



MAŁGORZATA SIENNICKA, AGATA ULANOWSKA, MAŁGORZATA GRUPA

INTRODUCTION

Textile production has been a key craft in societies of the past in Europe and the Mediterranean. Continually increasing interest in textile studies has focused on scientific examination of archaeological and historical textiles and fibres, tools and working places, written sources and iconography, as well as on experimental approaches to textile technology. Due to these multidisciplinary studies, the elaborated technology and great social, cultural and economic significance of textile production has fully been recognised and systematically examined.¹ Additionally, the enhanced knowledge about past societies that manufactured and consumed textiles on both a regular, daily basis, and on special occasions, in various historical and functional contexts, opens new avenues of textile research. These studies have developed into new directions and, among other things, aim to explore multifarious questions regarding the organisation and dynamics of textile manufacture.² It has become even more apparent that textile craft was multifaceted, constantly transforming, and dynamically responding to diverse cultural, social and economic processes occurring within past societies.

This volume attempts, in particular, to examine the mechanisms and conceptual frameworks of textile production by

means of investigating the combined evidence of archaeological fabrics, textile tools and equipment, remains of working areas and dye-works, traces of various stages of textile manufacture, as well as written and iconographic sources. We ask questions about modes of production, the scale and level of standardisation of textile manufacture, the division of labour, involvement of craftspeople and elites in the production processes,³ the dynamics of technical and technological innovations and the manners by which they were diffused,⁴ and finally, the social, economic and symbolic value of textiles and textile tools.⁵ Production of fabrics is analysed from a large-scale perspective, presenting extensive data sets from various cultures and areas dating between the Early Bronze Age and the 19th century CE.

The majority of the papers collected in the present volume of *Fasciculi Archaeologiae Historicae* resulted from the conference ‘Dynamics and organisation of textile production in past societies in Europe and the Mediterranean’⁶ organised by Agata Ulanowska (formerly the Centre for Research on Ancient Technologies in Lodz, Institute

¹ For example Barber 1991; Gleba et al. 2008; Michel and Nosch 2010; Gleba and Mannering 2012; Bender Jørgensen 2012; Nosch et al. 2013; Engelhardt Mathiassen et al. 2014; Harlow and Nosch 2014; Nosch et al. 2014; Andersson Strand and Nosch 2015; Bender Jørgensen and Rast-Eicher 2016; Fanfani et al. 2016; Grömer 2016; Harich-Schwarzbauer 2016; Spantidaki 2016; Gaspa et al. 2017; Siennicka et al. 2018; Ulanowska and Siennicka 2018.

² Gillis and Nosch 2007; Vestergård Pedersen and Nosch 2009; Bender Jørgensen 2012; Nosch et al. 2013; Breniquet and Michel 2014; Vedeler 2014; Huang and Jahnke 2015; Brøns and Nosch 2017.

³ Cf. Costin 1991; Costin 2005; Costin 2007; Andersson 2003; Andersson Strand 2011; Rosenswig and Cunningham 2017.

⁴ Cf. Nosch 2015; Bender Jørgensen et al. 2018; Siennicka et al. 2018; Ulanowska and Siennicka 2018.

⁵ For example Jarva and Lipkin 2014; Brøns 2017; Wilkinson 2018; general on innovations see e.g. Kristiansen 2005.

⁶ Regretfully, not all of the originally presented papers could be published in this volume. For the complete list of the participants of the conference in Lodz and short summaries of their presentations, cf. Ulanowska et al. 2017. Additionally, this volume includes one contribution (by Łukasz Antosik and Tomasz Kurasiński) that has not been presented at the conference in Lodz.

of Archaeology and Ethnology, Polish Academy of Sciences; currently Institute of Archaeology, University of Warsaw), in scientific collaboration with Małgorzata Siennicka (formerly the Centre for Textile Research at the University of Copenhagen; currently Institute of Archaeology, University of Göttingen) and Małgorzata Grupa (Institute of Archaeology, Nicolaus Copernicus University in Toruń). The conference was held on the 21st and 22nd June 2017 in the Polish Academy of Sciences, Branch in Łódź.

The peer-reviewed contributions of the present volume are arranged geo-chronologically. Katarzyna Żebrowska presents in her paper, *The Early and Middle Bronze Age Textile Tools from the Aeolian Islands (Italy)*, an overview of textile tools, mainly clay spindle whorls and loom weights, and discusses the evidence for textile production in chosen prehistoric settlements in the Aeolian Archipelago in Italy, dating to the Early and Middle Bronze Ages (c. 1600-1250 BC). She suggests that the domination of heavy spindle whorls resulted from the use of plant fibres, such as full-length flax, while very heavy implements were used primarily for plying yarns or twining.

The contribution of Luca Bombardieri and Giulia Muti, Erimi Laonin tou Porakou. *A Textile Community of Practice in Middle Bronze Age Cyprus*, examines the rich evidence for textile production (textile tools, vessels and archaeobotanical remains) and its economic and social implications for the prehistoric community of the Middle Bronze Age (c. 2000/1950-1650 BC) site of Erimi Laonin tou Porakou on Cyprus. The authors identify textile activities and explore the organisation and scale of production in the settlement. In the discussion of the impact of textile production on the transmission of knowledge and expertise, a theoretical model of 'Communities of Practice' is applied.

In her paper *But How Were They Made? More about Patterned Textiles in the Aegean Bronze Age*, Agata Ulanowska analyses the iconography of textiles in Bronze Age Greece as a potential source of technical knowledge of the patterning and weaving techniques. The patterns on costumes at Akrotiri on Thera are examined as a case study. It is argued that the wall painters were aware of the technical details and techniques of actual textiles, and depicted them accurately, yet identification of specific textile techniques on the basis of the iconography of the frescoes is not possible.

Magdalena Przymorska-Sztuczka, in the contribution *Organisation of Textile Production in the Settlement of the Lusatian Culture at Ruda, Grudziądz Commune*, discusses evidence for spinning and weaving, based on the discovery of numerous spindle whorls, two potential loom weights, and possible remains of a warp-weighted loom. Textile tools at this site came to light mainly within households.

The modes of transmission of textile skills through women are examined by Alina Iancu. Her study *Weaving in a Foreign Land: Transmission of Textile Skills through Enslaved Women and through Inter-marriages in the Ancient Eastern Mediterranean and Pontus* is based mainly on historical and

literary sources, as well as iconography and archaeological evidence. The author argues that slavery and intermarriage can be seen as means of transmission of textile skills in the Ancient Mediterranean and beyond.

In the contribution titled *Clothing the Elite? Patterns of Textile Production and Consumption in Ancient Sudan and Nubia*, Elsa Yvanez presents abundant evidence of the textile tradition developed in the kingdom of Meroe in Nubia (300 BCE-350 CE). Fabrics and clothing discovered in graves and depicted on reliefs and statues, implements, and different modes of textile manufacturing are examined. It is suggested that the Meroitic textile industry reflected the social complexity and the ethnic diversity of the kingdom. The role of the administrative and religious elite is also addressed.

The paper *Textile Work in Shared Domestic Spaces in the Roman House: The Evidence from Latin Poetry* by Magdalena Öhrman, examines the materiality of textiles and textile crafts in Roman poetry. It suggests that certain male Roman authors had actual technical knowledge of textile manufacture, and this may be a result of sharing in their childhood domestic space with girls of elite houses and thus perceiving the training undertaken by them. This can be demonstrated through literary descriptions of textile activities.

Penelope Walton Rogers devotes her contribution *From Farm to Town: The Changing Pattern of Textile Production in Anglo-Saxon England* to alternations in textile production in the 5th-11th centuries CE. While textile production remained mainly farm-based, during the middle part of the period, large estates started producing high quality goods for the elites, small overseas trading centres channelled surplus cloths, and together with the emergence of towns in the 9th century, social and economic changes related to textile production can be observed. This laid the foundations for urban guilds and the cloth export of later centuries.

The contribution of Łukasz Antosik and Joanna Słomska, *Early Medieval Looms in Poland in the Light of Archaeological Finds*, refers to the existing archaeological evidence of looms used in Poland during the Early Middle Ages, and more particularly to the loom weights and other weaving tools. The warp-weighted loom, horizontal pit loom and horizontal foot loom are the only types to be reconstructed in relation to the archaeological finds. Another type, a two-beam loom, is considered to have possibly been employed in Poland as the analogies and iconography from other areas of Europe seem to suggest.

The paper of Łukasz Antosik and Tomasz Kurasiński, *Textile Finds from the Early Medieval Cemetery in Glinno, Sieradz District. New Data for the Research on Textile Production in Central Poland*, examines several textile finds from the inhumation cemetery of the early medieval period (mid-11th-mid-12th century AD) at Glinno in central Poland. Despite their poor preservation, scientific analyses could demonstrate that these were conventionally manufactured domestic textiles, similar to other finds from this region of Poland, and they were most probably used to warp funeral goods.

Riina Rammo and Jaana Ratas offer in their contribution, *An Early 13th Century Craft Box from Lõhavere in Estonia and Its Owner*, a study on a well-preserved birch bark box, which contained numerous objects related to textile crafts, such as jewellery, textiles and other items. The authors suggest that the owner of the box, possibly a woman from the hillfort, was a professional craftsperson experienced in various handcraft activities and specialised in making particular types of textile products.

The paper *Wooden Textile Tools from Medieval Poland* by Małgorzata Grupa discusses rarely preserved and published wooden objects, which most probably were employed in textile production. The author presents rich evidence from several medieval and modern period sites in Poland, such as Żółte, Opole and Gdańsk. She argues that even small communities, like the one at Żółte, could have effectively carried out the entire process of textile making, including preparing fibres, weaving, and finishing fabrics, by using a wide range of, among others, wooden implements.

A collection of luxurious textiles from the Hanseatic town of Elbląg (Elbing) is presented by Anna Rybarczyk. Her paper, *Textiles and Social Status. The Case of Late Medieval Elbląg*, combines the archaeological finds of lavish textiles, mainly these made of silk, with otherwise infrequently obtainable historical evidence regarding the owners of parcels where the particular items have been discovered. The collected archaeological and written sources open a discussion on consumption of luxurious items, in this case fabrics, by townspeople in Elbląg in the Middle Ages.

In the last contribution of this volume, Beata Miazga introduces us to textiles with metal threads from several funerary contexts dating to the modern period in Poland. In her study *Metal-Decorated Textiles in Non-Destructive Archaeometric Studies. Examples from Poland*, analytical methods, such as microscopic analyses and energy-dispersive X-ray fluorescence, enable identification of the metals most frequently used for making threads, i.e. of gilded silver, pure silver and copper.

The editors would like to express their gratitude to the authorities of the Institute of Archaeology and Ethnology and the collaborators from the Centre for Research on Ancient Technologies of the Polish Academy of Sciences, Branch in Lodz, for their help and financial support to organise the conference. Our special thanks are due to the director of the Institute Prof. Jerzy Maik, who kindly agreed to publish the proceedings of the conference in this issue of the *Fasciculi Archaeologiae Historicae* journal and provided the necessary funding for this publication.

The conference would not have been possible without the funding received by Agata Ulanowska from the National Science Centre in Poland for her research project *Textile Production in Bronze Age Greece – Comparative Studies of the Aegean Weaving Techniques* (FUGA post-doctoral internship at the Centre for Research on Ancient Technologies, Polish Academy of Sciences, awarded by the National Science Centre in Poland, DEC-2015/16/S/HS3/00085), and the funding received by Małgorzata Siennicka from the Research Executive Agency of the European Commission and the Marie Skłodowska-Curie Actions for her research on textile tools from Early Bronze Age Greece carried out at the University of Copenhagen (PIEF-GA-2012-329910).

Finally, the editors would like to cordially thank all the peer-reviewers and experts who kindly advised on the submitted papers, and contributed to the improvement of the publication. These are, in alphabetic order: Stephanie Auslebrook (Independent researcher, United Kingdom), Milena Bravermanová (Independent researcher, Czech Republic), Helena Březinová (Czech Academy of Sciences, Czech Republic), Anne P. Chapin (Brevard College, United States of America), Lindy Crewe (Cyprus American Archaeological Research Institute, Cyprus), Giovanni Fanfani (Deutsches Museum, Germany), Ana Grabundžija (Independent researcher, Germany), Karina Grömer (Natural History Museum Vienna, Austria), Mary Harlow (University of Leicester, United Kingdom), Sanna Lipkin (University of Oulu, Finland; University of Buffalo, United States of America), Ursula Rothamel (Textile conservator, Germany), John Peter Wild (University of Manchester, United Kingdom), Magdalena M. Woźniak (Polish Academy of Sciences, Poland).

Bibliography

- Andersson E. 2003. *Textile Production in Scandinavia during the Viking Age*. In: L. Bender Jørgensen, J. Banck-Burgess, A. Rast-Eicher (eds.), *Textilien aus Archäologie und Geschichte. Festschrift für Klaus Tidow*. Neumünster, 46-62.
- Andersson Strand E. 2011. *Tools and Textiles – Production and Organisation in Birka and Hedeby*. In: S. Sigmundsson (ed.), *Viking Settlements and Viking Society. Papers from the Proceedings of the Sixteenth Viking Congress, Reykjavik and Reykholt, 16th – 23rd August 2009*. Reykjavik, 1-17.
- Andersson Strand E., Nosch M.-L. (eds.) 2015. *Tools, Textiles and Contexts. Investigating Textile Production in the Aegean and Eastern Mediterranean Bronze Age*. Ancient Textiles Series 21. Oxford, Philadelphia.

- Barber E. J. W. 1991. *Prehistoric Textiles. The Development of Cloth in the Neolithic and Bronze Ages with Special Reference to the Aegean*. Princeton.
- Bender Jørgensen L. 2012. *Spinning Faith*. In: M. L. Stig Sørensen, K. Rebay-Salisbury (eds.), *Embodied Knowledge: Historical Perspectives on Belief and Technology*. Oxford, 128-136.
- Bender Jørgensen L., Rast-Eicher A. 2016. *Innovations in European Bronze Age Textiles*. "Prähistorische Zeitschrift" 91(1), 68-102.
- Bender Jørgensen L., Sofaer J., Stig Sørensen M. L. (eds.) 2018. *Creativity in the Bronze Age. Understanding Innovation in Pottery, Textile, and Metalwork Production*. Cambridge.
- Breniquet C., Michel C. (eds.) 2014. *Wool Economy in the Ancient Near East and the Aegean. From the Beginnings of Sheep Husbandry to Institutional Textile Industry*. Ancient Textiles Series 17. Oxford, Philadelphia.
- Brøns C. 2017. *Gods and Garments: Textiles in Greek Sanctuaries in the 7th to the 1st Centuries BC*. Ancient Textiles Series 28. Oxford, Philadelphia.
- Brøns C., Nosch M.-L. (eds.) 2017. *Textiles and Cult in the Ancient Mediterranean*. Ancient Textiles Series 31. Oxford, Philadelphia.
- Costin C. L. 1991. *Craft Specialization: Issues in Defining, Documenting, and Explaining the Organization of Production*. "Archaeological Method and Theory" 3, 1-56.
- Costin C. L. 2005. *Craft Production*. In: H. D. G. Maschner, Ch. Chippindale (eds.), *Handbook of Methods in Archaeology*. Lanham MD, 1032-1105.
- Costin C. L. 2007. *Thinking about Production: Phenomenological Classification and Lexical Semantics*. "Archaeological Papers of the American Anthropological Association" 17 (1), 143-162.
- Engelhardt Mathiassen T., Nosch M.-L., Ringgaard M., Toftegaard K., Venborg Pederson M. (eds.) 2014. *Fashionable Encounters: Perspectives and Trends in Textile and Dress in the Early Modern Nordic World*. Ancient Textiles Series 14. Oxford, Philadelphia.
- Fanfani G., Harlow M., Nosch M.-L. (eds.) 2016. *Spinning Fates and the Song of the Loom: The Use of Textiles, Clothing and Cloth Production as Metaphor, Symbol and Narrative Device in Greek and Latin Literature*. Ancient Textiles Series 24. Oxford, Philadelphia.
- Gaspa S., Michel C., Nosch M.-L. 2017. *Textile Terminologies from the Orient to the Mediterranean and Europe, 1000 BC to 1000 AD*. Zea E-Books 56 (<http://digitalcommons.unl.edu/zeabook/56>, accessed 12.11.2018).
- Gillis C., Nosch M.-L. B. (eds.) 2007. *Ancient Textiles, Production, Craft and Society. Proceedings of the First International Conference on Ancient Textiles, Held at Lund Sweden and Copenhagen, Denmark, on March 19–23, 2003*. Ancient Textiles Series 1. Oxford.
- Gleba M., Mannering U. (eds.) 2012. *Textiles and Textile Production in Europe: From Prehistory to AD 400*. Ancient Textiles Series 11. Oxford, Oakville.
- Gleba M., Munkholt C., Nosch M.-L. (eds.) 2008. *Dressing The Past*. Ancient Textiles Series 3. Oxford.
- Grömer K. 2016. *The Art of Prehistoric Textile Making. The Development of Craft Traditions and Clothing in Central Europe*. Veröffentlichungen der Prähistorischen Abteilung 5. Vienna.
- Harich-Schwarzbauer H. (ed.) 2016. *Weben und Gewebe in der Antike: Materialität – Repräsentation – Episteme – Metapoetik / Texts and Textiles in the Ancient World: Materiality – Representation – Episteme – Metapoetics*. Ancient Textiles Series 23. Oxford, Philadelphia.
- Harlow M., Nosch M.-L. (eds.) 2014. *Greek and Roman Textiles and Dress. An Interdisciplinary Anthology*. Ancient Textiles Series 19. Oxford, Philadelphia.
- Huang A. L., Jahnke C. (eds.) 2015. *Textiles and the Medieval Economy: Production, Trade, and Consumption of Textiles, 8th–16th Centuries*. Ancient Textiles Series 16. Oxford, Philadelphia.
- Jarva E., Lipkin S. 2014. *Ancient Textiles Were Expensive. How Do You Know That?* "Faravid" 38, 23-38.
- Kristiansen K. 2005. *Innovation and Invention – Independent Event or Historical Process?* In: C. Renfrew, P. Bahn (eds.), *Archaeology: The Key Concepts*. London, New York, 113-116.
- Michel C., Nosch M.-L. (eds.) 2010. *Textile Terminologies in the Ancient Near East and Mediterranean from the Third to the First Millennia BC*. Ancient Textiles Series 8. Oxford, Oakville.
- Nosch M.-L. 2015. *The Wool Age: Traditions and Innovations in Textile Production, Consumption and Administration in the Late Bronze Age Aegean*. In: J. Weilhartner, F. Ruppenstein (eds.), *Tradition and Innovation in the Mycenaean Palatial Polities. Proceedings of an International Symposium Held at the Austrian Academy of Sciences. Institute for Oriental and European Archaeology, Aegean and Anatolia Department, Vienna, 1–2 March, 2013*. Österreichische Akademie der Wissenschaften. Philosophisch-historische Klasse Denkschriften 487. Band. Mykenische Studien 34. Vienna, 167-201.
- Nosch M.-L., Koefoed H., Andersson Strand E. (eds.) 2013. *Textile Production and Consumption in the Ancient Near East: Archaeology, Epigraphy, Iconography*. Ancient Textiles Series 12. Oxford, Oakville.

- Nosch M.-L., Feng Z., Varadarajan L. (eds.) 2014. *Global Textile Encounters*. Ancient Textiles Series 20. Oxford, Philadelphia.
- Rosenswig R. M., Cunningham J. J. 2017. *Introducing Modes of Production in Archaeology*. In: R. M. Rosenswig, J. J. Cunningham (eds.), *Modes of Production and Archaeology*. Gainesville, Tallahassee, Tampa, Boca Raton, Pensacola, Orlando, Miami, Jacksonville, Ft. Myers, Sarasota, 1-28.
- Siennicka M., Rahmstorf L., Ulanowska A. (eds.) 2018. *First Textiles. The Beginnings of Textile Manufacture in Europe and the Mediterranean. Proceedings of the EAA Session Held in Istanbul (2014) and the 'First Textiles' Conference in Copenhagen (2015)*. Ancient Textiles Series 32. Oxford, Philadelphia.
- Spantidaki S. 2016. *Textile Production in Classical Athens*. Ancient Textiles Series 27. Oxford, Philadelphia.
- Ulanowska A., Siennicka M. (eds.) 2018. *Tradition and Innovation in Textile Technology in Bronze Age Europe and the Mediterranean*. "Światowit" 56 (2017).
- Ulanowska A., Siennicka M., Grupa M. 2017. *Dynamics and Organisation of Textile Production in Past Societies in Europe and the Mediterranean. 21-22 June 2017, Łódź, Poland*. "Archaeological Textiles Review" 59, 93-95.
- Vedeler M. (ed.) 2014. *Silk for the Vikings*. Ancient Textiles Series 15. Oxford, Philadelphia.
- Vestergård Pedersen K., Nosch M.-L. 2009. *The Medieval Broadcloth: Changing Trends in Fashions, Manufacturing and Consumption*. Ancient Textiles Series 6. Oxford, Oakville.
- Wilkinson T. C. 2018. *Cloth and Currency: On the Ritual-Economics of Eurasian Textile Circulation and the Origins of Trade, Fifth to Second Millennia BC*. In: K. Kristiansen, T. Lingqvist, J. Myrdal (eds.), *Trade and Civilisation. Economic Network and Cultural Ties, from Prehistory to the Early Modern Era*. Cambridge, 25-55.

