Textile production in Egypt from the Old to the Middle Kingdom: Reconstructing the chaîne opératoire (3H220628)

A Data Management Plan created using DMPonline.be

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Project abstract:

Textiles were fundamental to ancient societies, yet are under-represented in archaeology. Even in Egypt, where the dry desert has created exceptional preservation conditions for organic materials, very few of these surviving textiles have been studied in detail. In the last few decades Egyptian textiles have seen some increase in interest. There is however much that remains unknown, especially regarding textiles from the Old- to Middle Kingdom (OK-MK, 2686-1650 BCE). This gap in our knowledge cannot be explained by a lack of evidence, since there are many large pieces of fabric from this period preserved in museums. Moreover, this period has produced a number of iconographical depictions of textile workshops. These models and paintings form the base of our current knowledge of ancient Egyptian textile production, and have been generally interpreted through the lens of West-European production methods. Yet the extant material reveals that the production process would have looked completely different in Egypt.

This project aims to reconstruct the chaîne opératoire by comparing the attributes of the physical textiles with the iconographic evidence. The study comprises collections of OK-MK textiles housed in museums, complemented by data from recently excavated material found in dated contexts. By combining this data with iconography and experimental archaeology, I expect to gain significant new insights into an understudied period of textile history.

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FWO DMP (Flemish Standard DMP)

1. Research Data Summary

List and describe all datasets or research materials that you plan to generate/collect or reuse during your research project. For each dataset or data type (observational, experimental etc.), provide a short name & description (sufficient for yourself to know what data it is about), indicate whether the data are newly generated/collected or reused, digital or physical, also indicate the type of the data (the kind of content), its technical format (file extension), and an estimate of the upper limit of the volume of the data.

				Only for digital data	Only for digital data	Only for digital data	Only for physical data
Dataset Name	Description	New or reused	Digital or Physical	Digital Data Type	Digital Data format	Digital data volume (MB/GB/TB)	Physical volume
		Please choose from the following options: • Generate new data • Reuse existing data	*Please choose from the following options:* • Digital • Physical	*Please choose from the following options:* • Observational • Experimental • Compiled/aggregated data • Simulation data • Software • Other • NA	*Please choose from the following options:* • .por, .xml, .tab, .cvs,.pdf, .txt, .rtf, .dwg, .gml, … • NA	*Please choose from the following options:* • <100MB • <1GB • <100GB • <1TB • <5TB • <10TB • <50TB • >50TB • NA	
Literature	Bibliographic references and files about egyptian textiles, textile iconography, textile archaeology etc.	reuse	digital	Compiled/aggregated data	.pdf, .xml	<100GB	
Textile production Iconography	image files, drawings, metadata and (digital) notes of textile scenes in tombs (in situ) and models (museum objects)	new (but reusing some existing images from museums, or previous epigraphic surveys)	digital	• Compiled/aggregated data • Observational	.png, .jpg, .docx, .pdf	<100GB	
Textile analysis data	measurements, drawings, photographs, microscope images and notes gathered from physical textiles from museum collections and recent excavations	new	digital and physical	• Observational • Experimental	.jpg, .png, .raw .cvs, .xls .docx	<100GB	several notebooks, relevant data will be digitised
Experiment data	observations, pictures and samples from textile experiments such as flax processing, "spinning" and weaving	new	digital and physical	• Observational • Experimental	.jpg, .png .docx	<1GB	about 1 or 2 archival boxes of textile experiments

If you reuse existing data, please specify the source, preferably by using a persistent identifier (e.g. DOI, Handle, URL etc.) per dataset or data type:

Data contained in published papers and books will be used.
One dataset from period outside of the project scope will be used as comparison material. This data was gathered by Gillian Vogelsang-Eastwood:
https://www.amarnaproject.com/pages/recent_projects/material_culture/workmans.shtml
Some pre-existing images from museums and drawings from epigraphic surveys will be included in the dataset on iconography.

Are there any ethical issues concerning the creation and/or use of the data (e.g. experiments on humans or animals, dual use)? Describe these issues in the comment section. Please refer to specific datasets or data types when appropriate.

- No

Will you process personal data? If so, briefly describe the kind of personal data you will use in the comment section. Please refer to specific datasets or data types when appropriate.

- No

Does your work have potential for commercial valorization (e.g. tech transfer, for example spin-offs, commercial exploitation, …)? If so, please comment per dataset or data type where appropriate.

- No

Do existing 3rd party agreements restrict exploitation or dissemination of the data you (re)use (e.g. Material/Data transfer agreements/ research collaboration agreements)? If so, please explain in the comment section to what data they relate and what restrictions are in place.

- No

Are there any other legal issues, such as intellectual property rights and ownership, to be managed related to the data you (re)use? If so, please explain in the comment section to what data they relate and which restrictions will be asserted.

- No

2. Documentation and Metadata

Clearly describe what approach will be followed to capture the accompanying information necessary to keep data understandable and usable, for yourself and others, now and in the future (e.g., in terms of documentation levels and types required, procedures used, Electronic Lab Notebooks, README.txt files, Codebook.tsv etc. where this information is recorded).

1) Bibliographic references are organised in Zotero, in different folders per subject, and with tags for chronology, geography, actions etc. They are linked to the digital files.
2) The pictures, metadata and annotations are stored in structured folders on my drive. A readme file makes this structure accessible to others when I deposit it in the RDR. During my project this data will be compiled in an annotated catalogue per object/depiction, which I intend to publish in some form.
3) The textile analysis data (measurements, drawings, pictures, microscopy images and metadata) is stored in folders structured per site/museum. I will include a document with an overview of the sites and contexts studied in the main folder, along with the key to museum abbreviations. All textiles have an individual object number to identify them, which is also used in the microscopy images. The observations and measurements that are collected in Excel and Filemaker will be exported to a .csv format before sharing them on the RDR.
4) The observations and pictures from the textile experiments will also be stored together in structured folders, together with the written reports to make them accessible.

Will a metadata standard be used to make it easier to find and reuse the data? If so, please specify (where appropriate per dataset or data type) which metadata standard will be used. If not, please specify (where appropriate per dataset or data type) which metadata will be created to make the data easier to find and reuse.

- No

There is no metadata standard for my particular field. I am however not the first one to work with archaeological textiles, and thus my database format is inspired by that of other textile archaeologists, and adapted to make it work for my particular material and research questions. As such it is compatible and comparable with databases of other scientists in my field.

3. Data storage & back-up during the research project

Where will the data be stored?

All my data will be stored on my KU Leuven OneDrive, since I am the only one working on this research project. The KUL offers 2TB, with the possibility of further expansion if needed.

How will the data be backed up?

By storing my data on my KU Leuven OneDrive, I will keep it safe and accessible from multiple devices. Data that is generated on my laptop's hard drive, like microscopy images, are saved to my OneDrive daily. Images taken on other devices are also regularly saved to the OneDrive. During fieldwork in Egypt, I make sure to regularly get internet, so my OneDrive synchronises.
Physical notes and sketches/drawings are photographed before travelling, and properly digitised using afterwards.

Is there currently sufficient storage & backup capacity during the project? If yes, specify concisely.
If no or insufficient storage or backup capacities are available, then explain how this will be taken care of.

- Yes

Yes, the 2TB of free OneDrive storage should be enough for the data in my project.

How will you ensure that the data are securely stored and not accessed or modified by unauthorized persons?

The KU Leuven OneDrive accounts are managed by KU Leuven ICTS. They are protected by multi-factor authentication. My research project does not involve personal, sensitive or protected data, so OneDrive offers me enough security. Microsoft encrypts its data and data transfers, for further information see https://icts.kuleuven.be/sc/english/storage/onedrive.

What are the expected costs for data storage and backup during the research project? How will these costs be covered?

The KU Leuven OneDrive is offered for free, there are no costs involved.

4. Data preservation after the end of the research project

Which data will be retained for at least five years (or longer, in agreement with other retention policies that are applicable) after the end of the project? In case some data cannot be preserved, clearly state the reasons for this (e.g. legal or contractual restrictions, storage/budget issues, institutional policies...).

My newly generated data (point 2, 3 and 4 above) will be stored for at least 10 years after the end of the research project. There are no foreseeable restrictions on the data.

Where will these data be archived (stored and curated for the long-term)?

The data and metadata will be stored on the KU Leuven newly launched Research Data Repository (RDR).

What are the expected costs for data preservation during the expected retention period? How will these costs be covered?

The KUL RDR provides 50GB free storage per year, which should be enough for my dataset(s).

5. Data sharing and reuse

Will the data (or part of the data) be made available for reuse after/during the project? In the comment section please explain per dataset or data type which data will be made available.

- Yes, in an Open Access repository

1) The assembled literature will not be made available for reuse, because of copyright. I can however share a file upon personal request.
2) The iconographic data will be made available Open Access, perhaps in a published catalogue form. I am still discussing options for publication.
3) The data collected from the physical textiles will be available after the end of my project, and publication of the analysis. The measurements, metadata and pictures will be available on the RDR.
4) The documentation of the experiments will also be included in my reposited datasets. I intend to publish the results in an OA article.

If access is restricted, please specify who will be able to access the data and under what conditions.

I do not see any reason why access to my data should be restricted. Some images and drawings from other publications could still be under copyright, but when properly attributed this should not form an issue.

Are there any factors that restrict or prevent the sharing of (some of) the data (e.g. as defined in an agreement with a 3rd party, legal restrictions)? Please explain in the comment section per dataset or data type where appropriate.

- No

Where will the data be made available? If already known, please provide a repository per dataset or data type.

All will be made available on the KU Leuven Research Data Repository (https://rdr.kuleuven.be/).

When will the data be made available?

After the end of the project and upon publication of the results of the research project.

Which data usage licenses are you going to provide? If none, please explain why.

The data will be published under a CC-BY license. This means that it is freely reusable with attribution.

Do you intend to add a PID/DOI/accession number to your dataset(s)? If already available, you have the option to provide it in the comment section.

- Yes

I do intend to do so once it is uploaded.

What are the expected costs for data sharing? How will these costs be covered?

I do not expect any costs from data sharing.

6. Responsibilities

Who will manage data documentation and metadata during the research project?

I will manage all data and metadata.

Who will manage data storage and backup during the research project?

I will manage all storage and backup.

Who will manage data preservation and sharing?

I will manage data preservation and sharing, with the approval of my supervisor.

Who will update and implement this DMP?

I am responsible to update and implement this DMP.