Revealing the history of the Ark Door from the Ben Ezra Synagogue in Cairo, Egypt

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**BACKGROUND**

In 2000, the Walters Art Museum in Baltimore, MD and Yeshiva University, New York, NY co-purchased a wooden panel thought to be one of the doors from the main Torah ark in the Ben Ezra Synagogue in Cairo. Previously, the door had become part of an international dialogue discussing its origins and history when Dr. Barry Ragone, a dentist from Florida purchased the door at an estate auction in 1993, for $37,500. Initial research by scholars from the Walters, and those contacted by Dr. Ragone, revealed textual evidence dating the door to the 11th century AD. This was supported by C14 dating done for Dr. Ragone. Although the object was identified as Fatimid based on date, further investigation reveals that the decoration and workmanship closely resemble 13th to 15th century AD Ayyubid and Mamlik designs. One of the most historically significant pieces in both the Walters and Yeshiva collections, the panel became the subject of a research project dedicated to placing it in its proper context using a multi-faceted approach to answer questions related to the date, material, history, and original decoration.

**ANALYSIS**

**Dating**

Questions have arisen pertaining to the accuracy of three radiocarbon 14 (C-14) dates extracted from the door and analyzed in 1998. These initial results support a date of 1040 AD as highly plausible. However, the workmanship and designs of the door are comparable to Ayyubid and Mamlik carving, which are not seen before the 13th century AD. Due to questions surrounding the method used to take the original samples, three new samples were taken and analyzed in 2012 by the Bafer Radiocarbon laboratory (NZ). The results indicate a 95% confidence of the calibrated dates 1043-1215 AD, confirming the original dates. Attempts were made to combine dendrochronology with C-14 in a technique called wiggle matching, but an insufficient number of tree rings negated this possibility (at least 30 rings are required). Current research is thus being centered on the carving, which may be a post-13th century AD embellishment of this 11th century door.

**Pigments**

In keeping with the approach for all analysis at the Walters, non-destructive techniques were used whenever possible, and guided precise sampling as necessary. Initial X-ray Fluorescence spectroscopy (XRF) indicated that paint visible (red, green, purple, brown, and gesso) visible on both sides of the door is post-1800, based on the identification of Zn (representing zinc oxide) and Ba (representing barium sulfate) in pigment and gesso layers. We were able to identify at least two paint campaigns. Areas in the inscription initially thought to be gilding were identified as brass flakes. Six cross sections were taken from discrete areas on the object to clarify XRF results. The location of the samples were chosen keeping in mind the sacred nature of the panel (i.e. inscriptions were not sampled). Cross sections revealed the presence of paint under the thick ZnO ground layer, including a gypsum ground under a red wash, coated with a thin layer of natural resin or varnish. SEM revealed the presence of ZnO even below this layer, confirming that the door was entirely re-painted post-1800.

**CONCLUSIONS AND FURTHER RESEARCH**

These methods of analysis have helped to partially reconstruct the history of the door, including its most recent, post-1800 paint campaigns and appearance and its origin. The door underwent at least 3 painting campaigns prior to removal from use. In its final permutation, it appears to have been dark red-purple with green pigments used to decorate the inscriptions and arabesque designs. The inscriptions were also "gilded" with brass. Water damage on the bottom of the door indicates a period of disuse, perhaps stored in the synagogue’s Geniza. Differences between the date of the wood and the carving are in keeping with similar objects with a long history of use, and provide an opportunity for further study. More work must be done to understand the door within the context of the synagogue, including comparisons of our findings to those of comparable polychrome woodwork from Ben Ezra and other Islamic buildings. Identification of similar pigments and ground layers may help to better situate the object within Islamic woodwork.

**CULTURAL HISTORY**

The Ben Ezra Synagogue is said to have been built in the 9-10th centuries in Old Cairo (Fostat), and has been associated with the medieval thinker Maimonides (1135-1204 AD). The Cairo Geniza documents were also discovered here in the 19th century. In 1013 AD, the earliest building was destroyed by Caliph al-Hakim.

It was thought that the Walters-Yeshiva panel dated to the first reconstruction of the synagogue in 1040-41 AD. Although texts from the 1800’s describe the carved wooden decoration in the synagogue, it is not until 1900 that we have conclusive evidence that new cupboards and doors were mounted in the central and subsidiary arks. Significant questions remain concerning the use and date of the panel.

**REFERENCES**