Master-Thesis in Conservation-Restoration:

Facing East
The Study and Conservation Treatment of a Child's Garment from the Textile Finds of the Archaeological Site of Assi El-Hadath in Lebanon

Fig. 1: Front side of child's garment before conservation

Fig. 2: Front side of child's garment after conservation

Fig. 3: Applying the dye gel on nylon tulle for partial dyeing

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Abstract

The artefact selected for this research and thesis is the property of the *Direction Générale des Antiquités du Liban (DGA)*, and is part of the assemblage in textiles found from the cave Assi El-Hadath in Northern Lebanon. It was discovered in the course of excavations led by a team of speleologists from the *Groupe d´Etudes et de Recherches Souterraines du Liban (GERSL)*, conducted between 1988 and 1993 in the Qadisha Valley. The object is a child's garment dated to the 13th century. The object was discovered between the legs of one of the mummified bodies buried in this cave.

The thesis focusses primarily on the conservation of this object and the research behind the conservation decisions. Particular attention is paid to the condition assessment and technical analysis of the garment, examining the pattern construction and the sewing order, as well as the meaning and function of the garment within the context of its discovery. Treatment decisions, notably investigating and choosing the proper colouring agent for the supporting fabric are focussed on. This supporting fabric was used in a sandwiching method, objects were stabilised between two layers of nylon tulle fixed with a correspondent stitching technique. Although a significant part of the conservation work is designing an appropriate mount, from both the aesthetic and preventive aspect of conservation, the timeframe of the Master's thesis could not allow its practical execution.

The aim of this work is to select the most appropriate treatment from both an ethical and aesthetic point of view, keeping in mind the constraints and limitations of conservation actions, which aim to stabilise the object though ensuring the reversibility of the interventions. The thesis emphasizes how conservation can retain important contextual information on the object, which allows for a better understanding of its function and meaning within the historical context.

Condition and conservation concept

Various scientific analyses and tests have contributed to understand the problems of the object and to develop a well-funded conservation approach. The basic conservation problem of the child's garment were its three dimensional structural pattern pieces, which were heavily creased, partially collapsing (due to the bleached linen warp threads) or even completely missing. Introducing a new support fabric to the object to stabilize the object was the major technical obstacle that had to be overbridged. Stabilization of the weakened areas by covering some of the pattern pieces with support fabric and by that, covering important visual information, leads to an ethical question.

Nylon tulle partially dyed in the shades matching the object was selected as the appropriate support fabric, as it provided the necessary strength, yet did not visually obstruct the appearance of the object and was easily distinguishable from the original materials. The conservation concept further involved the cleaning of the garment, flattening the heavy creases by humidification, stabilization of weakened areas, and developing mounts for transport, storage, and display.

Choosing a partial colouring method of supporting fabric

Three commercially available colouring agents and their corresponding application methods were tested. The selection was based on their acceptance in the professional community. Two of the agents are used in the field of painting and printing, Dicrylan AM© for screen-printing and acrylic Liquitex® for painting. Lanaset® dye, the third agent tested, is commonly used in textile conservation.

Each technique of partial dyeing was examined with optical light microscopy considering positive and negative aspects. The combination of Lanaset® dye as colouring agent with methylcellulose as thickener, applied as dye gel, and finally steam dye fixing offered the most satisfactory results, due to the following reasons: even distribution of dye, availability of recipes from a database, stiffness of nylon tulle was unchanged, high and reliable repeatability and stable wet fastness.

A nylon tulle partially coloured with Lanaset® dye with methylcellulose matching to the different shades of the child's garment was chosen as suitable support fabric for this conservation treatment.

Conclusion

As the aim of conservation was to preserve the object and ensure the archaeological interpretation, a support fabric of inorganic material was intentionally chosen to prevent a possible cross-contamination between materials of a similar origin. In this way, if new research and sampling occur in the future, the object's integrity and authenticity are preserved, and a clear distinction from conservation materials is provided.

The second aspect of the decision making for the conservation concerned the colouring agents for partial dyeing of the nylon tulle. After thorough testing, the method of Lanaset® dye with methylcellulose was finally chosen. The selected method was applied as a dye gel on the tulle, which allowed a subtle shading of the support fabric according to the garment's different colour hues.

The garment was stabilised with a so-called sandwiching system, i. e. by sewing the weakened areas of the object between two layers of nylon tulle. This supporting method ensured a minimal amount of stitching through the object, but a maximum support and flexibility. The mount making will be undertaken according to the proposed design, following conservation process of all garments from this assemblage. Overall, the conservation treatment was considered successful, meeting all the required parameters.

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