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The materiality of textiles and textile tools in the Late Bronze Age Eastern Mediterranean

Abstract

This paper examines the materiality of Late Bronze Age Eastern Mediterranean (including the Aegean) textiles, fibres and textile tools and aims to explore the relationship between people and their cloth and clothing while considering the diverse material properties of each garment and tool. It focuses on elite clothes and textiles. The article highlights the agency of matter and how the assemblage constituted by the individual elements of Late Bronze Age garments (natural fibres, imported or local dyes, colourful embellishments of beads, precious metals, and threads) acted on its environment as well as on its wearer. It also focuses on the meaning and information encoded both in garments and its constitutive parts and in textile tools. Clothes and textiles were *actants* who not only communicated to an audience, but also had the power to transfer and give energy, vitality, force, gender, status and identity to their wearer.

Keywords: Materiality, Late Bronze Age, textiles, textile tools, thing-power, Eastern Mediterranean

Introduction

This paper examines the materiality of Eastern Mediterranean textiles, including the Aegean, during the Late Bronze Age, a period of international interconnection in the area characterized by the exchange of goods, ideas and people. “Gifts” between the Aegean, Cyprus, Egypt, the Levantine Kingdoms, and the Mesopotamian empires further west were used to initiate trade or diplomatic negotiations and consisted of precious raw or finely crafted materials. Cloth and clothing were part of this elite exchange system and were used as gifts, commodities, and means of symbolic communication, which was understood by all parties involved. This article aims to explore the relationship between people and their cloth and clothing while taking into account the diverse properties of each textile fibre and textile tools. It will also investigate the influence of textiles on human behaviour and how they contributed to create a socially charged and ranked material culture. Textiles and clothing, as noted by J. Schneider, constitute

the widest imaginable category of material culture (Schneider 2006, 203). Clothes are a transforming medium that intensifies sociality in rituals but also in everyday life and can be seen as a second skin (Turner 1980/1993), which “by virtue of its physical proximity to the body, articulates self with other” (Schneider 2006, 204). Dress mediated socio-cultural relationships (Cifarelli 2019, 5) and in the Eastern Mediterranean the medium simultaneously displayed, shaped and transformed gender, ethnicity, divine status, occupation, and social status (Howes and Classen 2014, 66; Cifarelli 2019). Clothes and textiles were used to alter, obscure, transform and embellish the body and were able to create shifting identities and self-representations.

Textiles and cloth materials

The question of materiality in archaeology has been heavily debated and authors have argued over the meaning of the term. For some, it is what makes things ‘thingly’ (Ingold 2007, 36), and it needs to focus on the

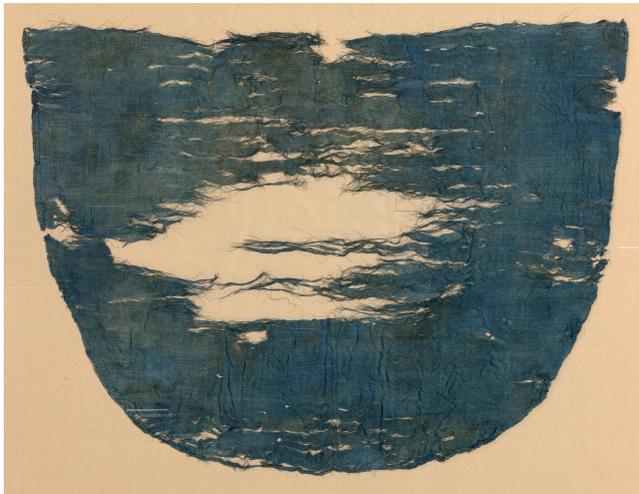


Fig. 1: Blue Kerchief from Tutankhamun's Embalming Cache (KV 54), MET 09.184.217; L. 40 cm, W. 53 cm (© The Metropolitan Museum of Art)

properties of the materials, while for others, it must engage in the dialectic of people and things (Meskell 2004), while understanding the properties of the material in terms of social meaning and significance (Tilley 2007, 17–18). The term materiality relates to the dynamic relation of humans and artefacts, and conveys some sort of process (Knappett 2014, 4702). Although C. Knappett has argued that it makes little sense to study in detail the material properties of artefacts because they are secondary to the role of the objects in social relations (Knappett 2007, 20), I argue that for textiles, the individualities of their quality, colour, feel, and finish was what determined their social role, and how they “collide and labour together in relationship” (Attala and Steel 2019, 1). In this sense, studying the materiality of textiles and clothes is akin to understanding how different fibres, quality of raw materials (fine to coarse), types of weave, dyes (to enhance or highlight the finished product), and decorations (beads, embroideries and bracteates) were perceived by and acted on their users and audience. It also relates to understanding how they were used, valued, and how they were utilized in social and political strategies.

A vast array of textiles is documented in the eastern Mediterranean Late Bronze Age. They had distinctive qualities, textures, colours, and decorations. The materiality of finished textiles depended on the selection of raw fibres and their treatment, as well as on the tools that were used to spin and weave, and on the skill of the workers. Throughout this article, selected examples of textiles or garments will be

presented, but not all garments nor textiles will be specifically surveyed.

Different raw materials are attested: linen, wool and maybe Sea-silk/byssus (Burke 2012, 175–176; Burke and Chapin 2016, 25–26; Sorgia and Carannante 2017, 34, 37–38), hemp or ramie/nettle (Breniquet 2008, 98–101), and silk, as demonstrated by the silk cocoon found in the west house in Thera (Panagiotakopulu et al. 1997, 421). I have described them elsewhere (Sauvage 2022), but I will propose a short summary. Each fibre differs in term of colour, brightness, light reflection, and coarseness. Linen as well as wool can produce very fine and lightweight or coarser fabrics. Both linen and wool could have been white and thus were thought of as bright and shiny. If byssus and silk were already exploited, they would also both have been thought of as shiny and bright because of their natural light colour and embedded light reflective properties. The hue of natural fibres, from white/beige to brown and dark/black for wool (for instance Thavapalan et al. 2016, 200) could have been altered with natural dyes. Although it is easier to dye wool (or silk), linen dyed in red, blue, yellow and green is also attested as demonstrated by the kerchief MMA 09.184.217 from Tutankhamun's embalming cache, fig. 1 (Pfister 1937, 209; Germer 1992, 68–70; Barber 1991, 227; Herslund 2010, 72). Dying fibres in tones of red, yellow, blue and purple or any combination of these colours would also have conferred brightness, lustrousness and vividness to garments (Sauvage 2022, 46, 49).

Although textile tools (spindle whorls, spindles, loom-weights, distaffs, and beaters) were often manufactured locally (Sauvage 2013, 192, fig. 11.2 for Louvre 81 AO 918) and were made of different materials (clay, stone, metal, ivory, bone, wood, reed; Sauvage 2013, 190–196), similar categories of objects are found throughout the Eastern Mediterranean, for instance discoid loom weights in the Aegean (Cutler 2021), at Enkomi in Cyprus (Karageorghis 2011, 7a1–32) and in the Levant at Ugarit (Schaeffer 1949, fig. 96.5, 7–11), beaters (Smith 2013), distaffs (Sauvage 2014) and of course spindle-whorls. This article will focus more particularly on similar weight-categories of spindle-whorls. Very light, light, medium and heavy groups in similar weight-range existed both at Ugarit and at Enkomi and therefore have to be considered quite common in the Late Bronze Age Eastern Mediterranean (Sauvage 2013, 190–196, fig. 11.7). These were used to manufacture threads of different thickness. For instance, small whorls with a light 4 g weight were used to manufacture a very fine and delicate thread. The high quality and delicacy of the thread would have matched the smoothness



Fig. 2: Bone shaft (L. 23.6 cm) from Megiddo tomb 877B1, after Guy 1938, pl. 95.50 (Image: Institute for the Study of Ancient Cultures of the University of Chicago)

of the carefully finished whorls (Sauvage 2013, 203, fig. 11.7). In this case, there is a correlation between the value of the whorl material, the time invested in its manufacture and the value of its output. For instance, well-finished bone and ivory whorls were used for the manufacture of fine threads because the density of the material makes them lighter than stone or metal whorls of similar or even lesser diameter. In the archaeological spindle-whorl corpora from Ugarit and Enkomi, all of the lighter whorls are manufactured from bone/ivory and all are highly polished. These and all ivory whorls were found in 'prestigious' contexts in Ugarit in "dépôt 43", tomb III at Minet el-Beida, the royal palace and the maison aux albâtres (Gachet-Bizollon 2007; Sauvage 2013, 202–203 and note 43) and at Enkomi in tombs, and in Area I (Sauvage and Smith 2016). These prestigious contexts and the time necessarily spent in wool preparation and spinning process to use these light whorls points to their exclusive use for high quality elite, or even royal production. Ivory was valuable because it came from large and dangerous animals (hippos and elephants). It had a shiny polish, and because of its smoothness and hues was thought of as 'bright' (Warburton 2019, 13). Similarly, in the *Odyssey* (4.133–136), Helen of Troy uses a golden spindle to spin purple wool, likely dyed with the rare and valuable murex dye (*Odyssey* 4.133–36). Therefore, the quality of the finished garment/textile could have been directly related to the materiality and value of the textile tools used (Sauvage 2022, 36–46). Like Helen, second millennium queens carried out fine and intricate textile production. In the Mari text ARMT 10.17, the queen of Mari Šibtu informs her husband king Zimri-Lim of the garments that she manufactured for him: "Further, my lord can now set on his shoulders the garments and shirt that I myself have made" (Michel 2020, 136; ARMT 10.17: Durand 2000, number 1129, translated by Sasson 2015, 326, 6.5.bii.1a). Thus, although large workshops existed in 2nd millennium BCE Mari (Michel 2020), the high-quality textile production related to a tradition of expert practice intertwined in the daily lives of elite women (Hendon 2015).

Elite textile tools also seem to have been charged with mnemonic meaning. For instance, finely crafted ivory spindles and distaffs decorated with geometric

patterns at their extremities are reminiscent of textile borders that these tools could have helped manufacture (Sauvage 2022). These decorations might have acted as a tactile reminder of the finished product, or its border (fig. 2) (Sauvage 2022), but it is also possible that the mnemonic materiality of the tools influenced the production of the finished textile. Extremely fine and precious, or "royal quality" textiles in Ugarit and in Egypt (Vita 2010, 325, note 11; Herslund 2010, 72–73) would have been produced in elite households or palatial settings, on smooth and glimmering ivory whorls and spindles, or even on precious metal tools (*Odyssey* 4.133–36). The materiality of the crafting process therefore related to social identity of both the wearer and craftswomen as there is a correlation between the production sphere, the tool used and its consumption level. High quality fabrics meant for the higher sphere of society, were at least partially produced (spun, maybe woven, and embellished) by the highest-ranking women in Cyprus and the Near East.

Colours, treatments and decorations

White garments were precious as they were considered bright, radiant, shiny and even pure (Feder 2014, 90) in Egypt (Morgan 2011, 4; Blom-Böer and Warburton 2019, 234; Schenkel 2019, 37–38), Ugarit (*Epic of Kirta* – 1:2,1 and 1:3, 41–45, Coogan and Smith 2012, 77), Hatti (Dardeniz 2019, 100–101), and Ebla (Pasquali 2005, 166). In Egypt, white (linen) garments were a sign of social stature (Vogelsang-Eastwood 2000, 280). It might also have been the case in the Near East because white wool was a royal commodity during the Ur III dynasty, in the 22nd to 21st centuries BCE (Steinkeller 1995; Breniquet 2014, 65).

Coloured textiles and garments

Coloured and multi-coloured wools and garments are well attested in the Late Bronze Age Eastern Mediterranean with, for instance, the blue kerchief of King Tutankhamun (MET 09.184.217, fig. 1), his embroidered tunic (Pfister 1937, pl. LII; Barber 1991, figs. 5.10 and 5.11), the garments of the Asiatic leaders from the mortuary temple of Ramses III at Medinet Habu (Aruz et al. 2008, catalogue 168a–d, 267–269) (fig. 3), and the garments described in Hittite and Homeric texts (Number 28B, Beckman 1996, 153–154; Shelmerdine 1998, 102). Purple garments were some of the most precious commodities (Dardeniz 2019, 102, note 20), while textiles dyed red and blue were favoured in the Hittite world (Dardeniz 2019, 102) and in the Levant maybe because combining both colours might have created the visual illusion of a purplish



effect (Thavapalan 2018b, 30). According to Young, colours can be agentive and capable of affecting events and transformations (Young 2006, 178). They “can be harnessed to accomplish work that no other quality of things can, especially in the hands of knowledgeable practitioners” (Young 2006, 173). In the Near East, colours raise questions about “materiality, substances, and inner properties of objects” (Rendu-Loisel 2019, 190). Thavapalan has suggested that textiles were dyed in a manner that evoked the vivid hue and lustre of precious materials (Thavapalan 2018a, 3). For instance, “purple” wool evoked lapis-lazuli as the typical shades obtained from murex-dye could range from deep red, blue and purple, and would have had characteristics akin to the vivid hue and brightness of the stone (Thavapalan 2018a, 8, note 26). Purple-dyed textiles were connected to royalty and divinity (Marín-Aguilera et al. 2018, 137–140; Sauvage 2022, 49–50) as attested by the evidence from the royal tomb at Qatna, Syria (James et al. 2009; Baccelli 2012), the Submycenaean to Protogeometric tombs at Stamna, Greece (Kolonas et al. 2017), the possible ‘royal’ production at Knossos (Burke 2010, 79; Marín-Aguilera et al. 2018, 140. See also tablet L(7) 474, Ventris and Chadwick 1973, 321, n° 224; Reese 1987, 204; Melena, 2019), and at the royal harbour of Minet el-Beida (Schaeffer 1951, 188; Sauvage 2012, 155; Pardee

forthcoming, chapter 43). The prime importance of shellfish purple-dye might have been due to its rarity, the number of molluscs required to dye fibres (Burke 2010, 36; Marzano 2013, 157–158), and the colourfast properties of the dye, which would have remained bright (Marín-Aguilera et al. 2018, 145). The exotic, distant underwater origin of the substance, and control by the royal spheres of the Eastern Mediterranean would have contributed to its prestige, enabling users to establish strict hierarchies and boundaries embedded in a social understanding of objectified ranks. Moreover, if colour evoked precious stones, then garments entirely dyed purple, would have been akin to wearing an outer skin of lapis lazuli. Colours are linked to radiance and were, as white was, awe-inspiring (Rendu-Loisel 2019, 190). Similarly, coloured threads or coloured embellishments on garments (beads, borders, tassels, etc.) could have been shiny, light-reflective and would have produced a jewellery-like effect on the worn garment.

Shine and oil treatment

Elite garments could also be treated with oil, fat or perfumed oils, possibly enhancing the bright, radiant and shiny properties of textiles. In Homeric epics, ‘shiny’/‘gleaming’ and ‘fragrant’ textiles can be made of both linen and wool (Shelmerdine 1998, 99). But only Helen’s robe is both shiny and fragrant (*Iliad* 3.141, 385, 419; Shelmerdine 1998, 99). According to Van Damme, it is possible that Helen’s garment might have been made of silk (Van Damme 2012, 166). When the clothes are fragrant, the terms ‘nectar’ and ‘ambrosia’ which normally refer to the food and drink of the gods (or to perfumed oil) are used (Shelmerdine 1998, 99). Until modern times, oil could be used on linen to give it a glossy finish (Lorimer 1950, 371–372). Linear B texts mention the treatment of linen with oil (Fr1225, Shelmerdine 1998, 103) and a text from Mari mentions that sesame oil is making cloth shine (Durand 1983, 146–147, number 131, note 12). Experimental archaeology also confirms the shine given to garments treated with oil, and their fragrance when using oils perfumed with rose, sage, or herbs (Shelmerdine 1998, 101, 103). Robkin notes that the application of olive oil on fine to medium-weight linen cloth will make it transparent (Robkin 1981, 213). From Mesopotamian sources dated to the first millennium BCE, we learn that alkali and oil were used together to bleach linen (Nbn 502; Quillien 2014, 285, note 102) and create a kind of soap. In this case, the use of oil in the bleaching process would make linen whiter, thus shinier, but it may not have given it a shine per se, according to our modern western definition. In Uruk, linen washers



Fig. 3: New Kingdom Polychrome faience tiles: a – Syrian Leader (left, MFA Boston acc. 03.1573); b – Amorite leader (right, MFA Boston acc. 03.1571) and their colourful garments, Reign of Ramses III; Medinet Habu (Images: Boston Museum of Fine Arts)



Fig. 4: Textiles decorated with beads and bracteates from the tomb of King Tutankhamun, P0105 and P0106 (Image: © Griffith Institute, University of Oxford)

received aromatics such as juniper, bdellium, myrrh and hemp, which could have been used to improve the smell (Zawadzki 2006, 65–66, text BM 83647) or perfume the clothes as perfume was part of the god's radiance in Babylonian religion (Farber 1993–1997; Jursa 2009, 163–164; Payne 2007, 93; Quillien 2014, 286). Although in modern times wool is not treated with oil, Shelmerdine notes a reference to the fact that oil could restore suppleness to wool after washing (Shelmerdine 1998, 101). It is also worth mentioning that Viking wool sails most likely were treated with fat and oil to make them more efficient, that is more airtight (Cooke et al. 2002, 209). Mycenaean documents seem to show that wool was also treated with oil as it was delivered to textile centres (Shelmerdine 1998, 103, note 29). In KN Xe 7711, *Etawoneus*, a 'finisher' of textiles, is receiving wool that might have been treated with oil so that he can finish its final decoration (Shelmerdine 1998, 103, note 31). Shelmerdine thinks that the Bronze Age practice of making cloth shiny and

fragrant with oils "played a distorted and specialised role in Homer" and was a romanticised fact of a Late Bronze Age practice (Shelmerdine 1998, 104).

Embellishments

Fringes and tassels were made of coloured fibres, shiny metals (Gaspa 2014, 232; Iliad II.530) or beads of various precious materials (Vogelsang-Eastwood 1999, 57) (figs. 4 and 8). Threads of silver or gold would have created shimmering effects, woven (Gleba 2008, 68) or embroidered (at Mari for instance, Durand 1997, 271–278, nos. 133–139; Gaspa 2014, 239, note 81) on trims (Hittite Song of Kumarbi, §25; Hoffner 1998, 45) or throughout the whole garment (Aaron's ephod: Exodus 39.3; Gleba 2008, 61). Colourful threads forming patterns and motifs could also be produced with laid-in threads (worked on the loom), as was the case for the hieroglyphs decorating a tunic from king Tutankhamun (Barber 1991, 154, fig. 5.8) and as seen on fragments from the tomb of Thutmose IV



(Barber 1991, colour plate 1, number 46529). Tapestry woven decorations are attested both by archaeological examples from the tomb of king Tutankhamun, the tomb of Kha and Merit (Schiaparelli 1927, figs. 114–116) and by bone/ivory beaters found throughout the eastern Mediterranean (Smith 2013). Embroideries were likely a rare luxury, which required special skills as well as time. All the examples that are known to us either come from royal contexts or from religious contexts. They might have been done by different workers, adding another step in the production whereas laid-in threads and tapestry woven patterns were directly worked on the loom. In the tomb of king Tutankhamun, two tunics (Carter 367j – JE 62626 and Carter 44t) and some fragments are decorated with true embroideries (Barber 1991, 159–162). On the adolescent tunic (Carter 367j – JE 62626), embroideries have been done on panels that were sewn onto the fabric (Barber 1991, 161; Vogelsang-Eastwood 2016b, 53–55). According to Elizabeth Barber, it is possible that the embroideries were made by Syrian workers in Egypt as the collar has a panel with the Egyptian name of the pharaoh, and the bottom has a band divided into panels in the so-called international style (Barber 1991, 161–162). Gilian Vogelsang-Eastwood proposes that this tunic was a diplomatic present from the Mitannian court in northern Syria (Vogelsang-Eastwood 1999, 84; Vogelsang-Eastwood 2016b, 55). The other fragments have motifs resembling later Maltese crosses (Child's tunic, Carter 44t), a Nekhbet vulture (in chain stitches with rolled up cloth to create volume – Carter 101p – JE 62339), "wings" and a leopard skin pattern (Pfister 1937, 214–217, pl. 53a 54E; Barber 1991, 162; Vogelsang-Eastwood 2016b, 52–53). The smaller fragment also has rolled-up cloth waving across the surface forming an unidentified motif (Barber 1991, 162). Small embroidery fragments have also survived from the first millennium BCE royal tombs at Nimrud (Crowfoot 1995, 113), and a 6th century BCE text mentions the garment of a god made of red wool and decorated with a lion pattern (Quillien 2014, 285; text Cyr 232 Strassmaier 1880). Vogelstand-Eastwood notes that pins and needles used for stitching, sewing and embroidery could have been made from plants such as the 'Jerusalem Thorn' (*Paliurus spina-christi*), but were also made of bronze and silver and small fish bones for the finer examples (Vogelsang-Eastwood 2016a, 31). These needles were stored in fine tubes made of reeds, bird bones or papyrus, as demonstrated by the two examples from the tomb of Kha and Merit at Deir el-Medina (TT8). One is made of papyrus rods held by a small rope and contained two needles and a bronze linen knife, while the other is made of papyrus

stems and contained four needles (Museo Egizio di Torino nos. 319–320; Schiaparelli 1927, figs. 78–79, 105; Spinazzi-Lucchesi 2018, 118). Another example is preserved in the Manchester Museum collection (Manchester Museum 567; Vogelsang-Eastwood 1994, 36, fig. 55). Bronze needles are attested at el-Amarna (Egypt), demonstrating that sewing for hems (Kemp and Vogelsang-Eastwood 2001, 180–185, fig. 6.14, table 6.5) and maybe embroidery was practised in the royal capital. In particular, one needle (Petrie Museum, University College 24277), with two eyes arranged at right angles, might have been used to create elaborate embroideries, sewing two threads at once (Petrie 1917, pl. LXV, number 87, 53; Freed et al. 1999, number 153, 251; Kemp and Vogelsang-Eastwood 2001, 185). Some bronze needles were found in contexts associated with textiles tools, as was the case in Hazor where one was found with a spindle-whorl (Spinazzi-Lucchesi 2018, 44). Some form of thimbles for sewing or maybe embroidery are also known in ancient Egypt, as attested by the Ramesside stone example from Lisht preserved at the Metropolitan Museum of Art (number 11.151.634; <https://www.metmuseum.org/art/collection/search/544712>; Vogelsang-Eastwood 1994, 36, fig. 57).



Fig. 5: Detail of the Megiddo plaque with the spotted garments of the king, and priestess (Image: courtesy of the Institute for the Study of Ancient Cultures of the University of Chicago)

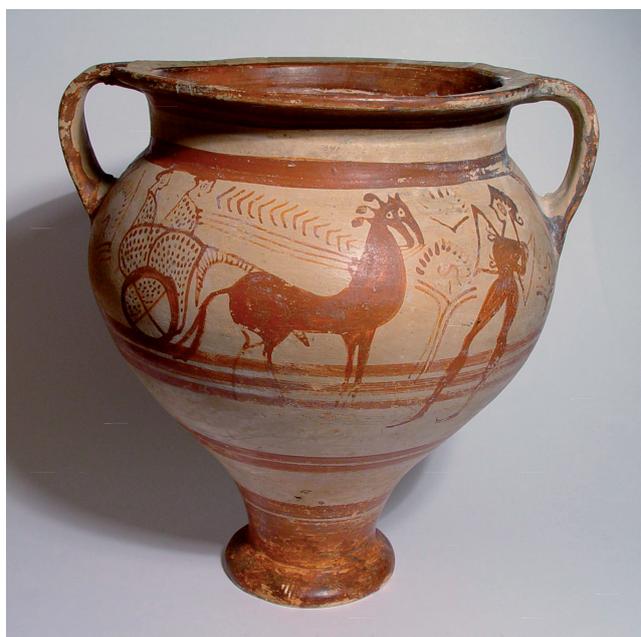


Fig. 6: Mycenaean krater from Enkomi (Cyprus), LH IIIA2; British Museum 1897,0401.929 (Image: © The Trustees of the British Museum)

Precious metals and clothing

Gold bracteates are well attested in the second millennium BCE, as exemplified by textiles found in the tomb of King Tutankhamun (fig. 4) (Carter 1923, 153, 156, 247; Barber 1991, figs. 5.10 and 5.11; Vogelsang-Eastwood 2016b), by the 54 rosettes found in the Aegina Treasure (British Museum 1892,0520.18–71; Aruz et al. 2008, catalogue 61, 107), by the bracteates from the Aegean (Konstantinidi-Syvridi 2014, 144–145), by the rosettes from Tell el-Ajjul and Ialysus, and by golden discs found in the royal tombs of Ebla (Pinnock et al. 1995, 483, nos. 403–404) and Mari (Parrot 1959, 98, fig. 71; Maxwell-Hyslop 1971, 87, fig. 65c; Thomas 2014, 82). They can either be simple discs (Tutankhamun), tiny domes (Tutankhamun), discs with concentric circles in relief (Ebla) or have more complex shapes such as rosettes/flowers (Ialysus, Tell el-Ajjul), five-pronged stars (Tutankhamun, statue of Aanen), or leopard heads (Tutankhamun). It is tempting to identify garments decorated with bracteates on the Megiddo plaque with the spotted tunic worn by the king, as well as the spotted sleeves of the priestess facing him (fig. 5; Sauvage 2022). Additionally, the spotted dresses depicted on Mycenaean pictorial vases (fig. 6), the Amorite terracotta representations from Mari (fig. 7; Thomas 2014, 82–83, figs. 4.3 and 4.4), and the leopard skin from the statue of Aanen, the second priest of Amun during the reign of Amenhotep

III (Museo Egizio di Torino, inv. 1377), might also represent garments decorated with bracteates. Kingly garments decorated with rosettes are represented on Assyrian reliefs such as A7359 from the reign of Sargon II at ISAC, and on the queen's garment in the garden's drinking scene from the palace of Ashurbanipal at Nineveh. According to Thomas, in the case of Mari, this type of garment might have been made for the coronation (*taddiâtum* garment; Durand 2009, 112) and could correspond to the dress worn on the 'investiture painting' of Mari, even if no ornaments other than festoons are visible (Thomas 2014, 82). Archaeological evidence from the Aegean shows that gold rosette bracteates become popular in the 15th and 14th century BCE in the Argolid and Messenia (Konstantinidi-Syvridi 2014, 144) which is the place of manufacture of most of the Mycenaean pictorial vases, especially those with representations of spotted tunics (see fig. 6). The spotted tunics of the Mycenaean chariot driver and/or rider have been paralleled with the ox-hide tunics depicted on the Amarna Papyrus EA 74100 preserved at the British Museum, and therefore identified as leather tunics, probably trimmed with metal (Schofield and Parkinson 1995, 241).

It should be noted that Littauer and Crouwel proposed that imitations of spotted hides could be made of patterned or decorated cloth (Littauer and Crouwel 2002, 540). In Egypt gold bracteates were sometimes used to suggest or imitate animal skins or hides, as in



Fig. 7: Fragment of a terracotta figurine from Mari; H. 5.2 cm; Musée du Louvre, département des antiquités orientales, inv. AO 18421 (Image: musée du Louvre, département des Antiquités orientales / Caroline Sauvage)



the case of the leopard skin from the statue of Aanen mentioned above, or as seen on fragments from the tomb of King Tutankhamun. It is therefore possible that bracteates were similarly used in the Mycenaean world, and that spotted tunics there, were similar to the Levantine and Egyptian tunics decorated with sewn-in bracteates. Although it seems that the gold bracteates found in Aegean tombs were mostly used to decorate the selvage of the dress or shroud, they could also have been used on the whole garment (front and back) or even on whole shrouds (Popham, Catling and Catling 1974, 203, 214, fig 11 I and J, fig. 12; Konstantinidi-Syvridi 2014, 144). Konstantinidi-Syvridi remarks that in the Aegean, bracteates are found in wealthy burials and might have decorated a shroud rather than a garment, as it has been suggested that these could have been worked in the tomb at the time of burial (Konstantinidi-Syvridi 2014, 144).

When used in a non-funerary context in the Aegean, the bracteates could have been sewn onto parts or the whole surface of the garment, possibly giving the impression of a garment made of gold. They would have acted as mirrors, glimmering and sparkling as light played across them. They gave clothing a dynamic and material presence, which would have been increased by the motion of the worn garment, along with the changing natural light or the flickering light of oil lamps (Hamilakis 2013, 76–77). The weight of such garments might have reduced the mobility of the wearer or created bodily discomfort (Karmel Thomason 2016, 251), as a text from Mari mentions that a garment, whose interior should look like a silver sheet should not be too heavy to prevent tearing (Durand 1997, 274, number 136: “Il faut que cet habit, comme s’il était un habit de Tuttub, soit tissé et noué de façon soignée de chaîne de trame et que son intérieur soit vraiment comme une feuille d’argent. Cet habit se verra mettre des ourlets à la yamhadéenne et, comme une étoffe-huššûm, du širpum lui sera appliqué. Il ne faudra pas que, lorsqu’on installera ensemble chaîne et trame, les ornements ne soient (trop) lourds au moment où on les enfilera et que l’habit ne se déchire”; Gaspa 2014, 239). Harris reports a similar phenomenon in the Iron Age where hundreds of bronze buttons were found attached to a woman’s burial outfit (grave 27, mound 48 at Stična in Slovenia (Harris 2019, 226 with references), and in Hallstatt (e.g. grave 360 with over 3,000 buttons: Grömer 2016, fig. 116).

Beads

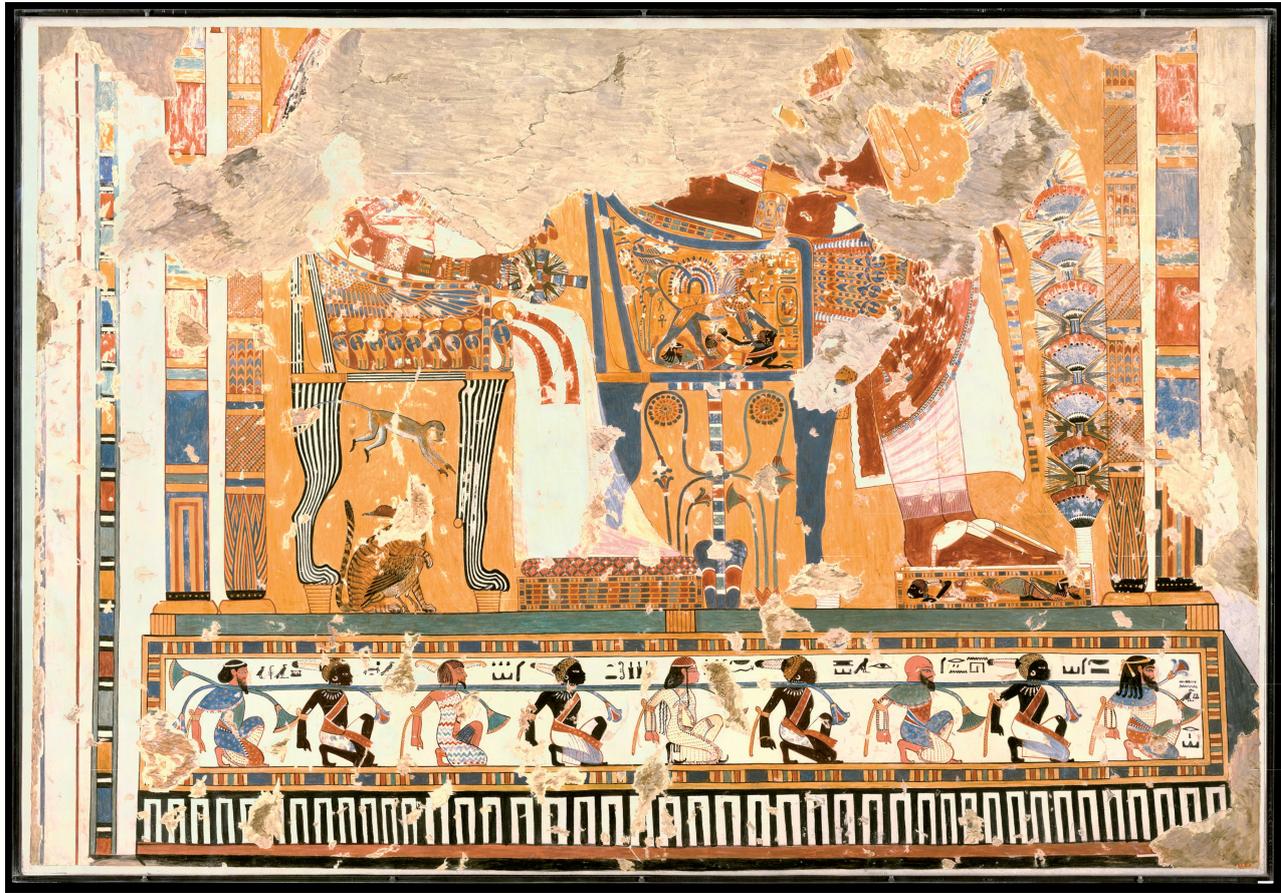
Tiny beads of colourful faience or glass decorated luxurious garments: for instance, in Ugarit text RS 15.43, wool, linen clothes, and glass are listed

together (Sauvage 2022, 42). In the case of one of King Tutankhamun’s tunics (fig. 8), the beads are arranged in geometric motifs imitating woven bands that could be produced while weaving with cards. These motifs resemble part of the garment worn by Amenhotep III on the side of his legs along his throne (fig. 9).

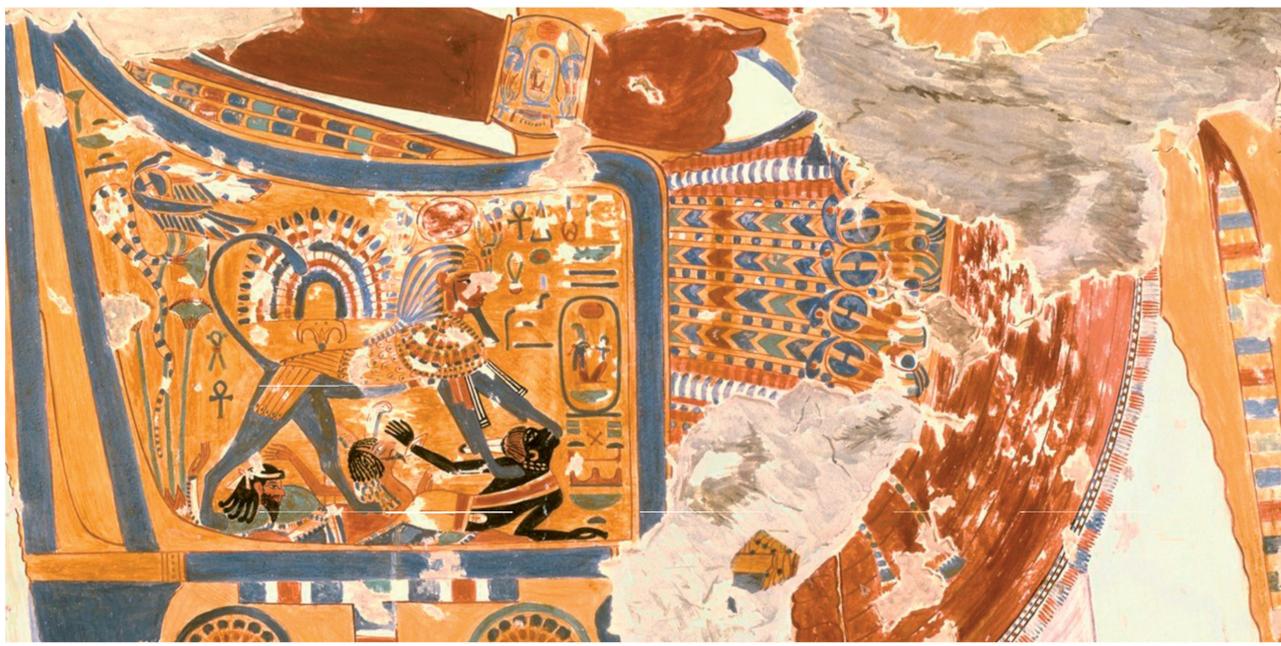
Larger beads or “buttons”, maybe thought of as lotus flowers in Egypt, are also attested on the beaded tunic of king Tutankhamun. They are made of blue, white, yellow and brown/red (?) faience, and are dome-shaped with splayed edges (see fig. 8). These whorls are well attested in the eastern Mediterranean and could be used as dangling tassels to decorate sleeves, or the bottom of hems, as seen on the Xeste 3 fresco from Thera (fig. 10). Given the number of these dome-shaped objects associated with King Tutankhamun’s beaded tunic, it is possible that they decorated its border, or created dangling tassels. These would also have reflected light, and provided extra texture, as well as visual and auditory stimulation when the wearer was moving. Beads of stone were also used to ornament textiles, and are attested in an 18th century BCE text from Mari referring to a dress decorated with 30 pieces of blue stone and coral weighing 11 shekels and 5/6 of silver (Dossin et al. 1964, 12; Durand 1997, number 138, 276–277: “11 siccles 5/6 d’argent étant le poids des ornements-sagikkum consistant en 30 éclats de pierre bleue et du corail”; Thomas 2014, 82–83), and in the first millennium BCE royal tombs of Nimrud where gold as well as cornelian beads



Fig. 8: Close-up of beads used to decorate one of Tutankhamun’s tunic. Carter 21d (Image: P. J. Bomhof, RMO, Leiden)



a



b

Fig. 9: a – Amenhotep III and queen Tiye enthroned beneath a Kiosk, Tomb of Anen; b – Detail of Amenhotep III kilt and belt depicted in the Tomb of Anen, Nina de Garis Davies (1881–1965). Thebes, Sheikh Abd el-Qurna, Tomb TT 120 (Facsimile by Nina de Garis Davis, MET 33.8.8; Rogers Fund, 1933) (Image: © The Metropolitan Museum of Art)



Fig. 10: Saffron Gatherers from room 3a, east wall at the Xeste 3 building, Akrotiri – on display at the Thera Museum (Image: Elsa Yvanez)

were found on fine linen textiles (Crowfoot 1995, 113). The rarity and cost of the material used, along with the time invested in textile embellishment demonstrate the value added to the original textiles and can be compared to modern haute couture with hand-sewn embellishments (fig. 11). These, in ancient as well as modern times, literally transformed garments and turned them into intricate body ornaments, and priceless jewellery-like objects. They not only animate clothing, and further materialise their impact on their audience and on their surrounding world, but also turned clothing into ornaments, replacing or adding precious jewellery to the overall “outfit”. This jewellery-like aspect of elite/royal and divine garments was certainly the intended effect, at least for the New Kingdom pharaohs, as seen on depictions of enthroned Amenhotep III in his kiosk where the throne, footrest, kiosk and garments match the colour and intricacy of the jewellery worn by the king (see fig. 9). The same can be said about the furniture found in Tutankhamun’s tomb, where, for

instance, his throne and chest also match the material repertoire of jewellery.

Not only were colours and materials important, but their accumulation resulting in the increased intricacy of clothes determined both the status of the garment and that of its wearer. Garments and their decorations transformed the wearer, and, for instance, the radiance of colours and glimmer of appliqués would have given the impression of a radiant being and might have further embodied the divine character of the pharaohs in Egypt (golden and shimmering ornaments would have thus manifested the king as a god). In the Near East, “luminosity/splendour” was an active force (protective or destructive) associated with gods, divine and royal emblems, kings, weapons, monsters, demons, diseases, and cultic paraphernalia (Thavapalan 2018b, 15). These special and radiant clothes could thus have infused their wearers with vitality (Schneider 2006, 205), and were not only projecting the social and divine status of their wearer, but were also embedding it into their wearer, who



Fig. 11: Model on the catwalk wearing a pearl embroidered outfit and matching accessories from the Chanel Fall/Winter 2004-2005 “Haute Couture” fashion show in Paris (Image: Stephane Cardinale/Corbis via Getty Images)

would have, in a way, absorbed this aura of light to become radiant. These garments would thus have acted for the wearer and on the audience, leaving it in awe (Winter 2000). As noted by Thomason, multicoloured and beaded textiles would have produced a multisensorial and synaesthetic experience that she compared to Feldman’s observation on ivories: “the combination of intricacy of carved design, luminosity and diversity of colours, and tactile desire would have served to capture and ensnare viewers’ attention along the lines of Alfred Gell’s notion of enchantment by technical virtuosity” (Feldman 2014, 50; Thomason 2016, 249). People’s perception would have been dependent on social convention (Howes and Classen 2014, 66), materialized in the shape, decoration, colour and aura of their visible outer textile skin. As noted by Schneider, this capacity to enhance who we are while deepening our social relationship is evident in the wrapping of the dead to ensure their continuance as social beings (Schneider 2006, 207). Therefore, these shimmering and bright elite, kingly, or divine

garments would have embodied the social standing of its wearer, giving him/her legitimacy to act or perform specific duties (royal or religious), and would also have affected the audience and influence their reaction and perception of their world.

Power and Agency of worn clothes, garments and textiles tools

Power of transformation

Information was embedded in garments and was regularly visually “deciphered” by the audience of the worn clothes (Van Wees 2005). Information pertaining to gender (Garcia-Ventura 2015), social groups/social status, religious function, lineage, rank (Devoucoux 2020, 66), relationships of vassalage (Podani 2010) or domination (*Epic of Baal*, tablet 6, column 2, l. 10–11; Coogan and Smith 2012, 147), as well as family relations (especially marital relations; Podani 2010, 50) were communicated by fabrics, types and/or decorations of garments, or the visual appearance of the garment’s hem (Podani 2010). Types of clothes or garments of specific colours could additionally have conveyed diverse states of mind or feelings (“festive garment” (CTH 385.10; Singer 2002, number 3 §1, 26) tearing off clothes during burials (*Aqhat* tablet 3, column 1, l. 47–48; Coogan and Smith 2012, 48)). They would also have displayed in socially codified ways stages of life and emotions such as grief as attested by El and Anat covering their loins with sackcloth to mourn Baal (*Epic of Baal*, tablet 5, column 6, l. 12 (Anat), l. 17 (El); Coogan and Smith 2012, 143), or by the association of the colour black with mourning and underworld cults in Ebla (Pasquali 2005, 169). In Near Eastern texts, leaving a cultural dimension is characterised by “unclenching” as exemplified by Ishtar during her descent to the Netherworld, and “stopping behaviours that were established by the social group which characterizes an individual as pertaining to that specific cultural context” (Rivaroli 2019, 15).

People’s limited wardrobe as well as the time involved in garment production created a symbiotic relationship between people and their garment (Podani 2010, 52). Clothes, acting as second skins, were part of people’s identity, and could stand for or act for their owners. For instance, a *sisstikutum* garment (or cord for a seal) could symbolically replace a person during an extispicy (divination by the reading of animal entrails) (Podani 2010, 52), or serve as the pledge for a loan (Podani 2010, 52 and note 31). A garment’s hem could also replace a cylinder-seal and be impressed onto legal documents



to symbolise an obligation to another party (Podani 2010, 53). Garments could stand for someone's identity or function and could influence or modify the identity of their wearer. In rituals, garments worn by exorcists were meant to transform them into divine messengers, allowing them to become

substitutes of the gods (Rendu-Loisel 2019, 190). They were an integral part of the ritual and were actants as much as the other ritual tools (Rendu-Loisel 2019, 197). In substitution rituals, the substitute king was dressed in a royal garment allowing him to become king: "I have dressed this man with the garment of



Fig. 12: Neo-Hittite Funerary stele depicting a women holding a spindle and a cup, acc. BLMJ 01060, H. 94 cm, W. 81 cm; courtesy of the Bible Lands Museum Jerusalem (Image: Moshe Caine)

kingship" (Van den Hout 1994, 41). The same royal identity provided by specific items of clothing is also described by the Edict of Tudhaliya IV of Hatti concerning the divorce of Ammistamru II of Ugarit; "If Utri-Sharrumma says: "I want to follow my mother", he shall place his garment on the stool and depart" (Number 36A; Beckman 1996, 166). Similarly, god-like garments allowed rulers to incarnate the gods, and to embody divine radiance. Kings wore distinctive "divine" garments representing their ritual transfiguration (Wyatt 2007, 58), allowing them to "share in the ontology of the divine realm" (Wyatt 2007, 69). The materialisation of royal ideology was partially created through dress and textiles. Garments were *actants* and an integral part of status definition (Demarrais 2004, 11). Their constitutive materials were equally important, defining them as assemblages exceeding the individual properties of their materials (Witmore 2014, 206–207).

Further transformation through cloth is attested in Ugaritic mythology when Anat, "put on a hero's clothes, she placed a knife in her sheath, she placed a sword in her scabbard; and on top she put on women's clothes" (*Story of Aqhat*, tablet 3, column 4, lines 43–46; Coogan and Smith 2012, 54). Not only did the cloth made the hero, but her attributes (weapons) modified her gender and enabled her hero abilities.

Tools and gendered identity

In Ugarit, as was the case elsewhere, femininity was displayed through textile tools: In the *Epic of Baal*, Asherah holds her distaff to display her femininity (*Epic of Baal*, tablet 4, l. 3–4; Coogan and Smith 2012, 127). The materiality of textile tools extended beyond their mnemonic and physical qualities and were thus used to publicly mark femininity. What one used or carried – weapons *vs.* textile tools – expressed one identity, as is explicitly stated in *Ishme Dagan K* (Römer 1988, 32), the *Story of Aqhat*, the *Epic of Baal*, and the Bible (Spindles and distaffs: Prov 31.19, II Sam 3.29; bows and arrows: II Sam 1.22, 22.35, II Kings 13.15; Hos 1.5; Ps 127 4–5; Hoffner 1966, 329). Textile tools worn in combination with clothing would therefore reinforce or disturb constructions of gender (Helle 2019, 105), and be used to embody the gender that they represented (Hoffner 1966, 327; Karatepe inscription, Hoffner 1966, 333). This was the case in manipulating genders in rituals (Hittite ritual of Pashkuwatti; Hoffner 1966; Peled 2016, 311; Helle 2019, 107–108), curses (II Sam 3.29; Hoffner 1966, 332), or by the goddess Innana-Ishtar (Hoffner 1966, 331; Helle 2019, 108–109), who had a dual nature and was both a warrior and a seductress (Thomas 2014, 85). In

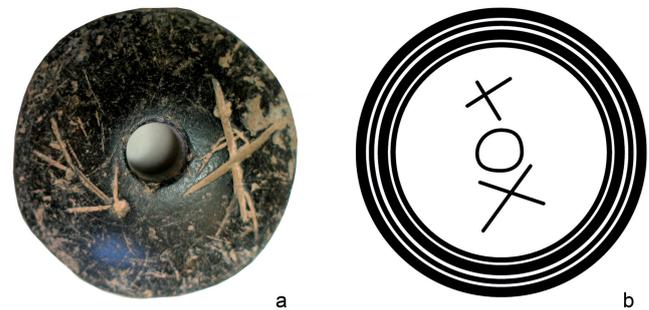


Fig. 13: a) Spindle-whorl AO 14 827 (ø: 3.5–3.6 cm; thickness: 0.9 cm; W.: 17.4 g); musée du Louvre, département des Antiquités orientales; b) Spindle-whorl ENK 1958 number 67, catalogue 1144 (ø: 4 cm) (Images: a Caroline Sauvage; b Caroline Sauvage, after Courtois 1984, fig 42.12)

Sumerian literary texts, womanhood is associated with textile work, which had to be proven or performed through the use of textile tools such as wool combs and spindles (*Two Women B* (l. 66–68), Matuszak 2016, 246–250; Helle 2019, 107; MS 3228, rev. 13–14; Matuszak 2016, 246). Such an expression of womanhood is certainly the intended meaning of the representations of women holding textile tools (spindles/distaffs) and mirrors on Neo-Hittite funerary stelae (fig. 12), as on the early 9th century BCE stele of Tarhuntiwastis, wife of Azinis (Istanbul Archaeological Museum (number 7694); Bonatz 2000, C33; see also steles C22, C24, C25, C26, C51, C60 and C68, Bonatz 2000). This gendered distinction is also confirmed by the Hittite royal funerary ritual mentioning that the effigy of the queen received a spindle and a distaff, while the effigy of the king received a bow and arrow (Van den Hout 1994, 63). Funerary data from the cremation cemeteries at Tell Shiukh Fawqâni (Tenu 2020, 142), Tell Shiukh, Hama, and Yunus (Tenu 2020, 144), where women were equipped with textile tools, while males had arrowheads confirm this notion.

The ability of textile tools to manipulate gender is perhaps further illustrated by a spindle-whorl from Ugarit (fig. 13a). Its decor consists of two human figures upside down, with each head facing the other's feet. One of them, on the right-hand side of Fig. 13a, was subsequently replaced or crossed out by a deeply engraved X. An approximate parallel can be found at Enkomi, with two cross motifs (fig. 13b). The decoration of both whorls is unique and contrasts with the corpus from these sites with spokes, rosettes or concentric circles decorations (Sauvage 2013; Sauvage and Smith 2016). However, this hypothesis is speculative since it is impossible to attribute gender to these stick figures.



Conclusion

The power of clothes and textiles was infused during the manufacturing process and increased when the finished product was used in its intended setting. In the Late Bronze Age Eastern Mediterranean, textiles were *actants*, that, according to Bennett's definition, can "affect other bodies enhancing or weakening their power" (Bennett 2010, 3). They have agency on their own (Gell 1999), they "performed work for, with, in, and as the body" (Thomason 2019, 221–222). *Actants*, especially in the case of textiles/garments or textile tools are both operators and agents (Bennett 2010, 9): they constitute a 'second skin' worn daily, and can literally change someone's identity, gender appearance, and image. Textile tools, like weapons, could thus have been worn to make, emphasize or transform one's gendered identity (Helle 2019, 114), social status (Eicher and Roach Higgins 1992, 15–17; N'Shea 2019, 177) dependent on the refinement and raw material of the distaff/spindle, and level of craftsmanship socially displayed. When these tools were carried in socially charged outings, the finely carved bone/ivory spindles, whorls and distaffs with mnemonic qualities would have been advertising the type of finished product their owners would have been capable of producing. The tools therefore influence not only the identity and the status of their owner/carrier, but also directly influenced the prestige and fineness of the woven output. Various finishes and embellishments on garments would have further transformed them and their wearers into radiant beings. In this sense, as argued by Toren, the meaning and knowledge transmitted to the audience was not just passively received but was also renewed and possibly transformed by the materiality of social practices (Toren 1999, 18; DeMarras 2004, 12). The equivalency of garments with a person's identity is due to the inherent nature of clothing as 'second skin', able to cover, transform, or display identity, gender, role, and socially significant information. Therefore, an individual in the ancient Near East would not just have been characterized by their body or mind, but by an assemblage of material and immaterial things, in which textiles, clothes and carried tools/attributes and accessories would have had a prime importance. In this case, textiles, clothes, clothing, human being and thinghood truly overlapped (Bennett 2010, 4). Textiles had real power, especially when worn and displayed by the elite, the royal court or cult statues. They would have been the "decisive force catalysing an event" (Bennett 2010, 9). In the Late Bronze Age Eastern Mediterranean, clothes had the power to animate, act, produce dramatic effect of awe, or

cocoon its kingly or divine wearer in an aura of light, while also transferring its vitality to its wearer. Clothes did not just communicate or displayed status, rank, groups, gender, and function to an audience, but they also had the power to transfer energy, vitality, force, gender, status and identity to their wearer.

Bibliography

- Aruz, J., Benzel, K. and Evans, J. M. (2008) *Beyond Babylon. Art, Trade, and Diplomacy in the Second Millennium B.C.* New York: The Metropolitan Museum of Art.
- Attala, L. and Steel, L. (2019) Introduction. In L. Attala and L. Steel (eds), *Body Matters: Exploring the Materiality of the Human Body*. Cardiff: University of Wales Press, 1–17.
- Baccelli, G. (2012) Il tessuto come simbolo: il ruolo dei tessuti nella Siria del II millennio a.C. In S. Mazzoni (ed), *Studi di Archeologia del Vicino Oriente, Scritti degli allievi fiorentini per Paolo Emilio Pecorella*. Florence: Firenze University Press, 147–162.
- Barber, E. J. W. (1991) *Prehistoric Textiles: The Development of Cloth in the Neolithic and Bronze Age, with Special Reference to the Aegean*. Princeton: Princeton University Press.
- Beckman, G. (1996) *Hittite Diplomatic Texts*. Atlanta: Scholar Press, Society of Biblical Literature.
- Bennett, J. (2010) *Vibrant Matter, a Political Ecology of Things*. Durham: Duke University Press.
- Blom-Böer, I. and Warburton, D. A. (2019) The composition of the colour palette and the socio-economic role of pigments used in Egyptian painting. In S. Thavapalan and D. A. Warburton (eds), *The Value of Colour. Material and Economic Aspects in the Ancient World*. Berlin Studies of the Ancient World 70. Berlin: Edition Topoi, 231–253.
- Bonatz, D. (2000) *Das syro-hethitische Grabdenkmal. Untersuchungen zur Entstehung einer neuen Bildgattung in der Eisenzeit in nordsyrisch-südanatolischem Raum*. Mainz: von Zabern.
- Breniquet, C. (2008) *Essai sur le tissage en Mésopotamie, des premières communautés sédentaires au milieu du IIIe millénaire avant J.-C.* Paris: Travaux de la Maison René-Ginouvès.
- Breniquet, C. (2014) The archaeology of wool in Early Mesopotamia: sources, methods, perspectives. In C. Breniquet and C. Michel (eds), *Wool Economy in the Ancient Near East and the Aegean. From the Beginning of Sheep Husbandry to Institutional Textile Industry*. Ancient Textile Series 17. Oxford: Oxbow Books, 52–78.
- Burke, B. (2010) *From Minos to Midas: Ancient Cloth Production in the Aegean and in Anatolia*. Oxford: Oxbow Books.
- Burke, B. (2012) Looking for Sea-Silk in the Bronze Age Aegean. In M-L. Nosch and R. Laffineur (eds), *KOSMOS*,



- Jewellery, Adornment and Textiles in the Aegean Bronze Age.* Proceedings of the 13th International Aegean Conference / Rencontre Égéenne internationale, University of Copenhagen, Danish National Research Foundation's Centre for Textile Research, Copenhagen, 21–26 April 2010. *Aegaeum* 33. Peeters: Leuven, 171–177.
- Burke, B. and Chapin, A. P. (2016) Bronze Age Aegean Cloth Production: A cottage industry no more. In M. C. Shaw and A. P. Chapin (eds), *Woven Threads*. Ancient Textiles Series 22. Oxford: Oxbow Books, 17–42.
- Carter, H. (1923, reprint 2014) *The Tomb of Tutankhamun, Volume 1. Search, Discovery and Clearance of the Antechamber*. London: Bloomsbury.
- Cifarelli, M. (2019) Introduction. In M. Cifarelli (ed), *Fashioned Selves: Dress and Identity in Antiquity*. Oxford: Oxbow Books, 1–7.
- Coogan, M. D. and Smith, M. (2012) *Stories from Canaan. Second Edition*. Louisville: Westminster John Knox Press.
- Cooke, B., Christiansen, C. and Hammarlund, L. (2002) Viking woollen square-sails and fabric cover factor. *IJNA* 31 (2), 202–210.
- Courtois, J. C. (1984) *Alasia III. Les objets des niveaux stratifiés d'Enkomi (Fouilles C.F.A. Schaeffer 1947–1970)*. Paris: Éditions Recherches sur les Civilisations.
- Crowfoot, E. (1995) Textiles from Recent Excavations at Nimrud. *Iraq* 57, 113–118.
- Cutler, J. E. (2021) *Crafting Minoanisation: textiles, crafts, production and social dynamics in the Bronze Age Southern Aegean*. Oxford, Philadelphia: Oxbow Books.
- Dardeniz, G. (2019) Significance of colour in the second millennium B.C.: the perception and use of glass at the center and periphery of the Hittites. In S. Thavapalan and D. A. Warburton (eds), *The Value of Colour. Material and Economic Aspects in the Ancient World*. Berlin Studies of the Ancient World 70. Berlin: Edition Topoi, 99–123.
- DeMarrais, E. (2004) The materialization of culture. In E. DeMarrais, C. Gosden and C. Renfrew (eds), *Rethinking Materiality: the Engagement of the Mind, with the material world*. Cambridge: McDonald Institute for Archaeological Research, 11–22.
- Devoucoux, D. (2020) The Discovery of Materiality: Archaeological clothing finds, representation, and knowledge formation. In H. Jenss and V. Hofmann (eds), *Fashion and Materiality: Cultural Practices in Global Contexts*. London: Bloomsbury Visual Arts, 58–77.
- Dossin, G., Bottero, J., Birot, M., Burke, L., Kupper, J-R. and Finet, A. (1964) *Archives royales de Mari XIII, Textes divers*. Paris: Librairie Orientaliste Paul Geuthner.
- Doumas, C. (1992) *The Wall-Paintings of Thera*. Athens: The Thera Foundation.
- Durand, J-M. (1983) *Archives Royales de Mari XXI – Textes Administratifs des Salles 134 et 160 du Palais de Mari*. Paris: Librairie Orientaliste Paul Geuthner.
- Durand, J-M. (1997) *Les documents épistolaires du palais de Mari I*. Littératures anciennes du Proche-Orient 16. Paris: Les Editions du Cerf.
- Durand, J-M. (2000) *Documents épistolaires du Palais de Mari, tome 3*. Littératures anciennes du Proche-Orient 18. Paris: Les Editions du Cerf.
- Durand, J-M. (2009) *Matériaux pour le Dictionnaire de Babylonien de Paris, tome 1, la nomenclature des habits et des textiles dans les textes de Mari*. Archives Royales de Mari 10. Paris: CNRS éditions.
- Eicher, J. B. and Roach Higgins, M. E. (1992) Definition and classification of dress: implications for analysis of gender roles. In J. Barnes and J. B. Eicher (eds), *Dress and Gender: Making and Meaning*. New York: Berg Publisher, 8–28.
- Farber, W. (1993–1997) Myrrhe. B. Philologisch. *Reallexikon der Assyriologie* 8, 536–537.
- Feder, Y. (2014) The Semantics of Purity in the Ancient Near East: Lexical Meaning as a Projection of Embodied Experience. *Journal of Ancient Near Eastern Religions* 14, 87–113.
- Feldman, M. F. (2014) *Communities of Style: Portable luxury arts, identity and collective memory in the Iron Age Levant*. Chicago: University of Chicago Press.
- Freed, R. E., Markowitz, Y. J. and d'Auria, S. H. (1999) *Pharaohs of the Sun: Akhenaten, Nefertiti, Tutankhamen*. Boston: Museum of Fine Arts.
- Gachet-Bizollon, J. (2007) *Les Ivoires d'Ougarit et l'art des ivoiriers du Levant au Bronze Récent*. Paris: Editions Recherches sur les Civilisations.
- Garcia-Ventura, A. (2014) Constructing masculinities through textile production in the Ancient Near East. In M-L. Nosch and M. Harlow (eds), *Interdisciplinary Studies in Textiles and Dress in Antiquity*. Oxford: Oxbow Books, 167–183.
- Gaspa, S. (2014) Golden decorations in Assyrian textiles: an interdisciplinary approach. In M. Harlow, C. Michel and M-L. Nosch (eds), *Prehistoric, Ancient Near Eastern & Aegean Textiles and Dress*. Ancient Textiles Series 18. Oxford: Oxbow Books, 227–244.
- Gell, A. (1999) The technology of enchantment and the enchantment of technology. In E. Hirsch (ed), *The Art of Anthropology: Essays and Diagrams*. Oxford: Berg, 159–186.
- Germer, R. (1992). *Die Textilfärberei und die Verwendung gefärbter Textilien in alten Ägypten*. Wiesbaden: O. Harrassowitz.
- Gleba, M. (2008) Auratae Vestes: Gold textiles in the Ancient Mediterranean. In C. Alfaro and L. Karali (eds), *Vestidos, textiles y tintes. Estudios sobre la producción de bienes de consumo en la Antigüedad. Actas del II Symposium Internacional sobre Textiles y tintes del Mediterráneo en el mundo antiguo*. Purpurae vestes 2: Textiles and Dyes



- in Antiquity, Athens, 24–26 November 2005. Valencia: University of Valencia, 61–77.
- Grömer, K. (2016) *The art of prehistoric textile making – The development of craft traditions and clothing in Central Europe*. Veröffentlichungen der Prähistorischen Abteilung (VPA) 5. Vienna: Natural History Museum Vienna.
- Hamilakis, Y. (2013) *Archaeology and the Senses. Human Experience, Memory and Affect*. Cambridge: Cambridge University Press.
- Harris, S. (2019) The Sensory Archaeology of Textiles. In R. Skeates and J. Day (eds), *The Routledge Handbook of Sensory Archaeology*. London: Routledge, 210–232.
- Helle, S. (2019) Weapons and weaving instruments as symbols of gender in the Ancient Near East. In M. Cifarelli (ed), *Fashioned Selves, Dress and Identity in Antiquity*. Oxford: Oxbow Books, 105–115.
- Hendon, J. A. (2015) Producing goods, shaping people: the materiality of crafting. *Archaeological Papers of the American Anthropological Association* 26, 149–165.
- Herslund, O. (2010) Cloths – garments – and keeping secrets. Textile classification and cognitive chaining in the ancient Egyptian writing system. In C. Michel and M-L. Nosch (eds), *Textile Terminologies in the Ancient Near East and Mediterranean from the Third to the First Millennia BC*. Oxford: Oxbow Books, 68–80.
- Hoffner, H. A. (1966) Symbols for Masculinity and Femininity: Their Use in Ancient Near Eastern Sympathetic Magic Rituals. *Journal of Biblical Literature* 85 (3), 326–334.
- Hoffner, H. A. (1998) *Hittite myths*. Second edition, edited by G. M. Beckman. Writings from the Ancient World Series 2. Atlanta: SBL.
- Howes, D. and Classen, C. (2014) *Ways of Sensing. Understanding the senses in society*. London, New York: Routledge.
- Ingold, T. (2007) Materials against materiality. *Archaeological Dialogues* 14 (1), 1–16.
- James, M. A., Reifarth, N., Mukherjee, A. J., Crump, M. P., Gates, P. J., Sandor, P., Robertson, F., Pfälzner, P. and Evershed, R. P. (2009) High prestige Royal Purple dyed textiles from the Bronze Age royal tomb at Qatna, Syria. *Antiquity* 83, 1109–1118.
- Jursa, M. (2009) Die Krallen des Meeres und andere Aromata. In W. Arnold, M. Jursa, W. Müller and S. Procházka (eds), *Philologisches und Historisches zwischen Anatolien und Sokotra: Analecta Semitica In Memoriam Alexander Sima*. Wiesbaden: Harrassowitz, 147–180.
- Karageorghis, V. (2011) *Enkomi. The Excavations of Porphyrios Dikaios 1948–1958. Supplementary Catalogue of Finds*. Nicosia: The A.G. Leventis Foundation.
- Karmel Thomason, A. (2016) The sense-scapes of Neo-Assyrian capital cities: royal authority and bodily experience. *Cambridge Archaeological Journal* 26 (2), 243–264.
- Kemp, B. J. and Vogelsang-Eastwood, G. (2001) *The Ancient Textile Industry at Amarna*. London: Egypt Exploration Society.
- Knappett, C. (2007) Materials with materiality? *Archaeological Dialogues* 14 (1), 20–23.
- Knappett, C. (2014) Materiality in archaeological theory. In C. Smith (ed), *Encyclopedia of Global Archaeology*. New York: Springer, 4700–4708.
- Kolonas, L., Sarri, K., Margariti, C., Vanden Berghe, I., Skals, I. and Nosch, M-L. (2017) Heirs of the Loom. Funerary Textiles from Stamna (Aitolia, Greece). A preliminary analysis. In M. Fotiadis, R. Laffineur, Y. Lólos and A. G. Vlachopoulos (eds), *Hesperos. The Aegean seen from the West*. 16th International Aegean Conference, Ioannina, 18–21 May 2016. Aegaeum 41. Leuven: Peeters, 533–542.
- Konstantinidi-Syvriddi, E. (2014) Buttons, Pins, clips and Belts ... 'Inconspicuous' Dress Accessories from the Burial Context of the Mycenaean Period (16th–12th cent. BC). In M. Harlow, C. Michel and M-L. Nosch (eds), *Prehistoric, Ancient Near Eastern & Aegean Textiles and Dress*. Ancient Textiles Series 18. Oxford: Oxbow Books, 143–157.
- Littauer, M. A. and Crouwel, J. H. (2002) *Selected Writings on Chariots and other Early Vehicles, Riding and Harness*, edited by P. Raulwing. Leiden-Boston-Köln: Brill.
- Lorimer, H. L. (1950) *Homer and the Monuments*. London: Macmillan & Co.
- Marín-Aguilera, B., Iacono, F. and Gleba, M. (2018) Colouring the Mediterranean: production and consumption of purple-dyed textiles in pre-Roman times. *Journal of Mediterranean Archaeology* 31 (2), 127–154.
- Marzano, A. (2013) *Harvesting the Sea. The Exploitation of Marine Resources in the Roman Mediterranean*. Oxford: Oxbow Books.
- Matuszak, J. (2016) She is not fit for womanhood: the ideal housewife according to Sumerian literary texts. In B. Lion and C. Michel (eds), *The role of women in work and society in the ancient Near East*. Studies in Ancient Near Eastern Records 13. Boston: De Gruyter, 228–254.
- Maxwell-Hyslop, K. R. (1971) *Western Asiatic Jewellery c. 3000–612 BC*. London: Methuen & Co.
- Melena, J. L. (2019) *The Knossos Tablets, Sixth Edition*. Philadelphia: INSTAP Academic Press.
- Meskel, L. (2004) Divine Things. In E. DeMarras, C. Gosden and C. Renfrew (eds), *Rethinking Materiality: the Engagement of the Mind, with the material world*. Cambridge: McDonald Institute for Archaeological Research, 249–259.
- Michel, C. (2020) Textile Workers in the Royal Archives of Mari (Syria, 18th Century BC). In L. Quillien and K.



- Sarri (eds), *Textile Workers. Skills, Labour and Status of Textile Craftspeople Between the Prehistoric Aegean and the Ancient Near East*. Proceedings of the Workshop held at 10th ICAANE, Vienna, 25–29 April 2016. Vienna: Austrian Academy of Sciences Press, 127–138.
- Morgan, L. (2011) Enlivening the Body: Colour and Stone Statues in Old Kingdom Egypt. *Source: Notes in the History of Art* 30 (3), 4–11.
- N'Shea, O. (2019) Dressed to dazzle, dressed to kill: staging Assurbanipal in the royal lion hunt reliefs from Niniveh. In M. Cifarelli (ed), *Fashioned Selves, Dress and Identity in Antiquity*. Oxford: Oxbow books, 175–184.
- Panagiotakopulu, E., Buckland, P. C., Day, P. M., Doulmas, C., Sarpaki, A. and Skidmore, P. (1997) A lepidopterus Cocoon from Thera and Evidence for Silk in the Aegean Bronze Age. *Antiquity* 71, 420–429.
- Pardee, D. (forthcoming) *Les textes épistolaires d'Ougarit*.
- Parrot, A. (1959) *Le Palais, Documents et Monuments. Mission Archéologique de Mari II*. Paris: Librairie Orientaliste P. Geuthner.
- Pasquali, J. (2005) Remarques comparatives sur la symbolique du vêtement à Ébla. In L. Kogan, N. Koslova, S. Loesov and S. Tishchenko (eds), *Babel und Bibel 2: Memoriae Igor M. Diakonoff*. Orientalia et Classica 8. Winona Lake Indiana: Eisenbrauns, 165–184.
- Payne, E. (2007) *The Craftsmen of the Neo-Babylonian Period: A Study of the Textile and Metal Workers of the Eanna Temple*. Doctoral dissertation, Yale University.
- Peled, I. (2016) *Masculinities and Third Gender: The Origins and Nature of an Institutionalized gender otherness in the ancient Near East*. *Alter Orient und Altes Testament* 435. Münster: Ugarit-Verlag.
- Petrie, W. M. F. (1917) *Tools and Weapons*. London: British school of archaeology in Egypt.
- Pfister, R. (1937) Les textiles du tombeau de Toutankhamon. *Revue des arts asiatiques* 11, 207–218.
- Pinnock, F., Marchetti, N. and Nigro, L. (1995) *Ebla all'origine della civiltà urbana. Trent'anni di scavi in Siria dell'Università di Roma «La Sapienza»*. Rome: Mondadori Electa.
- Podani, A. (2010) Preventing Rebellion through the Creation of Symbolic Ties of Kinship in Syria and Mesopotamia during the Second Millennium B.C. In S. Richardson (ed), *Rebellions and Peripheries in the Cuneiform World*. New Haven: American Oriental Society, 47–74.
- Popham, M. R., Catling, E. A. and Catling, H. W. (1974) Sellopoulo Tombs 3 and 4, Two Late Minoan Graves near Knossos. *The Annual of the British School at Athens* 69, 195–257.
- Quillien, L. (2014) Flax and linen in the First Millennium Babylonia BC: The Origin, Craft Industry and uses of a Remarkable Textile. In M. Harlow, C. Michel and M-L. Nosch (eds), *Prehistoric, Ancient Near Eastern & Aegean Textiles and Dress*. Ancient Textiles Series 18. Oxford: Oxbow Books, 271–296.
- Reese, P. (1987) Shells and Bronze Age purple dye production in the Mediterranean basin. *Annual of the British School of Archaeology at Athens* 82, 201–206.
- Rendu-Loisel, A-C. (2019) Chasing the Evil with Coloured Textiles in Ancient Mesopotamia. In S. Gaspa S. and M. Vigo (eds), *Textiles in Ritual and Cultic Practices in the Ancient Near East from the Third to the First Millennium BC*. Proceedings of an International Workshop, Copenhagen, 6–7 October 2015. Münster: Ugarit-Verlag, 189–198.
- Rivaroli, M. (2019) Changing Status by Wearing a Dress in the Myth of Gilgamesh. In S. Gaspa and M. Vigo (eds), *Textiles in Ritual and Cultic Practices in the Ancient Near East from the Third to the First Millennium BC*. Proceedings of an International Workshop, Copenhagen, 6–7 October 2015. Münster: Ugarit-Verlag, 15–32.
- Robkin, A. L. H. (1981) The Endogram WE on Mycenaean Textiles *146 and *166+WE: A Proposed Identification. *AJA* 85, 213.
- Römer, W. H. P. (1988) Sumerische Hymnen. *Bibliotheca Orientalis* 45, 24–60.
- Sasson, J. M. (2015) *From the Mari Archives. An Anthology of Old Babylonian Letters*. Winona Lake Indiana: Eisenbrauns.
- Sauvage, C. (2012) *Les routes maritimes et systèmes d'échanges internationaux au Bronze récent en méditerranée orientale*. Travaux de la Maison de l'Orient et de la Méditerranée 61. Lyon: Maison de l'Orient et de la Méditerranée.
- Sauvage, C. (2013) Spinning from old threads: the whorls from Ugarit at the Musée d'Archéologie Nationale of Saint-Germain-en-Laye and at the Louvre. In H. Koefoed, M-L. Nosch and E. Andersson Strand (eds), *Textile Production and Consumption in the Ancient Near East. Archaeology, Epigraphy, Iconography*. Oxford: Oxbow books, 189–214.
- Sauvage, C. (2014) Spindles and Distaffs: Late Bronze and Early Iron Age Eastern Mediterranean use of solid and tapered ivory/bone shafts. In M-L. Nosch and M. Harlow (eds), *Interdisciplinary Studies in Textiles and Dress in Antiquity*. Oxford: Oxbow books, 184–226.
- Sauvage, C. (2022) Senses and textiles in the Eastern Mediterranean in the Late Bronze and Early Iron Ages. In K. Neumann and A. Thomason (eds), *The Routledge Handbook of the Senses in the Ancient Near East*. London: Routledge, 35–61.
- Sauvage, C. and Smith, J. (2016) Local and regional patterns of textile production in Late Bronze Age Cyprus. In G. Bourogiannis and C. Muhlenboch (eds), *Ancient Cyprus*



- Today: Museum Collections and New Research*. SIMA Pocket-book 184. Uppsala: SIMA, 195–205.
- Schaeffer, C. F. A. (1949) *Ugaritica II*. Paris: Librairie Orientaliste.
- Schaeffer, C. F. A. (1951) Une industrie d'Ugarit, la pourpre. *Annales Archéologiques de Syrie* 1–2, 188–192.
- Schenkel, W. (2019) Colours as viewed by the ancient Egyptians and the explanations of this view as seen by academics studying colour. In S. Thavapalan and D. A. Warburton (eds), *The Value of Colour. Material and Economic Aspects in the Ancient World*. Berlin Studies of the Ancient World 70. Berlin: Edition Topoi, 35–54.
- Schiaparelli, E. (1927) *La Tomba Intatta Dell'architetto Kha Nella Necropoli Di Tebe*. Turin: Officina Poligrafica Editrice Subalpina.
- Schneider, J. (2006) Cloth and clothing. In C. Tilley, W. Keane, S. Küchler, M. Rowlands and P. Spyer (eds), *Handbook of Material Culture*. London: Sage, 203–220.
- Schofield, L. and Parkinson, R. (1995) Mycenaean Seminar 1993–1994, Of Helmets and Heretics: Mycenaean on a painted Papyrus from Amarna. *Bulletin of the Institute of Classical Studies* 40 (1), 241–242.
- Shelmerdine, C. W. (1998) Shining and Fragrant Cloth in Homeric Epic. In J. B. Carter and S. P. Morris (eds), *The Ages of Homer. A tribute to Emily Townsend Vermeule*. Austin: University of Texas Press, 99–107.
- Singer, I. (2002) *Hittite Prayers*. Writing from the Ancient World 11. Atlanta: Society of Biblical Literature.
- Smith, J. (2013) Tapestries in the Bronze and Early Iron Ages of the Ancient Near East. In M-L. Nosch, H. Koefoed and E. Andersson Strand (eds), *Textile Production and Consumption in the Ancient Near East, Archaeology, Epigraphy, Iconography*. Oxford: Oxbow Books, 161–188.
- Sorgia, E. and Carannante, A. (2017) Tangled threads. Byssus and sea silk in the Bronze Age: an interdisciplinary approach. In H. Landenius Enegren and F. Meo (eds), *Treasures from the Sea, Purple Dye and Sea Silk*. Oxford: Oxbow Books, 29–45.
- Spinazzi-Lucchesi, C. (2018) *The Unwound Yarn. Birth and Development of Textile Tools between Levant and Egypt*. Venice: Edizioni Ca'Foscari.
- Steinkeller, P. (1995) Sheep and goat terminology in UR III sources from Drehem. *Bulletin on Sumerian Agriculture* 8, 49–70.
- Strassmaier, J. N. (1880) *Inschriften von Cyrus, König von Babylon (538–529 v. Chr.)*. Babylonische Texte Heft 7. Leipzig.
- Tenu, A. (2020) Textile Tools, Significant Markers of Gender? The Case of the Cremation Cemetery Tell Shiukh Fawqâni (Syria). In L. Quillien and K. Sarri (eds), *Textile Workers. Skills, Labour and Status of Textile Craftspeople Between the Prehistoric Aegean and the Ancient Near East*. Proceedings of the Workshop held at 10th ICAANE, Vienna, 25–29 April 2016. Vienna: Austrian Academy of Sciences Press, 139–148.
- Thavapalan, S. (2018a) Purple fabrics and garments in Akkadian documents. *Journal of Ancient Near Eastern History* 3 (2), 1–28.
- Thavapalan, S. (2018b) Radiant things for God and men: lightness and darkness in Mesopotamian languages and thought. *Colour turn. An Interdisciplinary and International Journal* 1, 1–36.
- Thavapalan, S., Stenger, J. and Snow, C. (2016) Color and meaning in Ancient Mesopotamia: the case of Egyptian blue. *Zeitschrift für Assyriologie und Vorderasiatische Archäologie* 106 (2), 198–214.
- Thomas, A. (2014) In Search of Lost Costumes. On royal attire in Ancient Mesopotamia, with special reference to the Amorite kingdom of Mari. In M. Harlow, C. Michel and M-L. Nosch (eds), *Prehistoric, Ancient Near Eastern & Aegean Textiles and Dress*. Ancient Textiles Series 18. Oxford: Oxbow Books, 74–96.
- Thomason, A. K. (2019) The phenomenology and sensory experience of dress in Mesopotamia: the embodiment of discomfort and pain through dress. In M. Cifarelli (ed), *Fashioned Selves, Dress and Identity in Antiquity*. Oxford: Oxbow Books, 219–232.
- Tilley, C. (2007) Materiality in materials. *Archaeological Dialogues* 14 (1), 16–20.
- Toren, C. (1999) *Mind, Materiality, and History*. London: Routledge.
- Turner, T. (1980/1993) The Social Skin. In C. B. Burroughs and J. Ehrenreich (eds), *Reading the Social Body*. Iowa City: University Press of Iowa, 15–39.
- Van Damme, T. (2012) Reviewing the Evidence for a Bronze Age Silk Industry. In M-L. Nosch and R. Laffineur (eds), *KOSMOS, Jewellery, Adornment and Textiles in the Aegean Bronze Age*. Proceedings of the 13th International Aegean Conference / Rencontre Égéenne internationale, University of Copenhagen, Danish National Research Foundation's Centre for Textile Research, Copenhagen, 21–26 April 2010. *Aegaeum* 33, Peeters: Leuven, 163–169.
- Van den Hout, T. (1994) Death as a Privilege. The Hittite Royal Funerary Ritual in J. M. Bremer, T. P. J. van den Hout and R. Peters (eds), *Hidden Futures. Death and Immortality in Ancient Egypt, Anatolia, the Classical, Biblical and Arabic-Islamic World*. Amsterdam: Amsterdam University Press, 37–75.
- Van Wees, H. (2005) Cloth, class and gender in Homer. In D. Cairn (ed), *Body Language in the Greek and Roman Worlds*. Swansea: The Classical Press of Wales, 1–36.
- Ventris, M. and Chadwick, J. (1973) *Documents in Mycenaean Greek, Three Hundred Selected Tablets from Knossos*,



- Pylos and Mycenae with Commentary and Vocabulary*.
Cambridge: Cambridge University Press.
- Vita J-P. (2010) Textile terminology in the Ugaritic texts. In C. Michel and M-L. Nosch (eds), *Textile Terminologies in the Ancient Near East and Mediterranean from the Third to the First Millennia BC*. Ancient Textiles Series 8. Oxford: Oxbow Books, 323–337.
- Vogelsang-Eastwood, G. (1994) *De kleren van de farao*.
Amsterdam: De Bataafsche Leeuw.
- Vogelsang-Eastwood, G. (1999) *Tutankhamun's Wardrobe*.
Rotterdam: Barjesteh and Co.
- Vogelsang-Eastwood, G. (2000) Textiles. In P. T. Nicholson and I. Shaw (eds), *Ancient Egyptian Materials and Technology*. Cambridge: Cambridge University Press, 268–298.
- Vogelsang-Eastwood, G. (2016a) Materials and Equipment. In G. Vogelsang-Eastwood (ed), *Encyclopedia of Embroidery from the Arab World*. London: Bloomsbury Academic, 23–34.
- Vogelsang-Eastwood, G. (2016b) Embroideries from the tomb of Tutankhamun. In G. Vogelsang-Eastwood (ed), *Encyclopedia of Embroidery from the Arab World*. London: Bloomsbury Academic, 51–57.
- Warburton, D. A. (2019) Value of colours: introduction. In S. Thavapalan and D. A. Warburton (eds), *The Value of Colour. Material and Economic Aspects in the Ancient World*. Berlin Studies of the Ancient World 70. Berlin: Edition Topoi, 9–34.
- Winter, I. (2000) The eyes have it: votive statuary, Gilgamesh's axe, and cathected viewing in the ancient Near East. In R. Nelson (ed), *Visuality Before and Beyond the Renaissance*. Cambridge: Cambridge University Press, 22–44.
- Witmore, C. (2014) Archaeology and the new materialism. *Journal of Contemporary Archaeology* 1 (2), 203–246.
- Wyatt, N. (2007) The Religious Role of the King at Ugarit. In K. Lawson Younger Jr. (ed), *Ugarit at seventy-Five*. Winona Lake Indiana: Eisenbrauns, 41–74.
- Young, D. (2006) The colours of things. In C. Tilley, W. Keane, S. Küchler, M. Rowlands and P. Spyer (eds), *Handbook of Material Culture*. London: Sage, 173–185.
- Zawadzki, S. (2006) *Garments of the Gods, Studies on the Textile Industry and the Pantheon of Sippar according to the texts from the Ebabbar Archives*. OBO 218. Fribourg: Academic Press Fribourg.

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