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# TexMeroe: New approaches to cultural identity and economics in ancient Sudan and Nubia through textile archaeology

## Background to the project

The TexMeroe project focuses on the textile industry of the kingdom of Meroe, located along the Middle Nile valley in modern Sudan and Nubia, and covering the Late Antique period from c. 350 BCE to c. 550 CE. At the very margins of the Roman empire, between the Mediterranean basin and the African savannahs, this kingdom developed a unique culture blend its sub-Saharan cultural roots with its pharaonic heritage and Hellenistic influences. Its history is well-known through impressive displays of royal power on the walls of its many temples and pyramids but aspects of its social organisation and economic system remain in the shadows. Due to the absence of relevant historical texts, craft material studies present valuable evidence and quantifiable data documenting these fundamental components of the Meroitic society. In this context, the study of textile production opens particularly interesting research avenues.

Since the beginning of archaeological exploration in Sudan and Nubia, thousands of textile fragments have been discovered in both cemeteries and settlements (fig. 1). Excavations also yielded numerous tools (fig. 2) used for their manufacture, as well as iconographic representations of people dressed in various costumes (fig. 3). More recent research has also revealed archaeobotanical remains shedding light on the ancient agricultural system and land use patterns. Taken together, these different sources document the entire *chaîne opératoire* of textile production, from fibre collection, to spinning, weaving and dyeing, all the way to tailoring and dressmaking. They also highlight the diversity of textile use in settlements – in homes, towns and temples – as well as illustrating the clothing

habits of a diverse population and the importance of textiles in funerary rites.

These questions were first studied in the doctoral dissertation *From fibres to cloth. Archaeology, production and uses of textiles in ancient Sudan and Nubia during the Meroitic period*, presented in 2015 in Lille University (France). Born out of the discoveries of the UNESCO International Rescue Nubia campaign in the 1960s and subsequent excavations at the exceptional sites of Qasr Ibrim, Ballana and Qustul, previous works on the subject were mainly focused on textiles from selected sites or regions (Bergman 1975; Mayer-Thurman & Williams 1979; Crowfoot 1984; Adams 2010; Adams & Adams 2013). A more comprehensive study was needed, taking into consideration all aspects of Meroitic textile production and the whole range of data from the entire breadth of the kingdom's territory. As recent excavations produced more craft and textile-related finds, it became paramount to place the still unpublished Meroitic textiles at the heart of the newly developing research on production organisation and the economy of ancient Sudan. The study of textile artefacts encompasses a wide range of key issues, such as agriculture and manufacturing techniques, the organisation of labour and trade, and the definition and communication of social status (Andersson et al. 2010; Harlow & Nosch 2014). With the support of the European Union's Horizon 2020 Research and Innovation Program, TexMeroe was developed as a Marie Skłodowska Curie fellowship (MSCA 743420) to help answer these lingering questions, using textile studies to better understand Meroitic society. The project has found a welcoming



Fig. 1: Fragments of a cotton textile from Gebel Adda cemetery (Lower Nubia, c. 300 CE), showing an openwork border and long fringes, torn from the original fabric and used as binding tapes for a shroud, inventory number ROM 973.24.2895 (Images: Elsa Yvanez with the authorisation of the Royal Ontario Museum © ROM)

home at the Centre for Textile Research (CTR) at the University of Copenhagen.

### Aims and methods

TexMeroe has been designed with two aims. The first is to study three different textile techniques characteristic of ancient Sudan, each of them embodying the relationship that existed between crafts and cultural identity. The second aim is to place Meroitic textile production within its economic environment, building a socio-economic model which integrates textile activities and products that can be used by archaeologists and historians in Sudan and beyond. In addition, several objectives and research questions are at the core of TexMeroe's activities. These include: producing a detailed analysis of manufacturing techniques specific to Meroitic populations; understanding the place of Meroitic textiles within the greater context of Mediterranean and African production; recognising textiles as a socially important medium, displaying social, religious, and ethnic belonging; using the textile industry's raw materials as case studies to help define the nature of Meroitic economy; understanding the organisation of textile production and its industrial model/s at both settlement and state levels; and identifying trading mechanisms by tracking textiles along exchange and diplomatic networks.

The different research themes explored through TexMeroe follow the entire life cycle of textiles, from raw material collection, through manufacturing processes, the multiple everyday uses and reuses of the fabrics to their final interment in the graves. The methodology is first and foremost archaeological: the research is firmly based on the analysis of the objects in interaction with their context of use and discovery. The project also combines the methods and resources from other fields including history, art history, ancient textile studies, material studies, anthropological theories, and archaeobotany, building on the CTR's experience in multidisciplinary approaches.

### Project structure and preliminary results

Meroitic textile techniques and identities in craft are often overshadowed by the famous Late Antique Egyptian tapestries, despite a remarkable synthesis between diverse influences coming from their African and Mediterranean neighbours. TexMeroe attempts to better define this rich tradition, by focusing on the detailed study of three characteristic techniques, including the openwork decorative borders created at the end of many fabrics in a technique apparently unique to Sudan. Resembling macramé or lace, it consists of grouping and regrouping the warps, and wrapping them with a supplementary weft thread so as to create bands of geometric lattice-work (Crowfoot

1984). The project analyses several examples of these openwork borders to understand and reproduce their construction. They will be compared to earlier macramé specimens, discovered on the Bronze Age site of Kerma (2400 to 1500 BCE), in order to trace the history of this technique and the evolution of this distinctive local taste. The second type of textile under consideration is pile weave. The extensive use of looped pile weave for the creation of soft and thick covers is undoubtedly the main characteristic of Meroitic furnishing textiles. The project aims to establish technical criteria for their study and comparison of specimens discovered at several Nubian sites, in order to highlight their diversity, track their evolution, and compare them with other contemporary productions. This study aims to unearth new information on the role of pile weave in clothing and/or furnishing and new elements regarding the transfer of craft techniques through time and space. The third aspect of Meroitic textile manufacture to be observed during the project is the use of dyes or pigments. About 40% of Meroitic textiles bear traces of dyes and tannins, which are mostly unidentified. The plants, pigments, and techniques used to apply colour on textiles will be investigated using high performance liquid chromatography connected to tandem mass spectrometry (LC-MS/MS) for dyes and UV radiation and visible-induced luminescence (VIL) imaging for pigments in collaboration with Magdalena Biesaga, from the Laboratory for Flow Analysis and Chromatography at the University of Warsaw (Poland) and Cecilie Brøns, who leads a pioneering project in ancient polychromy with the support of the Carlsberg Foundation (Denmark).

The economic landscapes of textile production will be scrutinised from fibres to consumers. Typical of the Sahelian regions of the Sahara, the Meroitic economy seems to have stood on the shifting patterns of production between sedentary populations and pastoral groups, the seasonal exploitation of the desert hinterlands, and the political centralisation and redistribution of goods (Edwards 2004: 164-169; Fuller 2014). In this theoretical framework, textile activities occupied a crucial position, both at settlement level and in the kingdom as a whole. Their remains have not been studied in detail and the influence of textile production remains under-represented in the understanding of Meroitic economy. Following the textiles' life cycle, TexMeroe intends to test the current economical hypotheses with quantifiable data.

At the beginning of the *chaîne opératoire*, the project focuses on the development of cotton production as a main raw material for textile manufacture. Recent

archaeobotanical studies (Fuller 2014; Clapham & Rowley-Cowny 2010) have shown that cotton was cultivated locally in Nubia and Central Sudan, dating back to at least the beginning of the first century CE. These discoveries corroborate the many cotton textiles found on Meroitic sites, sometimes representing more than 80% of the total assemblage. Widely used by the elite, this fibre is one of the main characteristics of textile production in ancient Sudan. Together with Charlène Bouchaud, archaeobotanist from the Muséum d'Histoire Naturelle (France), TexMeroe strives to assemble and analyse all available data from textile, environmental, and botanical studies, in order to understand the role of the Meroitic kingdom as an essential contributor to the cultivation and diffusion of cotton in the ancient world.

Further along in the manufacturing process, TexMeroe is working to place textile crafts in their domestic and industrial contexts, concentrating especially on spinning and weaving. In Sudan and Nubia, textile implements such as spindle whorls and loom weights are common finds (fig. 2). Present in both rural and urban settlements, from the southern site of Abu Geili on the Blue Nile to the northern Nubian city of Qasr Ibrim, these convey the importance of textile activities in the daily life of the Meroitic population. The sum of this material paints a vivid image of textile



Fig. 2: Spindle whorls from Meroe artisanal quarter and loom weights from Wad ben Naga palace and Meili Island settlement (c. 100-300 CE), Sudan National Museum inventory numbers 62.10.148, 24513, 24519 & 14573 (Images: © Elsa Yvanez)



Fig. 3. Funerary stela of a Meroitic lady and her son (?), from the cemetery of Karanog (Lower Nubia, c. 100-200 CE), Cairo Egyptian Museum inventory number JE40229. (Image: Reproduced from Wenig 1978: 205-206, no 127.)

manufacturing, from domestic production in living quarters to the creation of multitasking industrial areas. In collaboration with ongoing excavation programmes in the “Island of Meroe”, this research aims to restore the tools to their archaeological locations in order to understand how textile production was integrated into the urban landscape, in a single settlement as well as on a broader regional scale.

At the end of the production line, the TexMeroe project also studies the textiles’ destinations: the consumers and their modes of textile consumption. In a world where most of the population did not wear any clothing beside a small loincloth or a belt made of leather, garments of woven textiles had a tremendously important status. Mainly used by the administrative and religious elite of the kingdom, textiles were embedded in a complex network of resource management and central policies. Easily transportable and sometimes of considerable value, they were also prime candidates for exchange and diplomatic gift-giving, playing a central role in cementing political ties between the royal family, the court and the local elites. TexMeroe explores these questions, investigating the textiles’ position as luxury items in Sudan and identifying the evolving demands

of a noble class as its members chose different clothing according to their political allegiance, and their cultural identity and ethnic identity.

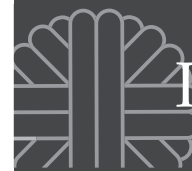
Less than a year after its start, the project is still in the data collection phase visiting museums to analyse their textile collections and making detailed studies of relevant specimens. Experiments will soon be conducted to verify the accuracy of technical reconstructions for the openwork borders and looped pile weaves. Sampling procedures are currently underway and will soon lead to laboratory analyses for dating, and dye and pigment identification. Work is progressing on the publication of an interdisciplinary volume about the archaeology of Old World cotton (Bouchaud & Yvanez, forthcoming), and material has been assembled from excavated settlements in order to reconstruct their textile production models. The study of elite clothing and the use of textiles as prestige goods has borne interesting results, published as articles in upcoming volumes (Yvanez 2018 and forthcoming, Yvanez & Wozniak forthcoming). The project will continue to benefit from the many learning opportunities offered by the CTR and its network of experts, deepening the understanding of Meroitic textile production and opening new avenues of research. It will also focus on more dissemination activities, such as seminars, classes, and online content in order to make this rare and precious material available to many more people within academia and beyond.

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### Bibliography

- Adams, N. (2010) Political Affinities and Economic Fluctuations: the Evidence from the Textiles at Qasr Ibrim. Godlewski, W & Laitar, A (eds) *Between the Cataracts. Proceeding of the 11<sup>th</sup> International Conference*



- for *Nubian Studies*. Warsaw: Warsaw University, PAM supplement series 2.1, 291-297.
- Adams, W. & Adams, N. (2013) *Qasr Ibrim: The Ballaña Phase, EES Excavation memoir 104*. London: Egypt Exploration Society.
- Andersson, E., Frei, K., Gleba, M., Mannering, U., Nosch, M.-L. & Skals, I. (2010) Old Textiles, New Possibilities. *European Journal of Archaeology*, 13.2: 149-173.
- Bergman, I. (1975) *Late Nubian Textiles, Scandinavian Joint Expedition 8*. Scandinavian University Books.
- Bouchaud, C. & Yvanez, E. (eds) (forthcoming) *Cotton in the Old World. Domestication, cultivation, use and trade, Journal d'ethnoécologie*. Paris: Muséum d'Histoire Naturelle.
- Crowfoot, E. (1984) Openwork fringes from Qasr Ibrim. *Meroitic Newsletter* 23: 10-16.
- Edwards, D. (2004) *The Nubian Past, an Archaeology of the Sudan*. London: Routledge.
- Fuller, D. (2014) Agricultural Innovation and State Collapse in Meroitic Nubia. The Impact of the Savannah Package. Stevens, C., Nixon, S., Murray, M. & Fuller, D. (eds), *Archaeology of African Plant Use, UCL Institute of Archaeology Publications 61*. Walnut Creek: Left Coast Press, 165-177.
- Harlow, M. & Nosch, M.-L. (2014) Weaving the Threads: methodologies in textile and dress research for the Greek and Roman world – the state of the art and the case for cross-disciplinarity. Harlow, M. & Nosch, M.-L. (eds), *Greek and Roman Textiles and Dress, an Interdisciplinary Anthology, Ancient Textiles Series 19*. Oxford & Philadelphia: Oxbow Books, 1-33.
- Mayer-Thurman, C. & Williams B. (eds) (1979) *Ancient Textiles from Nubia*. Chicago: Chicago Art Institute.
- Wenig S. (1978) *Africa in Antiquity II. The Arts of Ancient Nubia and the Sudan. The Catalogue*. Brooklyn.
- Yvanez, E. (forthcoming) Clothing the elite? Patterns of textile production and consumption in ancient Sudan and Nubia. Siennicka, M., Grupa, M. & Ulanowska, A. (eds), *Dynamics and Organisation of Textile Production in Past Societies in Europe and the Mediterranean*. Lodz University.
- Yvanez, E. (forthcoming) Precious textiles and diplomatic gift-giving in Late Antic Nubia (c. A.D. 350-550). Wagner-Hasel, B. & Nosch, M-L. (eds), *Gaben, Waren und Tribute: Stoffkreisläufe und antike Textilökonomie*. Hannover: Leibniz Universität Hannover.
- Yvanez, E. (2018) Se vêtir à Djebel Adda. Nouvelles Perspectives de recherche sur l'identité culturelle en Nubie méroïtique. Choimet, G. & Maillot, M. (eds), *Actualités archéologiques françaises au Soudan. Route de l'Orient, hors série 3*: 103-123.
- Yvanez, E. & Wozniak, M. (forthcoming) Changing Textiles – Shifting Identities? Costume and Political Allegiance in Late Antic Nubia. Hallman, A (ed.) *Outward Appearance vs Inward Significance: Addressing Identities through Attire in the Ancient World*. Chicago: Oriental Institute.

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