

## **The Unwound Yarn**

Birth and Development of Textile Tools Between Levant and Egypt

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## **0 Introduction**

The idea for this work arose from the observation of the extraordinary state of conservation of Egyptian materials linked to textile production and the fact that very few studies have been devoted to these remains. Interestingly, areas possessing climates that are less conducive to the preservation of organic materials have been the subject of extensive and far-reaching studies on the subject of textile production: these studies today form the methodological basis for the field.

One of the great benefits of working on textile-related items is the extraordinary homogeneity that has characterised these tools for millennia, across different areas and contexts. Despite major technological differences, mainly as pertains to looms, the basic instruments of spinning and weaving have remained unchanged until the present in certain parts of the world, and allow for interesting ethnographic comparisons to be made. With these assumptions in mind, the decision was made to consider two archaeological areas with very different traditions of textile studies in order to integrate, where possible, the various available data.

The present work presents a study of a group of Egyptian artifacts held at the Museo Egizio in Turin (henceforth Museo Egizio), in an attempt to integrate them into the general discussion of the spinning and weaving techniques of Ancient Egypt. The results of this study are compared with material from the Levant, an area that is similar to Egypt in many respects, but with the advantage of a longer and more intensive tradition of textile studies. The order of the following chapters develops from a general description of the state of ancient Near Eastern textile-production studies, surveys the archaeological sources available from both Egypt and the Levant, and ends with an assessment of the material housed at the Museo Egizio.

The great advantage of studying the Egyptian remains is undoubtedly the preservation of organic materials, which are difficult to recover from most archaeological contexts. In fact, outside of Egypt, it is extremely rare to find preserved textiles; although textile imprints on terracotta or mineralised fragments adhered to metal objects may be recovered in limited instances. In the same way, wooden spindles and spindle whorls, looms, fibres, threads and balls of yarn are rarely preserved, which sometimes creates difficulty in identifying the function of particular objects. This is true in the case of spindle whorls, which are sometimes confused with

beads, and the class of bone and ivory rods used in the Levant throughout the Late Bronze and Iron Ages whose function as spindles, distaffs or pins is still under discussion.

The study of well-preserved Egyptian materials may aid in assessing the function of certain of these objects – some technical differences across different geographic areas being recognised – and may grant new insights upon the designation of certain objects as belonging to the textile sphere. The chronological context chosen for this study is wide; it includes Neolithic and Chalcolithic periods, the entire Bronze Age, and the first half of the first millennium, taking the onset of Persian domination in the Levant as its end point, as the Persian period saw the introduction of different materials and weaving techniques into the areas under discussion.

It was decided to limit research to the archaeological sphere, albeit with an awareness of the amount of information contained in textual sources; it would not have been possible, however, to carry out an in-depth analysis of the written record related to textile production for both Egypt and the Levant over such a chronologically vast period. It was also not possible to offer a reconstruction of the social and symbolic situation of textile production in this work, nor discuss the questions of domestic or palatial production and the use of female or male labour.

The methodology used in this work closely follows that highlighted in recent studies by the Copenhagen Center of Textile Research (CTR), wherein the study of archaeological and philological material is combined with experimental research. Due to this recent research it is now possible to approximate with confidence the quality of thread used, and thus, the type of fabric produced, based solely on the spindle whorls and loom weights recovered from various archaeological sites. In addition, the systematic study of artefacts and their re-creation in practical experiments has made it possible to debunk certain long-held assumptions (e.g. that the minimum weight of a spindle whorl is 4 g), these experiments have also better defined the role of certain classes of objects whose relation to textile production was in doubt.

The experimental-archaeological research approach of the CTR, by its transversal nature and by its coverage of textile production across the Mediterranean area and Northern Europe, provides the methodological basis on which the study under consideration can be set. The materials analysed by the CTR (i.e. primarily wool, terracotta and stone), however, limit the application of their study on the objects under examination, most of them made of flax and wood (as they are almost exclusively preserved in Egypt) and, thus, certain parameters provided by the CTR cannot be applied to all the materials under examination.

In ancient societies, textiles were extremely important, not just as necessary objects for dressing and furnishing, but also as markers of social distinction. Colored fabrics woven with decorative motifs or enriched with

precious materials made it possible to distinguish the importance of a person at a glance, along with other status symbols such as jewelry. The demand for precious fabrics and rare materials was, therefore, one of the first drivers of long-range contacts and trade, and with time the textiles themselves became a currency of exchange. The finest fabrics were worn by kings, queens and nobles; they were offered as gifts to the gods and used to pay the tribute demanded by the most powerful sovereigns. Individuals of the lower classes also needed to supply themselves with textiles, often through household production on the level of their own family.

Therefore, in the past an incalculable amount of fabric was produced for items such as garments, curtains, bedding and shrouds for funeral use, but of this massive quantity almost nothing has survived. The fragile organic fibres from which textiles were composed tend to disintegrate with time, except in rare circumstances such as very dry environments, glacial ice, charred contexts, or total submersion in anaerobic environments; some textile fragments might be preserved in the form of clay imprints or mineralised on metals.

Of all the wealth once represented by these materials, today only tiny fragments remain, often too decomposed to allow an interpretation. The tools with which these fabrics were manufactured (especially spindle whorls, needles and loom weights) have proven to be more durable, but a dearth of archaeological finds and the difficulty of interpreting many of the tools used in textile manufacture have long undermined our knowledge of this once thriving and widespread activity.

The first textile studies of the ancient Near East and Egypt began with the publication of artefacts used in weaving by W.M. Flinders Petrie (1890; 1917). This was carried forward by C.H. Johl (1924), A. Braulik (1900) and especially by G. Crowfoot (1931; 1937) works, which further defined the methods and instrumentation in use in ancient times, drawing from both archaeological and ethnographic data. After this wave of initial studies, only a few new elements were added to the discussion, and otherwise materials related to textile production were often relegated to a subordinate position in site reports, or even left unpublished.

The situation began to change in the early '90s due to E. Barber's study *Prehistoric Textiles*, which not only reconsidered the archaeological data but also combined it with interesting textual and social observations. During the last quarter century a large-scale re-evaluation of weaving studies has been carried out and several substantial publications have allowed great progress in the analysis of ancient textiles. The work of L. Peyronel (2004) that treats Syria and the Levant, that of G. Vogelsang-Eastwood (2001) covering Egypt, and C. Breniquet's (2008) book dealing with the evidence from Mesopotamia deserve honourable mentions. In spite of the proliferation of these comprehensive works and of numerous shorter studies, analyses of ancient Near Eastern and Egyptian weaving lag behind

those of other areas of the Mediterranean, particularly behind those of the Aegean and Northern Europe, for which several large study centres have developed (e.g. The Centre for Textile Research of Copenhagen and The Textile Research Centre of Leiden).

Several articles drawing on Mesopotamian and Levantine documents have been published in recent years and constitute a fundamental corpus for reconstructing the operating chain and the social organisation via which fabrics were made. We are lucky to possess hundreds of cuneiform texts dealing with textiles, including Sumerian lists of spinners and weavers employed in palatial and temple institutions, Old Assyrian texts from the merchant's *karum* at Kültepe, documents regarding textile production from the Syrian sites of Mari and Ebla, as well as the mention of precious textiles in the Amarna archive.<sup>1</sup> Textual information from the Southern Levant is comparatively meagre, except for certain hints in a text from Hazor (Horowitz, Wasserman 2004, 335-40).

Egypt has preserved an immense quantity of textile-related archaeological material and a large number of documents of all kinds, but the information these documents provide for textile production in this area is not remotely comparable to that from the ancient Near East. There are very few Egyptian texts that directly refer to textile production, and even fewer that list workers related to the production of fabric. Instead, textile workers appear frequently in models and funerary representations. When compared with the long lists of named people involved in textile production in the Sumerian sources, for example, it seems unlikely that a similar level of detail will ever be known regarding the situation in ancient Egypt; however, the archaeological evidence preserved from Egypt may serve to fill in the gaps that remain, particularly as pertains to our understanding of the actual technology of textile manufacture.

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<sup>1</sup> A wide information on these sources is provided by Waetzold 1972 (Neo-Sumerian texts), Pasquali 1997 (Ebla), Durand 2009 (Mari) and Matoian, Vita 2009 (Ugarit). Moreover, an in-depth discussion on lexical data can be found in the volume *Textile Terminologies* edited by C. Michel and M.-L. Nosch. For Egypt see Kemp, Vogelsang-Eastwood 2001.