

From Hahnemann's hand to your computer screen: building a digital homeopathy collection

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The University of California, San Francisco (UCSF), Library holds the unique manuscript of the sixth edition of Samuel Hahnemann's *Organon der Heilkunst*, the primary text of homeopathy. The manuscript volume is Hahnemann's own copy of the fifth edition of the *Organon* with his notes for the sixth edition, handwritten throughout the volume. There is a high level of interest in the *Organon* manuscript, particularly among homeopaths. This led to the decision to present a digital surrogate on

the web to make it accessible to a wider audience. Digitizing Hahnemann's manuscript and determining the best method of presentation on the web posed several challenges. Lessons learned in the course of this project will inform future digital projects. This article discusses the historical significance of the sixth edition of Hahnemann's *Organon*, its context in UCSF's homeopathy collections, and the specifics of developing the online homeopathy collection.

INTRODUCTION

The unique manuscript of the sixth edition of Samuel Hahnemann's *Organon der Heilkunst* (*Organon of the Medical Art*) is a gem in the Archives & Special Collections of the University of California, San Francisco (UCSF), Library. The library holds Hahnemann's own copy of the fifth edition of the *Organon* (the last edition published in Hahnemann's lifetime), in which he wrote notes and made revisions for the sixth edition (first published almost eighty years after Hahnemann's death) [1, 2]. Hahnemann's notes are written in the margins and on facing pages in the fifth edition, with longer notes on paper interleaved throughout the volume (Figure 1). The manuscript volume is part of the library's extensive collection of historic works in homeopathy.

Because the sixth edition of the *Organon* presented significant changes to homeopathic practice and because it is among Hahnemann's final professional writings, homeopaths from all over the world come to San Francisco to study the manuscript volume. This avid user group with a high level of interest made the *Organon* manuscript a strong candidate for digitization and presentation on the web. The digital *Organon* forms the cornerstone of an online collection, launched in early 2009, of significant works in the history of homeopathy <<http://www.library.ucsf.edu/collections/homeopathy/>>. The online collection also includes a handwritten transcript of Hahnemann's text and revisions used by Dr. Richard Haehl as the basis for the published German sixth edition (1921, Leipzig), as well as homeopathy pamphlets.

Digitizing Hahnemann's manuscript and determining the best method of presentation on the web posed several challenges. Lessons learned in the course of this project have better equipped library staff to undertake future digitization projects with rare and unique materials. This article discusses the historical significance of the sixth edition of Hahnemann's *Organon*, its context in UCSF's homeopathy collections, and the specifics of developing the online homeopathy collection.

Highlights

- Samuel Hahnemann's manuscript of the sixth edition of the *Organon der Heilkunst* is of special importance to homeopaths because of the significant changes from previous editions and the eighty-year gap between completion of the manuscript and publication.
- Creating a digital homeopathy collection composed of different types of physical objects required a combination of technical solutions.

Implications

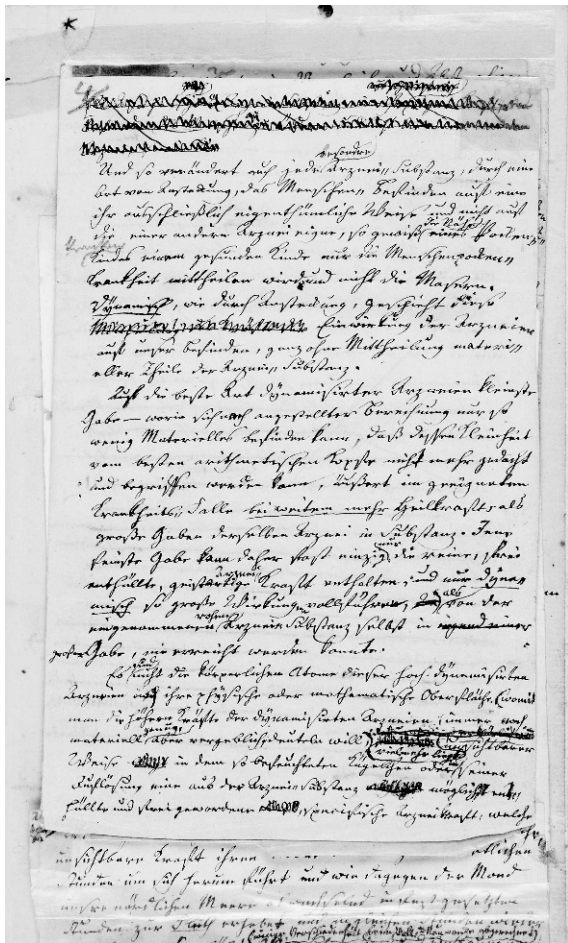
- Preparing a digital surrogate of a complex physical object revealed challenges and issues that will inform planning for future projects.
- Online digital objects do not necessarily reduce demand for the original items.
- A digital collection is a work in progress that must evolve and adapt as new technologies emerge.

HAHNEMANN'S ORGANON AND HOMEOPATHY

The *Organon* was Hahnemann's most significant work. The first edition, published in 1810 as *Organon der Rationellen Heilkunde* (*Organon of Rational Healing*), established a new mode of medical practice: homeopathy. It was considered "an epoch-making work" [3] and is recognized as the "Bible of Homeopathy" [4-6].

The *Organon* put Hahnemann at odds with the medical establishment in Europe, as homeopathy (unlike other alternative medical systems in use at that time) cannot be practiced in tandem with allopathic medicine. Further, Hahnemann's assertion that physicians should prepare their own remedies angered pharmacists and apothecaries [7].

Figure 1
One of Hahnemann's handwritten notes



Hahnemann revised the *Organon* five times, with each edition refining methods and adding knowledge gained from his homeopathic practice and research. Beginning with the second edition in 1819, the title was changed to *Organon der Heilkunst (Organon of the Medical Art)*. The fifth edition, published in 1833, was the last edition published during Hahnemann's lifetime [8].

The sixth edition

Hahnemann completed his work on the sixth edition in 1842, while living and practicing in Paris with his second wife, Mélanie, whom he had married in 1835 [7]. In February 1842, he wrote to his publisher, "After 18 months of work I have now finished the 6th edition of my *Organon*" [4, 5, 8, 9]. Hahnemann was unable to bring the book to publication before his death in July 1843. The tangible result of Hahnemann's work is the manuscript volume that now resides in the UCSF Library.

Much has been written about the significance of the sixth edition of the *Organon*. It contained changes to homeopathic practice that would have caused a stir had the book been published when it was written and were

controversial well into the twentieth century. In this edition, Hahnemann revised his thinking on the nature of disease, homeopathic concepts such as the "vital force," and methods of administering drugs [5, 7, 8].

Arguably, the most important change was the introduction, in section 270, of drug potencies based on a 1:50,000 dilution ratio and the "corresponding changes in dosage and administration" [5]. This represented a major shift in instructions on potency and administration given in the fifth edition [4, 5]. The new potencies came to be called "LM potencies" (by Rudolf Flury in the 1940s) and "Q potencies" (by Jost Kuenzli in 1960). For decades after the publication of the sixth edition (in 1921), many homeopaths ignored the LM potencies "on the grounds that the authenticity of the directions given in the edition of the *Organon* published by Richard Haehl in 1921 was in doubt" [5]. Haehl did not mention the new potencies in his introduction to the sixth edition, perhaps to de-emphasize them [5].

The sixth edition of the *Organon* was not published until 1921, nearly eighty years after Hahnemann completed it [1]. During those eight decades, homeopathy continued to develop without the new concepts that Hahnemann presented in his final work. Homeopathy practice in the United States, which flourished and expanded in the late nineteenth and early twentieth century, was based on the fifth edition [5].

Hahnemann's manuscript

Accounts differ as to the reasons for the long delay in publishing the sixth edition. Upon Hahnemann's death, his papers, casebooks, and unpublished writings, including the manuscript for the *Organon*, became the property of his widow, Mélanie, who intended to bring the sixth edition to publication at a later time. She only made the existence of Hahnemann's manuscript known publicly when false sixth editions began to appear [8]. Arthur Lutze published what purported to be the sixth edition in 1865 [10], and Mélanie Hahnemann was successful in having it withdrawn from publication due to its inaccuracy [8] (Table 1).

Mélanie Hahnemann's negotiations with various homeopaths in Germany, England, and North America to publish the sixth edition did not come to fruition [8, 9]. In his biography of Hahnemann, Haehl wrote of Mélanie Hahnemann's "craftiness" in her negotiations concerning the *Organon* [9]. According to some accounts, Mélanie Hahnemann, and later, her heirs, "jealously guarded" the manuscript, in hopes of some personal financial gain [3].

In one of the few sympathetic portrayals of Mélanie Hahnemann's motives, historian Rima Handley contends that Mélanie Hahnemann sought to protect her late husband's reputation. Knowing that elements of the sixth edition (such as the new potencies) would be controversial, Mélanie Hahnemann wanted to wait until the time was right to publish it and to oversee the production herself to ensure that the text was accurate [7].

Table 1
History of the manuscript of the sixth edition of the *Organon*

1842, February	Samuel Hahneman completes work on the sixth edition of the <i>Organon der Heilkunst</i> .
1843, July 2	Hahnemann dies in Paris. His widow, Mélanie, becomes the custodian of his professional writings.
1843–1865	Mélanie Hahnemann has a transcript copy made of Hahnemann's manuscript for the sixth edition of the <i>Organon</i> .
1865	Arthur Lutze publishes a purported sixth edition. Mélanie Hahnemann takes action to have it withdrawn from publication due to its inaccuracy.
1865–1878	Various homeopaths in Europe and North America negotiate with Mélanie Hahnemann to bring the sixth edition to publication; none are successful.
1870–1871	Samuel Hahnemann's manuscripts and casebooks are moved to the home of Karl von Bönninghausen, in Westphalia, for safekeeping during the Franco-Prussian War.
1878	Mélanie Hahnemann dies in Paris. The von Bönninghausen family takes over negotiations regarding Hahnemann's manuscripts, including the sixth edition of the <i>Organon</i> .
1897–1906	Richard Haehl approaches the von Bönninghausens several times to negotiate publication of the sixth edition; he is unsuccessful.
1920	James Ward and William Boericke purchase Hahnemann's manuscript for the sixth edition with Haehl's assistance.
1921	Haehl publishes <i>Organon der Heilkunst</i> , sixth edition, in Leipzig. This edition was prepared from the handwritten transcript copy.
1922	Boericke publishes <i>Organon of Medicine</i> , sixth edition (translated), in Philadelphia. This edition was prepared using Hahnemann's original manuscript.

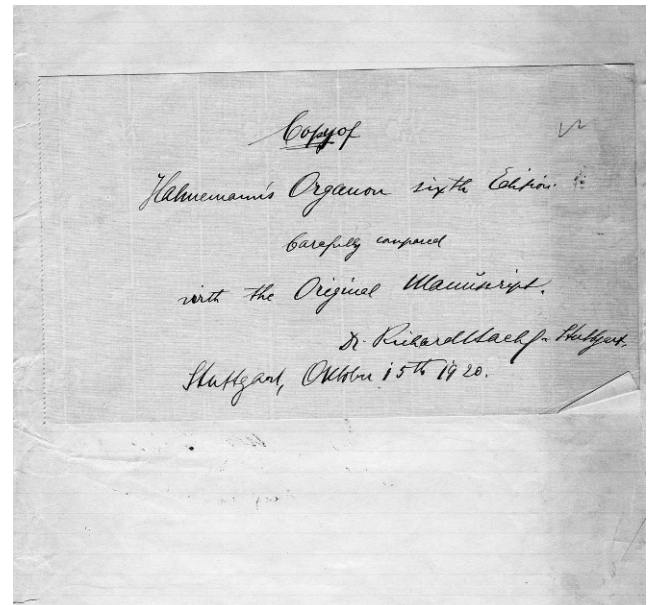
At some point, Mélanie Hahnemann had a handwritten transcript made of Hahnemann's volume and notes [4, 5, 6, 9]. No source tells who made the handwritten transcript, though Josef Schmidt notes that Mélanie Hahnemann had it in 1865 [6]. A note on the cover of the transcript reads, "Copy of Hahnemann's *Organon*, sixth Edition. Carefully compared with the Original Manuscript. Dr. Richard Haehl, Stuttgart, October 15, 1920" (Figure 2). The UCSF Library is fortunate to also hold this transcript, which Haehl used to produce the German sixth edition in 1921 [1].

During the Franco-Prussian War (1870–1871), Mélanie Hahnemann arranged to have all of Hahnemann's papers, including the manuscript for the sixth edition of the *Organon*, moved to the home of her son-in-law, the homeopath Karl von Bönninghausen, in Westphalia. After Mélanie Hahnemann's death in 1878, these materials became the property of the von Bönninghausen family [8].

At the time of her death, Mélanie Hahnemann had been attempting to negotiate the sale of Hahnemann's manuscripts to homeopaths in Cincinnati for \$50,000, but they were unable to raise that amount. The von Bönninghausens took over the negotiations, lowering the price to \$25,000, but the potential buyers still could not meet that price, so negotiations failed. Haehl, the German homeopath who would eventually bring the sixth edition to publication, approached the von Bönninghausens in 1897, in 1900, and in 1906, about acquiring Hahnemann's manuscripts, but his negotiations were also fruitless [9].

In 1920, James Ward and William Boericke, prominent homeopaths in San Francisco, purchased the

Figure 2
Cover of the transcript copy



manuscript for the sixth edition (the interleaved volume with Hahnemann's notes) for \$1,000 with Haehl's assistance. Ward related that he and Boericke had first inquired of Haehl about the manuscript in 1891 and indicated their desire to purchase it should the von Bönninghausens wish to sell it [3].

Haehl kept the handwritten transcript copy and used it as the basis for the German sixth edition, published in Leipzig in 1921 [1]. He sent Hahnemann's original manuscript volume to Ward and Boericke in San Francisco, and Boericke used it as the basis of the 1922 American edition [2]. At some later date, Haehl sent the transcript copy to San Francisco, though when or why is not known. (The bulk of Hahnemann's papers—including manuscripts, correspondence, and casebooks—did not leave Germany and are now housed at the Robert Bosch Institute for the History of Medicine in Stuttgart.)

The Homeopathic Foundation of California and the homeopathy collection of the University of California, San Francisco

In 1925, Ward and Boericke placed Hahnemann's manuscript volume in the library of the Homeopathic Foundation of California in San Francisco [3]. The foundation's library was relocated to the Hahneman Hospital of San Francisco in 1940. At that time, Dr. Howard Engle, recognizing the value of the *Organon* manuscript volume, placed it in a locked safe. Later, it was moved to a rented safety deposit box in a local bank.

In 1962, most of the Homeopathic Foundation of California's library (comprising more than 1,200 books, 160 serial titles, and hundreds of pamphlets) was donated to the UCSF Library. The manuscript of the *Organon*, however, remained in a safety deposit

box, under the care of Engle's sister-in-law, Elsa Engle. In February of 1972, Elsa Engle arranged with Dr. Otto Guttentag, UCSF Samuel Hahnemann professor of medical philosophy, to transfer the *Organon* manuscript to the UCSF Library. The handwritten transcript copy used by Haehl to prepare the 1921 sixth edition had been separated from the rest of the collection (or perhaps had never been placed with the collection) and remained in the Hahnemann Hospital library, apparently forgotten.

Meanwhile, homeopathy practice had ceased at the Hahnemann Hospital at some time in the 1960s. The hospital was renamed the Marshall Hale Memorial Hospital in 1975 and then merged with two other hospitals to eventually become the California Pacific Medical Center in 1991 [11].

The transcript copy of the manuscript came to the UCSF Library in 2008, after a librarian at the California Pacific Medical Center happened to find it and contacted UCSF's manager of archives and special collections. In the same box with the transcript was a scrapbook containing photographs of homeopaths and historic landmarks such as Hahnemann's home and monuments to Hahnemann—the illustrations for Haehl's biography of Hahnemann [9].

There has been a high level of interest in Hahnemann's manuscript of the sixth edition of the *Organon* since it first arrived at UCSF in 1972. Guttentag displayed it at the meeting of an international homeopathic conference in San Francisco later that year. Since then, homeopaths from all over the world have visited the UCSF Library to study the manuscript volume and Hahnemann's notes, particularly areas with extensive revisions, such as section 270 on the LM/Q potencies and section 284 on pre- and postnatal treatment.

Josef Schmidt spent a year studying Hahnemann's manuscript while preparing his "text-critical" German sixth edition in 1992 [12], widely considered to be a more accurate rendition of Hahnemann's text than previous editions were [8, 13]. It is not uncommon for homeopaths to use Schmidt's edition as a guide when studying Hahnemann's manuscript. Since the library's acquisition of the transcript copy, readers also study it side-by-side with the original manuscript and compare the two.

BUILDING THE DIGITAL COLLECTION

The high level of user interest in the *Organon* led to the decision to present it digitally on the web. The goal was to create a digital collection of UCSF's homeopathy holdings, using the manuscript volume of the *Organon* as the cornerstone of the collection. The online collection would showcase the prized manuscript, but also display other materials that are part of the overall homeopathy collection and create a forum for community discussion. The Harvard matrix for selecting material for digitization was used as reference to validate the reasoning for creating this digital collection, and it was determined that this was indeed a worthy project to undertake [14]. The digital

collection could start out small and increase in size as resources permitted. An evaluation of the collection commenced to ascertain what to include in a first iteration of this digital collection.

Challenges

There was no doubt that Hahnemann's manuscript volume would be a challenge to digitize and adequately represent on the web. Aside from the technical challenges, the manuscript presents issues in comprehension and preservation. Hahnemann's notes are written in early nineteenth-century German, using specialized terminology, and his handwriting is difficult to decipher. There are handwritten notes on the printed pages, on the interleaves between each printed page, and inserted as separate pieces of paper throughout the book. The paper is fragile and must be handled with great care. Most of the notes are taped to the appropriate page, but several are on loose pieces of paper. The detached notes tend to be in places where Hahnemann made extensive revisions. The physical condition of the inserted notes varies. In some cases, both sides of the sheets have been written on and the sheets have been folded multiple times, causing stress on the paper. Other notes have tape or paste stains obscuring the handwriting. The handwriting is quite small, but this small handwriting would be enhanced through digitization, which would allow the users to utilize zoom tools for better readability.

As more time was spent with the actual book, questions arose regarding the placement of those notes that were not taped or pasted in place. Because several different people had handled the manuscript over the years, it was uncertain whether all of the loose notes were still placed correctly in the volume. During this evaluation period, a Swiss homeopath (who could read Hahnemann's German) requested to see the manuscript and very generously offered to assist in deciphering the correct placement of the notes. She studied Hahnemann's manuscript along with Schmidt's text-critical edition [12] and determined that some of the loose notes were not correctly placed within the physical book.

Rather than risk the integrity of the book any further by attempting to move the physical notes, a solution needed to be found to represent their original placement accurately in the digital version. Thus, the digital book would not be a true surrogate, but an enhanced version of the analog object. This meant that any digital representation would need to allow users to open the notes separately from the printed pages in order to facilitate further discussion and research as to correct placement of the notes.

During this time, the handwritten transcript of the sixth edition arrived at the library, and it could therefore readily be included in the digital collection. The pamphlets, due to limited resources, needed to be culled down to a small sampling. The only challenge with these supporting materials was to decide how best to display them alongside the digital version of the *Organon*.

Methods

Several current digital book projects were reviewed as part of the evaluation process to help determine the best method for displaying this digital collection. Among these were Digital Dante at Columbia [15], the Library of Congress American Memory [16], the National Library of Medicine Turning the Pages [17], the Internet Archive [18], and Google Books [19]. Display options seemed divided between portable document format (PDF) and Flash-based flip-books. Presenting the transcript copy and, possibly, the smaller pamphlets in PDF form would be acceptable; however, this format seemed unwieldy for the *Organon* manuscript because of the nature of the handwritten notes. Additional consideration regarding the notes and the reverence users have for this volume rendered a PDF solution unsuitable, and it was quickly determined that a flip-book application would best re-create, digitally, the experience of viewing the manuscript.

Flip-books are Flash-based applications that provide a “wow” factor for electronic exhibits [20]. Ideally, this type of application would recreate the experience of turning pages with the added ability of zooming into the handwritten notes. The valuable content of the manuscript is in the handwritten notes; however, the idea of attempting optical character recognition (OCR) had to be tabled because handwriting is difficult to capture accurately. This left the challenging option of allowing users to open the complex notes in a separate window, while they view the printed pages at the same time. This was accomplished programmatically by adding a notes icon to those pages with complex handwritten notes, so that these could be opened separately from the flip-book.

Scanning of the transcript copy and the pamphlets was accomplished using an existing flatbed scanner in the archives. The *Organon* manuscript would require more careful treatment. Obviously, it could not be placed on a robotic scanner due to the fragility of the notes pages. This particular volume required expertise in handling books and a creative problem-solving spirit to address the specific needs of the handwritten notes.

A local vendor was selected to create the digital copy of the *Organon* manuscript using a combination of custom cradling, vacuum, and flatbed scanning techniques for both the printed pages and the handwritten notes. Some of the handwritten notes posed a particular challenge due to multiple folds, aging paper, writing on both sides, or attachment to the bound volume. In a few cases, the notes were already detached and could be placed on a flatbed scanner. In other cases, careful handling and cradling were necessary.

The vendor produced 3 sets of digital files at 600 pixels per inch (ppi): master archive TIFF files (raw files with no cropping or corrections); working TIFF files (rotated, cropped, and sized to 3000 ppi on the longest side); and derivatives (compressed JPEG files made from the working TIFF files).

The derivative JPEG image files of the *Organon* were placed in the flip-book application. Based on information from the Swiss homeopath, the digitized handwritten notes were moved to the associated printed pages to represent the assumptions of correct placement. Users would be able to keep the notes open, while referencing the text to facilitate further research into correct placement.

The first iteration of the online homeopathy collection is very simple. It was desirable to create a direct connection with the UCSF Library, and thus, the newly redesigned library website became a launching point. The homeopathy page is themed in conjunction with the rest of the library website and highlights the three primary resources that have been mentioned: the *Organon* manuscript, the transcript copy, and a pamphlet. Due to limitations of the flip-book application, at present, the site does not achieve the goal of inviting the user community to participate in an ongoing discussion. Staff is investigating ways to make this a future feature of the collection.

Lessons learned

As with all digitization projects, opportunities and risks need to be weighed against available resources, both personnel and fiscal. This played into the decisions to simplify the design of the website and the technology used to display the selected objects. Knowing that technologies continue to evolve, the display of this exhibit will be revisited within three years. With the advent of hypertext markup language (HTML) 5, it may be possible to move from the Flash-based flip-book to allow users to have a better experience viewing the *Organon* on portable devices. The Candide 2.0 project at the New York Public Library, using WordPress, is a promising solution for addressing the complex notes and allowing user comments [21]. The advent of launching this exhibit does not constitute an end to, but a beginning of an ongoing process for improvement.

CONCLUSION

The digital *Organon* has been popular among homeopaths and historians. However, demand to see the original has not diminished, and homeopaths still make the pilgrimage to San Francisco to connect with the original object. During a recent international homeopathic conference held in Los Angeles, four separate groups of homeopaths made a special side trip to San Francisco (requiring either a flight or a seven-hour drive) to study the *Organon* manuscript in person.

This was the first foray into creating electronic exhibits from the UCSF Library's rare book collections. It was important to begin with a high-demand object even though this manuscript is undoubtedly the most complicated item in the holdings. Starting with such a complex object helped to flush out some of the most difficult challenges in developing and presenting digital objects, along with solutions. The experience with the digital homeopathy collection serves as a foundation for planning future digital projects.

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