

Research Note

What Digitalized Archives Cannot Reveal: Reflections on Using Image Collections and Patient Records

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Introduction

In recent years, the advent of digital archives has opened up new avenues for historians of science, technology, and medicine to access collections that were previously inaccessible or difficult to reach. Since the turn of the millennium, scholars have engaged in a discourse on the potential and limitations of digital history, encompassing topics such as data preservation, academic integrity, and the implications of resource sharing in the digital age.¹ The impact of digitization on the handling and accessibility of scientific archives has also been a topic of discussion among historians of science. The evolution of digitization projects has progressed from merely encoding data to reproducing unique archival materials, thereby providing historians with unprecedented access to historical sources without the need for physical travel. While this shift facilitates preservation and extends public access, it also presents challenges, including questions about what gets digitized, who funds these efforts, and the potential loss of context associated with physical materials.² This research note presents three case studies conducted previously, which are discussed in detail. The aim is to examine the advantages and challenges of employing three unique forms of digitalized historical collections: photography, filmography, and patient records. Finally, an educational project recently undertaken is reflected upon.

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¹ Daniel J. Cohen, et al., "Interchange: The Promise of Digital History," *The Journal of American History* 95:2 (2008), 452–91.

² Brian Ogilvie, "Scientific Archives in the Age of Digitization," *Isis* 107:1 (2016), 77–85.

Medical Missionaries' Photo Albums

In the history of medicine, visual accounts have assumed an increasingly prominent role. One of the most evident reasons is that the practice originated from what Michel Foucault referred to as the “culture of the gaze,” which has shaped the comprehension of profound medical knowledge since the 18th century and beyond. However, with the advent of technology, the practice of gazing culture has become more intricate, as scientists have come to rely on visual tools to comprehend not only the human body but also the world around them. In an essay examining visual culture among medical missionaries, I employed the method of photo elicitation to construct the social biography of a missionary doctor, David Landsborough IV (1914-2010).³ This research delineates the historical meaning of missionary doctors' photo albums, arguing that these unique accounts are important in witnessing the material life of cultural encounters. In addition, I highlight three lesser-known aspects of missionary photography. First, visual accounts challenge the simplistic, essentialized notions of Western civilization and local culture that are often found in textual records. For example, missionaries who learned to use chopsticks and to carry infants using East Asian baby slings; Taiwanese children who learned to wear topees to prevent sunstroke. These examples demonstrate the blending of cultures between those considered “civilized” and those regarded as “unenlightened,” while discourses of discrimination and prejudices are evident in textual accounts of colonial history. Second, these albums reveal the practice of gift exchange among the individuals depicted in the photographs, as well as those who owned and collected them. While anthropological studies have focused on such practices in cultures under ethnographic scrutiny, similar practices are also observed among advocates of modern civilization. The same photographs appear in albums belonging to different missionaries, having been circulated among them as souvenirs, as travelers, or as greeting cards, following the establishment of local medical practices by the missionaries as sojourners. Additionally, loose photographs reveal a confused angle of “gaze” among owners of cameras. In my research, it is sometimes unclear as to whether certain photographs were taken by James Laidlaw Maxwell (1836-1921) or John Thomson (1837-1921), as in the back of certain developed photographs, captions about the authors of the photos were corrected.

The aforementioned observations were made while perusing authentic photo albums amassed by missionary doctors themselves, as well as those archived in university special collections. In recent years, digital archives have become available for researchers to access without the necessity of a physical visit to the collections.

³ Harry Yi-jui Wu, “The Missionary Gaze: The Social Biography and Archiving of Dr. David Landsborough IV's Photographic Collections,” *Taiwan Journal of Anthropology* 10:2 (2012), 1-57.

To illustrate, the photographs and scrapbook in the Papers of James Laidlaw Maxwell and his son John Preston Maxwell (1871-1961) (DA26/2/2 and DA26/2/4), which were originally archived in the University of Birmingham, were digitized in 2014 as part of a joint-universities collaborative project. The images are accessible online via the Historical Photographs of China website.⁴ Nevertheless, the project is not without certain disadvantages. First and foremost, the transition from analog to digital photography has resulted in the loss of the tangible, material aspect of the photographic process. Upon contact with the photographs, experienced researchers are able to discern the paper type, photographic processing, and printing technology utilized in the creation of the images. These factors play a pivotal role in defining the visual culture of the era in question. Secondly, the captions written on the reverse of the photographs are frequently obscured by the digital images. In the absence of such information, it is not possible to ascertain details such as the confused authorship mentioned above. Thirdly, it should be noted that other objects are frequently amassed with photographs in missionary albums. In the case of James Maxwell, for example, joss papers, calligraphy letters written by patients for medical requests and expressions of gratitude, and traditional paper-cut artworks are all important collections in the missionary's photo albums. Excluding these objects would result in missed opportunities to examine the miscellaneous objects and to identify the historical significance of such collecting behavior.

Furthermore, while conducting research for my inaugural monograph examining the formative years of the World Health Organization (WHO), I came to recognize the crucial position of images as a means of establishing the organization's legacy. Photographs play a pivotal role in the organization's narrative of North-South development. To illustrate, during Taiwan's tenure as a member of the WHO, photographic documentation chronicled the organization's advisory activities in developing countries, which were identified as potential beneficiaries of its expertise. The success of the malaria eradication program (MEP) in Taiwan was previously utilized by the WHO as a prominent example to illustrate its rationale for disease control. In the WHO's archive, the original copies of Taiwan's MEP effort were kept in a folder with a Post-it sticker reading "Pas de Distribution," as Taiwan was no longer a member state of the organization since 1971 (Figure 1). Visual accounts serve as direct evidence of historical events. However, this case demonstrates that the manipulation of how these accounts are presented or camouflaged is of greater consequence in the construction of history.

⁴ The website of "Historical Photographs of China" can be accessed at <https://www.hpcbristol.net/>.

Motion Pictures that Transformed Medicine

Furthermore, the digitization of historical audio-video accounts is a pressing necessity. In a chapter of my inaugural monograph, I provide a comprehensive analysis of how technological advancements enabled the research conducted by the World Health Organization regarding the profiling and classification of mental disorders.⁵ One of the most significant developments in the field of mental health research during the mid-1960s was the introduction of videography as a tool for capturing human behaviors that could be used as evidence of mental illness. In this chapter, I examine how the use of standardized negative films, rolling speed, and filming environments contributed to the objective nature of the research. Regrettably, despite my exhaustive worldwide archival research, I have been unable to locate any of these negative films in any institutional collections. Otherwise, there would have been a greater number of subjects available for deciphering and analysis. Furthermore, in the World Health Organization's diagnostic exercises for schizophrenia, audio tapes were utilized as supplementary tools for psychiatric experts to translate symptoms observed in the exercise. It has been suggested that tape recordings are not ideal for long-term storage. As a fascinating invention in the 1960s, cassette tapes became a popular documentation tool in multiple scientific projects. However, they are also susceptible to damage and quality degradation over time. Over half a century has passed, which may indicate that none of the reliable magnetic tape recordings have been preserved, in contrast to the negative films that are possibly just unfound.

For those engaged in historical research of psychological medicine, what are the benefits of preserving negative films? In two papers, I examine how psychological trauma was represented through visual technology over time.⁶ The evolution of trauma-related psychiatric disorders, including shell shock, combat neurosis, and post-traumatic stress disorder, has been shaped by the maturation of audio-visual media techniques. The production of footage on these disorders was undertaken for a variety of purposes. For example, during World War I, the Pathe company was commissioned by the British Army to film shell-shock patients at Seale Hayne Military Hospital in order to demonstrate the effectiveness of the treatment they were receiving. In 1946, the U.S. Army also commissioned Hollywood director John Huston to produce an hour-long documentary, entitled *Let There Be Light*, for

⁵ Harry Yi-Jui Wu, *Mad by the Millions: Mental Disorders and the Early Years of the World Health Organization* (Cambridge, MA: MIT Press, 2021).

⁶ Harry Yi-Jui Wu, "From Optical Unconscious to Mental Imagery: How Scientists Have Been Catching up with Filmmakers' Agendas on Trauma," *Journal of Trauma and Disassociation* 22:4 (2021), 439-451; Harry Yi-Jui Wu, "The Long Walk Home: Trauma Psychiatry on Film," *The Lancet Psychiatry* 5:4 (2017), 361-362.

educational purposes. The film was, however, kept from the public during the Cold War. The two films have now been preserved on YouTube under a Creative Commons license. The shell-shock footage has been released together with thousands of historical videos previously produced or owned by British Pathe. *Let There Be Light* has also now entered the public domain after a period of suppression lasting more than three decades. The differences between the symptoms of shell-shock and combat neurosis will not be examined in detail here, as they are discussed in detail in my published essays. It bears emphasizing that these are rare and precious archival materials, which have been digitized and preserved with an open license on a user-friendly video platform. The issue at hand is the selective nature of most digitization projects, which often prioritize material deemed to be culturally significant, while leaving larger amounts of archival content poorly managed. While a considerable amount of material is now available online for free, some is still restricted by paywalls, limiting access primarily to those affiliated with better-funded institutions.

Prior to the 20th century, the historical significance of films was not recognized by scholars of science, technology, and medicine, who subsequently advocated for their conservation. Consequently, most films were not retained. The films utilized for diagnostic exercises by the World Health Organization that I previously referenced were, according to archivists, destroyed while I was engaged in research in Geneva. Conversely, the proliferation of digitized footage accessible online may inadvertently lead researchers to overlook contextual and material conditions that are equally crucial to the content presented in the videos. It is possible that this obliviousness can only be overcome when the status of audio-video “data” is elevated to the same level as that of printed texts. Prior to this, it is imperative that scholarly discussions address the methods by which audio-video materials were produced, the way their contents were documented on various media, the means by which they were circulated and preserved.

Politics of Patient Records

In addition to image data, it is worth noting a distinctive category of primary source that has recently garnered increased attention in the field of medical history: patient records. While they have become increasingly crucial for historians to comprehend the functioning of hospitals and clinics, they are also instrumental in constructing detailed human profiles, including the demographic composition of individuals and populations within these institutions. It has been demonstrated that patient records are a valuable resource for the history of medicine, as they can highlight

discrepancies between established norms and actual clinical practice.⁷ In a previous study, an examination of patient records revealed the frequent use of Amytal, a formerly prevalent barbiturate sedative utilized in criminal psychiatry, also known as “truth drugs” for interrogation, at National Taiwan University Hospital during the 1950s.⁸ This practice was never referenced in the institutional history. In a separate study, I utilized psychiatric patient records from the same hospital, now archived at Academia Sinica in Taiwan, to investigate the types of mental disorders, ethnic origins of patients, and conditions of admission. Given the delicate state of the original paper records, all data were digitized and archived in PDF format. A search guide containing basic demographic information and patients’ diagnoses is also available for researchers before they consult the records on-site computers. This arrangement is convenient for researchers, as it allows them to access old materials without worsening their physical condition. Furthermore, the compiled information is useful for historians, as it enables them to execute statistics and rapidly compare content in different entries. While the digitalization of patient records is valuable in constructing a comprehensive picture of psychiatric services in history, it also presents challenges regarding its expediency.

Because of the digitization of patient records, the accessibility of personal information is increased. In the field of psychiatry, a substantial amount of this data is regarded as private and can potentially cause harm if it is disclosed without de-identification. Accordingly, a more ethically sound methodology must be implemented to align with the opening of related collections. Furthermore, there are challenges associated with the conversion of handwritten texts to digital fonts that can be recognized by computers. In addition to the cursive style of handwriting, mistakes are also commonly observed as physicians work in various conditions. The resulting inaccuracy can be attributed to flawed statistical compilations. In the case of the patient records employed in my research, during the first few decades of the 20th century, psychiatrists in colonial Taiwan were learning Japanese and German as their first and second working languages, which are different from their mother tongue. In some instances, psychiatrists employed the Romanized Taiwanese language in their documentation of patients’ voices. Following the conclusion of World War II, Chinese and English were adopted as the primary languages utilized in clinical writings, superseding the previous use of Japanese and German. Consequently, the differentiation of multiple languages within a single digital file necessitates the utilization of more sophisticated software. Additionally, the physical characteristics of handwriting, such as brushstrokes, ink color and the way the strokes are executed, can serve as crucial identifiers in patient records. These

⁷ John Harley Warner, “The Uses of Patient Records by Historians: Patterns, Possibilities and Perplexities,” *Health and History* 1:2-3 (1999), 101-111.

⁸ Harry Yi-Jui Wu, “Psychiatrists’ Agency and their Distance from the Authoritarian State in Post-World War II Taiwan,” *History of Psychology* 23:4 (2020), 351-370.

attributes, however, are challenging to replicate in digitized formats. Historically, the use of patient records to construct medical histories was once intended to achieve what Roy Porter termed “doing medical history from below” almost forty years ago.⁹ Through careful organization, the specifics of patients’ cases may be illuminated in a manner that offers a distinctive viewpoint, diverging from the conventional narrative of institutional history. As physician historian Jonathan Gillis has observed, however, patient records remain secondary sources, reflecting physicians’ perspectives on what they perceive and what they aspire to perceive and achieve.¹⁰ The advent of digital patient records has facilitated researchers’ access to institutions and enabled a more intimate engagement with the subjects under study. However, it appears that this technological advancement has primarily enhanced our operational understanding of the institutions’ perspectives, rather than advancing historians’ capacity to delve into the finer details that are more human in nature.

Creating Opportunities in Memory Holes

As evidenced by the aforementioned three cases, the contribution of digitized archives to scholars of the history of science, technology, and medicine is primarily in the increased ease of information retrieval. This convenience is of value to researchers in facilitating comparisons and in the compilation and comparison of large quantities of data. Nevertheless, in view of the degradation characteristics of the historical data recording medium, comprehensive digital preservation of digitized data is a necessary measure to avoid the repeated loss of useful information and to conserve preservation space. Nevertheless, the process of digitization of historical data also gives rise to a few issues that require further discussion and resolution. Firstly, the flattening of data and the loss of material information possessed by original forms of primary sources render the latter irreplaceable. Secondly, the current techniques are only capable of selective digitization of specific portions of certain primary sources. This is exemplified by historical artifacts with three-dimensional shapes that necessitate documentation through shooting from multiple angles to fully capture the object’s representation. Consequently, the preservation process may be incomplete. Thirdly, a quarter of the 21st century has passed. Many primary sources have been digitized prior to the advent of an effective methodology for the management of digital physical history records. The emphasis on the digitization of physical archives has led to the neglect of other digital materials,

⁹ Roy Porter, “The Patient’s View: Doing Medical History from Below,” *Theory and Society* 14:2 (1985), 175–98.

¹⁰ Jonathan Gillis, “The History of the Patient History since 1850,” *Bulletin of the History of Medicine* 80:3 (2006), 490–512.

such as websites, emails, and digital recordings that often have a limited lifespan.

In light of these challenges, the digitization of historical data remains a valuable endeavor, offering significant benefits and potential for advancement. I conclude with a history workshop that was born out of a crisis. This endeavor may culminate in a favorable outlook for medical historians regarding the work of digitization process. I have been involved in the design of medical history workshops at numerous universities in Singapore, Hong Kong, and Taiwan. The utilization of medical museums as a pedagogical tool for the instruction of history to medical and other healthcare professional students is a pragmatic approach that is grounded in the concept of “spatial relevance.”¹¹ However, the COVID-19 pandemic rendered on-site visits to medical museums impractical. I thus designed an alternative workshop, requesting that students bring an artifact of their own to create a digital museum for museum visitors in the year 2070, for example. In the context of the pandemic, rapid response collecting has emerged as an effective approach for museums to engage with communities, disseminating the narratives and histories of the present to both current and future generations. In my online classroom, we engage in discourse pertaining to a range of pertinent issues, including health-related human rights, the impact of inequality on disease, opportunities for cultural care, and other matters that are less frequently addressed in the mainstream media. My approach, which involves the search for and preservation of actual artifacts in digital form, strikes a balance between the irreplaceability of materials and the openness and accessibility of digital archives. This new enthusiasm for archiving is not only driven by a desire to preserve data, but also represents a crucial response to prevent the emergence of Orwellian “memory holes,” which could be deliberately created by authorities with a tendency to move in a right-wing direction on a global scale.

¹¹ Harry Yi-Jui Wu and Samson Ki Sum Wong, “Spatial Relevance: Teaching History to Medical Students at a Medical Museum in Hong Kong,” *Journal of History of Medical and Allied Sciences* 78:1 (2023), 71-82.

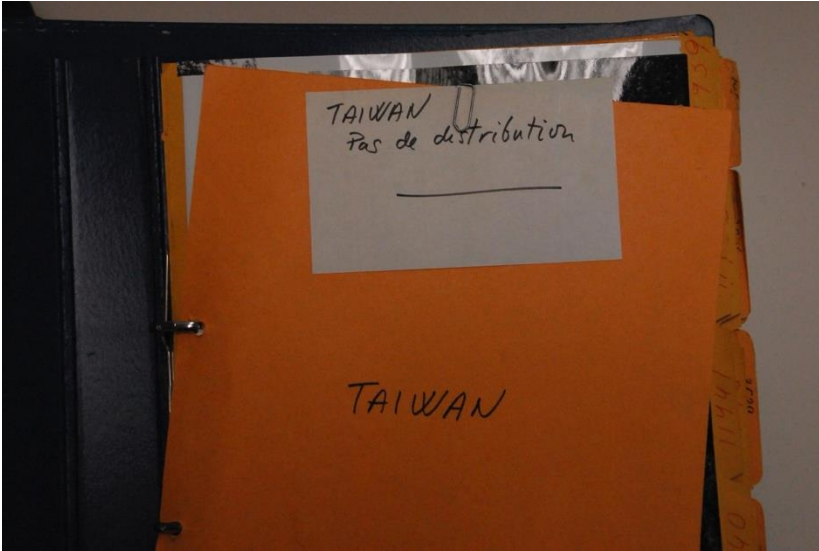


Figure 1. The folder containing a collection of loose photographs documenting public health activities in Taiwan, which have been archived at the World Health Organization. Photograph courtesy of the author.