

Contemplations on the conservation of the Saint Francis Missal

Cathie Magee, The Walters Art Museum, Baltimore

The Walters Art Museum in Baltimore, Maryland, owns a medieval manuscript known as the Saint Francis Missal (W.75) which is considered to be a relic of touch of Saint Francis of Assisi. The Missal has 285 parchment folios bound between beech wood boards in a quarter leather binding. The original 12th-century binding was removed sometime during the 15th century when the book was rebound in its current form. The leather on the binding was replaced in the 19th century. The Missal was in a state of very poor condition, with the most concerning issues being old insect damage that had severely weakened the boards, the broken tawed supports along both joints, the degraded 19th-century leather that had almost completely split at the back joint, and splits and losses on the spine folds of the 12th-century parchment. Ultimately, it was decided that the Missal required in-depth treatment in order to stabilize the book and allow it to be safely handled by researchers, shown to religious devotees, digitized, and displayed in the galleries. This paper will discuss the treatment of the Missal, the ethical considerations surrounding the treatment, the development of gels for use on parchment as a treatment approach, and the results of non-invasive scientific analysis on the components of the manuscript.

The proposed treatment, which is currently underway, is to completely disbind the manuscript so that the damaged spine folds can be properly mended and stabilized. This will facilitate close examination of the media used in the writing, ruling, and illumination of the text and allow consolidation where necessary. The quires will be re sewn on new flexible supports and new end bands sewn at the head and tail. The wooden boards will be consolidated and repaired so they can be reattached to the textblock. No aesthetic compensation will be made to visible losses in the boards. A new quarter leather spine will be put on the book, replacing the degraded 19th-century leather. All remnants removed from the binding will be preserved.

The treatment plan became a delicate balance between the long-term benefits and consequences of stabilization versus invasive intervention. The Walters Art Museum has an obligation to make the Missal available to visitors and scholars. As an important second-class religious relic, the authenticity of the object is also at stake. Displaying the book closed on long-term exhibit is not feasible due to the uncertainty of gallery space usage over the coming years. If we chose to execute the repairs to the spine folds in situ and reinforce the existing 15th-century sewing so the boards could be reattached, the structure would still be weak and as a result, future display and use of the manuscript would have to be severely limited. Conversely, pulling the textblock would allow for extensive mending to be undertaken and re sewing on new supports would result in a much stronger binding. Choosing the second option for treatment will enable more visitors to see the book in person and will allow the book to be safely digitized, giving a wider audience access but also likely increasing interest in the object.

A new technique involving the use of gellan gum is being developed specifically for the treatment of the textblock of the Missal. While the rigid low-acyl gellan gum is frequently used in paper conservation, it is

too rigid and too wet for use on parchment. By comparison, high-acyl gellan gum is much more flexible and less wet. It can also be made with organic solvents. Mixtures of low-acyl and high-acyl gellan gum were investigated for the removal of parchment manuscript waste adhered to the wooden boards, while high-acyl gellan gum is currently being investigated for use in removing the adhesive on the textblock spine.

The treatment of the Missal has also allowed for scientific research and analysis on the materials used in both the original object and in subsequent restoration campaigns. X-radiographs of the wooden boards revealed the extent of the insect damage, splits, and losses before disbinding could occur. Fourier transform infrared (FTIR) spectrometry on the spine adhesive identified its components and assisted in determining the treatment approach. Digital imaging of infrared and ultraviolet reflectance has revealed graphite and ink inscriptions on the folios and boards that were later erased. In addition, non-invasive analysis such as x-ray fluorescence (XRF) and Raman spectrometry on the pigments in the miniatures will distinguish 19th-century retouching from 12th-century paint. Further planned testing includes shrinkage temperature testing of the parchment in the textblock, and MALDI-TOF to confirm the species identification of the parchment.