
CONSERVATION PROBLEMS

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THE RESTORATION AND GLAZING OF TURFAN FRAGMENTS AT THE STAATSBIBLIOTHEK ZU BERLIN — PREUSSISCHER KULTURBESITZ

Around 40,000 ancient written documents from Central Asia are kept among the treasures entrusted to the Berlin State Library. They bear evidence of a thousand years of rich culture flourished along the Silk Road. The conservation of Turfan fragments and their restoration is important part of the work carried out at the Library restoration workshop. Four of the Library's sixteen restorers are familiar with the material. At the Third International Conference, the author of this paper had a chance to present the restoration approaches and practices of the Staatsbibliothek zu Berlin.

In the 1920s, most of the fragments were put between glass panes and have been thus preserved in that way until recently. Some words can be said about the method from a curatorial point of view. The method evidently has four main benefits:

- (i) transparency of the material;
- (ii) glass protects the contents from dust and insects;
- (iii) delicate fragments need not be touched when reading them;
- (iv) glass is relatively little reactive material, ensuring long storage of documents.

There are, however, disadvantages too: glass is a fragile material and if it is broken, the paper may be damaged

by sharp edges of the splinters. Besides, some fragments of a document stored in this fashion may get stuck to the glass, as a result of possible high concentration of moisture because of a barrier effect of the glazing.

Despite these risks, the head of the restoration workshop, Ernst Bartelt, and the curators of the Oriental Department decided to continue with the glazing. Yet an important aspect had to be modified. The new concept avoids the paper being pressed between the glass plates and makes some air exchange possible. To achieve this, a frame of cardboard band is pasted on one of the glass panes in order to avoid detrimental climatic effects.

A test shows the difference between the old and new glazing methods: Chinese and Japanese paper are evenly wet with water and glazed afterwards (see *fig. 1*). After one day, the difference is already visible: the conventional glazed samples (see *fig. 2*, right) look quite humid and the glass is steamed up, while the others with the "air frame" (see *fig. 2*, left) are drying evenly. This difference can be noticed till the fourth day. Therefore, one can say that the new method of conservation with the employment of an additional frame brings about a better air circulation between the glass panes, improving preservation conditions. In the present paper, I offer the description of the working process to demonstrate the new method.

Restoration process

First the objects are handed over to us, together with an order form the desired restoration steps to be checked. Then we take photographs of the objects for documentation, open the old glazing, examine the condition of the fragment and write it down in the restoration report.

Broken glass and splinters are removed, the glass is cleaned and the cardboard frame is pasted on. After that the fragment is mounted with small triangles of Japanese papers and paste (see *fig. 3*). Finally, the glazing is bordered with a gummed textile tape (see *fig. 4*).

What was glued can be removed if necessary. The restoration treatment and the materials applied are written down in the report; reversibility and documentation of the restoration are thus ensured. In the last seven years, about

400 fragments have been processed in this fashion to conserve them.

Not all of the objects demand mounting. Often treatment with more operations is required.

Fig. 5 demonstrates a detail of a fragment with some parts folded (the paper and an adhesive tape from an old repair). I applied a water/alcohol solution and a hair pencil to unfold the edges and remove the paper tape. The adhesive tape was taken off by mechanical means. *Fig. 6* gives the result of the operation.

Fig. 7 shows a crumpled fragment. To improve the legibility of the text the whole paper was moistened with a water/alcohol solution. I waited for the paper to relax, drew it carefully apart and dried it under weight. The ink spots were not treated as they did not make the text illegible (see *fig. 8*).