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EgYarn: Unravelling the thread: textile production in New Kingdom Egypt

The EgYarn project focuses on the study of the textile industry of New Kingdom Egypt (1550 BCE to 1070 BCE), one of the most well known and famous periods of the almost three millennia of Pharaonic history. It will consider the Theban area in particular, the capital, and the site of Gurob (Medinet el-Ghurob) which housed a royal harem.

In Ancient Egypt, textiles were used for numerous purposes including dressing pharaohs and queens, adorning gods' statues, and protecting mummies beneath multiple layers of bandages. For centuries, treasure hunters have torn open funerary shrouds and wrappings to steal precious items concealed beneath. Archaeologists have often collected these fabrics without giving them the proper attention because they were considered less informative than statues or *stelae*. However, textiles have information about ancient technology, social structures and economy woven into their fabrics. They bear witness to changes in fashion and the wealth, power, and the identity of individuals, while tools and workplaces provide clues about the available natural resources and social organisation. New Kingdom Egypt (1550 BCE to 1070 BCE) is a perfect case study to understand Ancient Egyptian textile production since several sites yielded tools as well as textiles.

The project EgYarn will provide a new perspective on New Kingdom social and economic organisation by demonstrating how textiles were produced, using which tools, by whom, and for whom. Starting from a piece of fabric, it will unveil the various stages of its creation, from the raw fibre to spinning and weaving, to focus on the hands that prepared it. In addition, by means of careful analysis of cases studies, such as Gurob and Deir el-Medina, social contexts and

the economic aspects of textile production will be investigated.

The project will create a comprehensive and up-to-date information base, recording the details of New Kingdom textile traditions and locating them in the Late Bronze Age production landscape between the Mediterranean basin and the southern reaches of Nilotic Africa.

Textile tools used for spinning and weaving fibres as well as a careful selection of representative textiles will compose the dataset. Technical analysis of each object will provide an understanding of how it was used and what could be produced with it. Complete measurements of tools are required, as well as examination of fibres with a digital microscope. A large number of the textile tools are made of wood. An extensive analysis of the different species used will provide clues about the operators and the resources available in a community (using high-quality wood would have probably cost more than locally available materials).

The primary focus is on objects excavated at two key sites, Deir el-Medina and Gurob during the 19th and 20th centuries. These are stored in several European collections; to these, it would be necessary to add minor collections of objects excavated at other New Kingdom sites, such as Thebes and Abydos, to give as wide a picture as possible. This project offers the opportunity to reunite tool assemblages which have been spread across different European institutions and to provide information about their current locations. Material kept in Egypt from recent excavations will also be analysed in order to acquire data about discovery contexts. A literature review focusing on ongoing investigations and better-documented assemblages,



Fig. 1: Spindle 526.a, Manchester Museum (Image: Chiara Spinazzi-Lucchesi)

such as Tutankhamon's fabrics (Vogelsang-Eastwood 1999; Pfister 1937; Crowfoot and Davies 1941) and finds from Tell el-Amarna (Kemp and Vogelsang-Eastwood 2001) will complement the data collection. Experimental archaeology will be necessary to fully comprehend the objects under scrutiny, especially the wooden spindles and other tools for fibre processing: 1) Exact copies of the wooden spindles used in New Kingdom Egypt will be made to test them and to try to understand the thread qualities that could be obtained from each spindle type, and the associated advantages and/or difficulties.; and 2) The main source of fibres in Ancient Egypt was flax; the appearance of surviving Egyptian flax fibres is quite different from that of modern fibres even those treated with traditional methods of retting and heckling which have been used since Roman times at least. Ancient Egyptian flax fibres may have undergone a different preparation process. Experimental archaeology will help to understand which methods are closest to those

adopted by the Ancient Egyptians, without being influenced by later traditions.

One of the goals of the research is to understand who produced the textiles and where. The comprehensive analysis of a large data set combining archaeological and written sources will help to test past hypotheses and offer a better understanding of the economic system linked to textiles. Deir el-Medina appears to offer a fascinating case-study of local manufacture and state-controlled redistribution, while Gurob will provide data about production tightly connected with the royal court. Specific documentary sources will be used to understand who produced the textiles and with what aim.

The combined analysis of archaeological and textual sources will provide answers to fundamental questions: Where and how were textiles produced? Is it possible to differentiate between domestic and institutional production? Did the consumption of home-produced textiles extend beyond the family sphere? And what relationship did the Egyptian textile tradition have with Mediterranean and African traditions? Decoding the New Kingdom's textile industry will create a new understanding of a fundamental aspect of the Ancient Egyptian economy in its heyday.

Acknowledgments

EgYarn is a Marie Skłodowska Curie fellowship (MSCA 890144), thanks to the support of the European Union's Horizon 2020 Research and Innovation Program, and is hosted at the Centre for Textile Research at the University of Copenhagen.

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