

Monastic Mysteries: Exploring the Adair Chantbook

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The Adair Chantbook At-A-Glance

Future Phases: Facilitating Access

Previously, the cost of a multispectral imaging

system could be extremely prohibitive—enough so

that such systems were usually only found in

expanded exponentially.

specialized libraries, large museums and foreign

universities. By developing an affordable version,

access to the research this technology permits is

for the University of Missouri-Columbia to use in

16th-century Czech missal and a 17th-century

examining their collections, and will work with them to apply this process to their latest acquisitions: a

We are currently building a replica of our system

- · Purchased 1968 in Seville, Spain by UMKC alumnus James Adain
- Donated to UMKC in 1973, currently held in LaBudde Special Collections
- Contains 102 parchment pages and nearly as many chants
- A compilation of many manuscripts, some of which date to the 15th centure

Traditional Humanities Inquiry

The 400-year-old Adair chantbook is marked by rich evidence of changes and alterations. Whole sections have been spliced in or cut out, and many leaves have been scraped clean and rewritten, editing which likely reflects changes in papal-approved liturgy as the language and order of the Mass was altered.

Examining this tangible evidence provides key information, but also points to paths of inquiry which require more data than is immediately visible. Here, a traditional humanities examination raises questions which it cannot satisfactorily answer.





This amateur script, clearly not the work of an official scribe, recurs throughout the Adair. Women were not trained as scribes, and convents (typically poorer than monasteries) were likely unable to hire a professional hand. The prevalence of inexpert scripting suggests nuns were performing the required liturgical edits themselves.

However irresistible this hypothesis may be, it cannot be properly tried if we limit our inquiry to the immediately visible data—the current contents of the scraped pages. The original content, what was edited or removed, must be made available in order to understand why and how these edits occurred. Accessing all the possible data requires a broadening of our approach to analysis and a targeted collaboration with other disciplines.



At left: The top four measures of this page have been scraped and rewritten in a comparatively unpracticed hand. Notice how the original text is faintly visible in areas, and elsewhere is completely obscured by the new text.

This is a clear example of an instance where the total data present exceeds what is discernable. A traditional "naked-eye" inspection will not produce a workable reading of the previous text and musical notation.

Technological Innovation: Beyond Tradition

When investigating any artifact, the ability to see *into* the object yields far more information than a surface-level inquiry.

As the undergraduate researcher on the UMKC CODICES team, I helped develop an imaging system to extend the capabilites of manuscript analysis, and address instances where a traditional inspection cannot deliver all possible data. Our multispectral process functions as a "digital autopsy," enabling analysis beyond what is immediately visible.

Below left: 38v has been scraped virtually blank.

The shadows that do remain are distorted by the bleed-through effect of ink on the recto side of the

Below right: 38v under VIS process.

Isolating the frequency at which the erased ink appears and filtering out the bleed-through effect renders the original text legible.





Based on the erased lyric revealed via our imaging we can now identify the mystery text on 38v as the chant *Tu es Petrus* (Thou art Peter).

Further Exploration: Three-dimensional Imaging



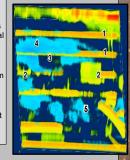
At present, we are also analyzing several manuscripts from the archives at Conception Abbey and will begin examining documents from the Mount St. Scholastica library this summer.

A key initiative behind our development of this system was the facilitation of regional manuscript research on par with larger institutions in other areas. This objective is furthered and complemented by bringing the innovative research techniques developed at our universities to work for and with our local cultural sites.

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Compiling multiple images taken at various wavelengths produces a 3-D virtual stack image, which offers up multiple points of research from a single 8x12 cm section.

In addition to revealing erased text (5), we can see:



- Compositionally different ink used after scraping (1)
- Scraped musical notes invisible to the eye (2)
 Isolation of notes from reverse side of page (3)
- The remains of a palmprint, rendered in blue (4)



- · CODICES Lab UMKC
- UM-Columbia Collections
- Conception Abbey
- Mount St. Scholastica



- Laura Ingalls Wilder House
- Mark Twain Boyhood Home
- Missouri Humanities Council
- Thomas Hart Benton collection
 Harry S Truman Library



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