more, only two whorls were found from the systematic and detailed excavation of the lower-status residential areas carried out in the 1970s (units F4, H5, and K8) (Meyer 1980, 1998). All of these go some way to confirm Gardner’s (1963, p. 87) comment regarding the *abundance* of spindle whorls on Mapungubwe Hill.

Table 2 Spindle whorls recovered from the Mapungubwe Stabilization Project (Nienaber and Hutton 2006)

Site area	Accession number	Number
Northern Dump	MAP/03/263	15
JS2 (b)	MAP/03/019	8
K8	MAP/03/534	1
GW (Western Excavation; Mapungubwe Hill)	MAP/03/050	4
GE 2 Sections E–F (Eastern Excavation; Mapungubwe Hill)	MAP/03/418	1
Total		29

The only other published sites in the Mapungubwe heartland which contained spindle whorls are Skutwater and Leokwe (Northern Terrace). Both of these are regarded as lower-status (commoner) settlements in the local political hierarchy (Calabrese 2007, p. 215; Van Ewyk 1987, pp. 160–161). Only two spindle whorls were found at each, despite rather extensive excavations at both sites (Calabrese 2007, p. 137; Van Ewyk 1987, p. 33). At Leokwe (Northern Terrace), excavations exposed a household, a large central midden, and a kraal. Whorls were only recovered from the central midden area (Calabrese 2007, p. 146). At Skutwater, Van Ewyk's (1987) excavations covered an immense area of 261 m² and exposed a household area that included wall rubble and floors, courtyard spaces, domestic middens, and grain bins. Other excavated features at the site include a large central kraal and several burials. The extent and coverage of excavations at Leokwe and Skutwater provide a fairly representative sample of the range of activities that took place at these two Mapungubwe commoner settlements. Spinning at these sites was clearly a small-scale endeavor.

Excavations at the northern Soutpansberg sites of Princess Hill and Vhunyela were less extensive but covered equally diverse contexts. At Princess Hill, Loubser (1991) excavated a 9 m² trench over a series of fragmented house floors in the higher-status summit area. From this excavation, 11 spindle whorls were found including four on the floor of a burnt-down residential structure. At Vhunyela, Loubser (1991) also excavated two trenches of 3 m × 3 m and 1 m × 8 m. These exposed the remains of a house floor, as well as midden and kraal features. Ten spindle whorls were found in these contexts.

Excavations of spindle whorl-bearing sites therefore covered a wide range of contexts which, in all cases, included households, middens, and kraal areas. Once density is calculated to compensate for different sample sizes, some patterns emerge regarding distribution. Despite the comparatively small-scale excavations, sites in the northern Soutpansberg—Mutamba, Princess Hill, and Vhunyela—contained a significantly large number of spindle whorls per cubic meter (Table 3). This is much higher than the lower-status sites in the Mapungubwe heartland such as Skutwater where, despite an excavated volume of c. 250 m³, only two whorls were found. Similarly, the 15.25 m³ of excavated soil at Leokwe only yielded two whorls. While the haphazard recovery methods from Mapungubwe Hill makes direct comparisons of density impossible, the available data do suggest that, at a minimum, spinning was practiced on a larger scale at Mapungubwe Hill than elsewhere in the immediate surrounding region. In addition, the contrast in the number of whorls between Mapungubwe Hill and the site's lower-status areas suggests a greater concentration of spinning (and likely weaving) in the higher-status zone. The royal wives and/or other members of the king's household were likely involved in this cloth manufacturing activity.

Table 3 Comparative density of spindle whorls per MIA site

Site	Excavated volume (m ³)	Spindle whorls (n)	Whorl/volume
Mutamba	28.8	187	6.5
Princess Hill	1.6	11	6.8
Vhunyela	6.15	10	1.6
Skutwater	250	2	< 0.01
Leokwe Area A	15.25	2	0.1
Mapungubwe K8 (occupation levels 1 and 2)	20.535	2	0.1
Mapungubwe Hill*	N/A	c. 43	N/A

N/A not available

Discussion

The spatial distribution of spindle whorls at archaeological sites, coupled with the natural range of *Gossypium* spp. and other fiber-producing plants, shows that spinning was practiced across a large region in southern Africa during the thirteenth century. It was, however, an activity practiced at varying concentrations and degrees of intensity. Areas like the northern Soutpansberg had very high whorl densities in both the elite and commoner contexts, while in the Limpopo Valley, sites (excluding the elite areas of Mapungubwe) tend to have very low numbers; The few whorls found at the commoner settlements of Skutwater and Leokwe suggest that at least some inhabitants of these communities spun fibers but at a comparatively small-scale, perhaps for limited local use. This level of spinning corresponds to early historical and ethnographic descriptions, whereby households practiced a variety of often overlapping and complementary part-time craft activities (Davison and Harries 1980, p. 179; also see Livingstone and Livingstone 1865; McAdams and Howman 1940; Stayt 1968).

The evidence for the northern Soutpansberg indicates a more intensive level of textile production. Such concentrated cloth production loci are not without precedence. Historically, certain areas of southern Africa, such as the Sabi, Shire, Luangwa, and Zambezi River valleys, were known to have been areas of intensive cotton spinning activity (Davison and Harries 1980; Livingstone and Livingstone 1865; Theal 1901). For example, the sixteenth-century Portuguese explorer Dos Santos noted that “on the banks of these rivers [lower Zambezi area] grow many cotton plants, in plantations which the [locals] sow, cultivate and prune almost in the same way as vines” (Theal 1901, p. 261). A similar situation of intensive cultivation and production seems to have existed in the northern Soutpansberg during the thirteenth century.

The number of whorls at Mutamba also provides some indication of the way spinning was organized at the site level. From the total number of whorls, 63% were from deposits directly associated with household spaces and domestic middens. These include whorls trapped beneath burnt house rubble and on floors. A similar domestic context for whorls is evident at Princess Hill, where Loubser (1991) recovered several in situ whorls on the floor of a burnt-down residential unit. Spindle whorls in middens and kraal areas (e.g., at Mutamba and Leokwe) were likely broken and discarded items. While the depositional context of whorls from other sites is more ambiguous, it is obvious that at Mutamba and Princess Hill, spinning was conducted in household spaces dispersed across the settlement landscape. Given that hand spinning of yarn is a time-consuming process and that a spinner only uses one whorl at a time, it seems that this activity would have likely involved multiple members of each household. Spinning at Mutamba was therefore likely an intensive craft activity practiced in household settings.

Historical accounts of communities regarded as Mapungubwe’s political successors make it clear that while large amounts of cloth were imported and sought after, locally made textiles were highly valued in its own right. For example, Portuguese historian De Barros wrote in the sixteenth century that the Monomotapa king (present-day Zimbabwe) regarded rolls of locally manufactured cloth as the greatest ornaments in his house (Theal 1900, p. 270). Moreover, the king and his wives only wore locally spun and woven cotton cloth (Theal

1900, p. 270; but see Dos Santos in Theal 1901, p. 207, for the use of imported silk by the king):

...and though Benomotapa is king of this country and lord of all, and his wives are dressed in these cloth[e]s, *no cloth of foreign manufacture can touch his person*, but all must be made in the country, through fear that any coming from the hands of strangers might be infected with some evil quality to do him harm... His [Monomotapa's] state does not consist of great pomp, ornaments, or furniture for the service of his person, *for the greatest ornaments in his house are cotton cloths made in the country with much labour*, each of which is about the size of one of our sumpter-cloths and is worth from twenty to fifty cruzados (emphasis added).

Archaeologically, the importance of cloth also finds precedence at the sixteenth-century site of Ingombe Ilede in the Zambezi Valley. Here, burials include local as well as imported cloth in rich displays of funerary goods that also included gold, marine shells, ivory, and glass beads (Fagan et al. 1969, pp. 23, 137). The importance of cloth as a valued commodity finds further elaboration in Dos Santos' writing on the sixteenth-century Monomotapa:

The dress of the King and of his lords is a fine cloth of cotton or silk hanging from the waist to the ankle, and another much larger cloth of the same cotton woven by the [locals], which they call *Machiras*, or of silk, thrown over the shoulders like a cape, with which they cover and muffle themselves, always leaving the end of the cloth on the left side so long that it drags upon the ground, and the more it drags the greater their majesty and dignity (Theal 1901, p. 207).

Dos Santos' (Theal 1901, p. 7) and De Barros' (Theal 1900, p. 270) accounts clearly link local cloth to elite ritual and ceremonial prerogatives. Such entitlements would augment the productive control and explain the concentration of whorls from Mapungubwe Hill as opposed to the non-elite areas at Mapungubwe. Elites were therefore not just passive recipients of cloth as a tribute material but also active producers of a valued commodity—an argument previously made for metallurgy and ritual resources (Calabrese 2000, 2007; Schoeman 2006, pp. 283–285). In addition, recent research on bone tools from Mapungubwe Hill shows that some examples have use-wear patterns consistent with contact with cloth (Antonites et al. 2016, pp. 451, 456). In light of Gardner's comments on the number of whorls on Mapungubwe Hill (and the subsequent recovery of spindle whorls from the reclamation material), the evidence is strong that spinning was part of a range of craft activities, including metallurgy, practiced in the royal court.

The low quantities of spindle whorls at lower-status sites in the Mapungubwe core such as Skutwater and Leokwe (Northern Terrace) indicate that spinning was not restricted to elites, but that it was a small-scale activity in commoner households. Once again, there is a historical precedent from the period immediately succeeding Mapungubwe. Dos Santos (Theal 1901, p. 445), commenting on sixteenth-century southern Africa, states that “the art of weaving ... was not practised by all the clans, but by certain of them who traded with their productions.”

An intensive spinning industry at Mutamba therefore offers a potential explanation for the range of trade goods at the site and the nature of political and economic interactions of the hinterlands with Mapungubwe (Antonites and Ashley 2016). Regionally, the production of spun fiber likely enabled even lower-status hinterland communities like Mutamba to acquire

long-distance goods such as glass beads and marine shell which were frequently limited to elite sites in the core. Hinterlands were a source of natural resources, labor, and consumers—factors that were essential to the political and economic power of Mapungubwe. Therefore, the intensive cloth production at Mutamba reflects concurrent demand for trade goods by Mapungubwe elites as well as the active participation of hinterlands in the regional trade systems.

Conclusion

Cloth production and distribution were central to the regional political economy of thirteenth-century southern Africa. Cloth, together with other resources such as ivory, gold, skins, horns, shells, exotic feathers, and possibly, slaves captives, underpinned the materialization of Mapungubwe's political power, but these were produced and procured through the active participation of hinterland communities in a larger interaction network that included political patronage and trade (Antonites 2012). The strategic environmental, social, and economic niches that hinterland communities occupied meant that they were integral parts of the regional political economy (Antonites 2012; Antonites and Ashley 2016; Denbow et al. 2015; Klehm 2013; Wilmsen et al. 2009). Although they essentially remained agrarian farmers throughout the thirteenth century, local specialisms—like intensive cloth production—incorporated far-flung communities into mosaics of complementary activities (Antonites and Ashley 2016; Kusimba and Kusimba 2018; McIntosh 2005; Sinclair et al. 1993; Sinclair and Hakansson 2000). While imported cloth was bartered and traded together with other exotic goods, locally produced cloth (as opposed to imports) was used by elites to signify status and wealth. The cloth production industry at Mutamba and the nearby sites highlights the dynamic role of hinterland communities in the political economy of the MIA and casts hinterland communities as active participants in regional economies. Investigating the patterns of production and consumption by these seemingly peripheral communities provides a significant contribution to understanding early complex societies in southern Africa and beyond.

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