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Digitization and the Changing Roles of Libraries in Support of Humanities Research: The Case of the Harrison Forman Collection

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Digitization and the Changing Roles of Libraries in Support of Humanities Research: The Case of the Harrison Forman Collection[1]

ABSTRACT. **Objective** – this article examines the role of libraries in expanding access to primary sources through digitization and in providing support for humanities research. **Research method** – the author analyzes the literature on information behavior of humanist scholars in light of the increased use of digitized primary sources. Next, using the example of the digitized photographs and diaries from the Harrison Forman Collection, the author explores the emerging role of libraries in creating a new source of scholarly materials and supporting research in humanities. **Results and conclusion** – digitization increasingly matters not only for practical reasons of ease of use and access but also by offering a new potential for humanistic research. Digitization projects provide enhanced intellectual control of primary resources, offer an opportunity to uncover hidden collections, and bring together scattered materials. Digital collections in their present design demonstrate some limitations in supporting scholars' browsing behavior and in providing contextual information. Creating digital collections in support of humanities research requires the transformation of library roles and collaboration with digital humanities scholars.

INTRODUCTION
Throughout history libraries have played an important role in advancing scholarship through collecting, organizing, preserving, and making available all forms of recorded knowledge. Primary sources in the form of textual documents, visual resources, or oral testimonies are at the heart of humanities research as they represent a key source of historical evidence. Humanities scholars have always depended on research libraries and archives as repositories of primary sources and rare materials. In the past, conducting historical research often involved travelling to distant archives or libraries in order to gain access to original source materials. Digitization and the development of digital collections, however, have transformed the way humanities scholars access primary resources and carry out their research. As Katz notes, "our work has been profoundly changed by the whole range of developments in digitisation and telecommunications" (Katz, 2005, p.107). Recent studies demonstrate that indeed digitization has made an impact on the research practices in humanities and changed scholars' information behaviors (Fenlon et al., 2014, pp. 4-6; Rutner & Schonfeld, 2012, pp. 7-11; Sinn & Soares, 2014, pp. 1800-1806).

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[1] This article is an updated and expanded version of the paper presented at the International Scientific Conference Fons Largus, May 16, 2012, Warsaw, Poland.

The development of digital libraries in support of humanities scholarship represents a new area of research and practice with shifting priorities and the transformation of library roles. Many questions still remain unanswered. How should libraries organize and present the new body of digitized primary sources to support and enhance scholarship in humanities? How can libraries address humanities scholars' ways of research, preferences, expectations, and concerns regarding the quality and stability of digitized content?

This article explores the potential created by digitization for humanities research and the evolving roles of libraries in supporting humanities scholars in discovering, accessing, and making sense of digitized primary sources. The author uses a digitization project undertaken by the American Geographical Society (AGS) Library as a case study to examine the emerging role of libraries in creating a new source of valuable scholarly materials and supporting research in humanities. The AGS Library digitization initiative, funded partially by the National Endowment for Humanities, aimed at digitizing and preserving over 70,000 film negatives of historical and documentary photography[2]. This large-scale digitization project led to the discovery of a significant body of previously unknown photographs. This article focuses on the photographs documenting the German invasion of Poland in the Harrison Forman Collection. This unique set of images was discovered during the digitization project.

HUMANITIES SCHOLARS AT WORK

The development of digital collections in support of humanities research cannot occur in a vacuum. Understanding user needs and preferences is a prerequisite for developing any new technologies and services, but it is especially important for building collections of digitized archival materials where context is critical to sense making and there is no mediation from a librarian or an archivist (Sexton et al., 2004, pp.33-34). The digital transition in libraries and archives needs to be informed by research on the scholars' information needs and actual practices in information seeking, discovering, and using scholarly materials. Digital technology and digitization have been gradually changing research practices of humanities scholars (Maxwell, 2010, pp. 25-27). The picture depicted by Tibbo in the article from the early 1990s of a 'typical' humanist, who works alone and may use selective print bibliographies but not electronic databases, is no longer true (Tibbo, 1994, p. 608). The wide availability of digital resources and new tools for working with text and visual resources has led to the adoption of digital technology by the researchers and the emergence of digital humanities.

The evolving scholarly practices in the humanities are the subject of an increased research interest and a number of empirical studies. Brockman et al. (2001) examine how humanities scholars conduct and collate their research and focus on activities and information resources used in scholarly work practices. This study found that the four core activities – reading, networking, researching, and writing – were interrelated in the scholars' work processes (pp. 6-13). As the study indicates, primary sources are central to the research inquiry in humanities. As Brockman et al. note, "humanities scholars are interpreters of documents" (p.15). The authors of the study also find that browsing rather than keyword searching is the most common form of information seeking. Browsing is part of an exploratory research process and is fundamental to humanities scholars as it can lead to new inspirations and serendipitous discovery. Browsing as a key information seeking strategy was also identified in recent studies that focused on information

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[2] For a description of the project, please see: Matusiak, Krystyna K.; Johnston, Tamara K. (2014). Digitization for preservation and access: Restoring the usefulness of the nitrate negative collections at the American Geographical Society Library. *The American Archivist* 77 (1), 241-269.

behavior and research practices of historians (Rhee, 2012, section: Findings; Maxwell, 2012, p. 29).

The importance of primary sources in humanistic scholarship is underscored in other research studies and publications on scholarly communication. Palmer emphasizes, "for many humanities scholars, key primary and secondary are central sources of evidence, and research is conducted through interaction with these materials" (Palmer, 2005, p. 1144). She compares the research process in the sciences and humanities and notices that the science model is problem-centered, while the humanities research model follows an interpretive course and information paths are longer and meandering. Borgman (2007) also points out the disciplinary differences in information practices of scientists and humanists especially in regard to the type of data used in research. Scientists generate data in the process of exploring a research problem, while humanists aggregate and integrate existing primary sources in order to analyze and interpret historical or cultural phenomena (Borgman, 2007, pp. 180-226). Borgman, however, notes that humanities scholarship in the digital age is becoming more data-intensive as scholars have an opportunity to collect a wide variety of digitized primary sources. This observation is supported by the findings of a study where humanities scholars report assembling digital collections not only for analysis in a given research project but also for reuse and future scholarly work (Fenlon et al., 2014, pp. 4-6).

The centrality of primary sources in humanities research is confirmed by a number of recent studies that explored historians' research practices and their use of digital collections (Maxwell, 2010; Rutner & Schonfeld, 2012; Sinn & Soares, 2014). The use of primary sources remains at the heart of the historical research, although history scholars increasingly interact with digitized versions of source materials (Rutner & Schonfeld, 2012, p.8). Primary sources used in humanistic research include not only textual documents but also other types of materials, such as photographic images, films, and oral histories. Discovery of primary sources is essential to historical research and locating relevant materials still represents a major challenge (Rutner & Schonfeld, 2012, p.15; Sinn & Soares, 2014, p. 1806).

Humanities scholars have adopted digital technology and explore electronic databases and digital collections in information seeking, but the research on the perceived value of digitized primary sources and their use for research purposes is still inconclusive. Dalbello (2004) notes the limited ability of digital collections to support scholarship because of the questions about the authenticity of digitized objects and the lack of coherence in digital assemblage and presentation (pp.284-288). Digitized objects as presented in digital collections appear to be isolated, de-contextualized, and removed from their roots in cultural traditions and communities. Digital collections in their present state of development lack the tools to contextualize the objects and place them in the larger cultural narrative. The concerns about the lack of context and authenticity of digitized primary sources were also found in the study conducted by Rimmer et al. (2008). Humanities scholars interviewed for this study state a clear preference for working with original primary sources rather than their digital representations. The study participants perceived physical artifacts as more reputable and appreciated the tactile experience in interacting with them (Rimmer et al., 2008, pp. 15-16). The scholars' reservations about using digitized versions stem primarily from the uncertainty about the fidelity of digital representation and digital objects' integrity and permanence.

The preference for working with original primary sources was also expressed by some historians in the studies conducted in the last few years. However, this recent research presents a more diverse picture and points to a gradual shift in the scholars' attitudes towards digitized

primary sources (Rutner & Schonfeld, 2012, pp.8-11; Sinn & Soares, 2014, pp. 1802-1803). While digitized collections may not replace the richness of the field experience in the physical archives, the availability of online findings aids and digitized collections represents a significant change and improvement for historians. Increasingly, some historians opt to work with only the digitized copies. The perception that digital versions are not the same seems to be changing (Sinn & Soares, 2014, p. 1803). The studies also indicate that historians found collections of digitized primary materials invaluable for their research, which represents a change from the early, more cautious attitudes.

Humanities scholars express concerns about the quality or stability of digital resource and may talk with certain nostalgia about the richness of interaction with physical artifacts and original documents. Nevertheless, many of them embrace the digital environment as it offers not only the convenience of access to research materials, but also new research opportunities and innovative ways for aggregating, analyzing, and presenting scholarly materials. The interdisciplinary field of digital humanities advances the scholarship through an application of humanist methodology to digitized or digitally born content and through creative use of digital tools. The editors to *A Companion to Digital Humanities* emphasize a combination of humanist principles with the use of information technology as primary goals of the field, "using information technology to illuminate the human record, and bringing an understanding of the human record to bear on the development and use of information technology" (Schreibman et al., 2004, p. xxiii). Dalbello (2011) traces the development of digital humanities and notices that the creation of humanists' laboratories became possible in the last decade due to the availability of critical body of multimedia resources, and the expansion of digitized collections, especially focused thematic archives (p. 492).

DIGITIZATION IN SUPPORT OF HUMANITIES RRESEARCH

Digitization has offered a tremendous opportunity to expand access to unique primary sources stored in research libraries, archives, special collections, and other cultural heritage institutions. The benefits of digitization in providing access to unique cultural heritage materials have been widely acknowledged in the research literature (Besser, 2004, pp. 557-558; Cohen & Rosenzweig, 2006, pp. 80-86; Daigle, 2012, p. 252). "Digitization is access – lots of it," emphasizes Smith in her influential publication *Why digitize?* (Smith, 1999, p. 7). The added value of digitization, however, goes beyond the mere convenience of remote access to digital copies of original documents. Researchers point out the extended search capabilities of digital text, the advantages of digital image enhancement, the potential to integrate resources in multiple modes of representation, and the ability to bring together dispersed research materials (Conway, 2000, pp. 2-3; Kenney & Rieger, 2000, p. 1). Deegan and Tanner (2004) note, "the digitization of resources opens up new modes of use for humanists, enables a much wider potential audience, and gives a renewed means of viewing our cultural heritage (Deegan & Tanner, 2004, p. 491).

Moreover, digitization has contributed to the discovery and wider availability of visual resources. Historically, photographic images were recorded on a variety of analog formats including glass plates and different types of film such as nitrate and safety negatives. Photographers would print a limited number of images for publications and exhibits, but the vast majority of photographic images remained on difficult-to-access film negatives and slides. The inaccessibility of photographic film formats seems to be one of the major factors in limited awareness of those collections and in their scholarly use.

The nature of photographic collections, their organizations in research libraries, and the difficulty in accessing the visual content of analog formats pose significant challenges to using them in research. The collections are often far removed from scholars and scattered across different departments or even different libraries. Photographic collections are usually arranged by original creators or donors and have very little item-level or even collection-level indexing. Even knowledgeable photo curators, familiar with collections, will find the task of locating images on a particular subject daunting.

Photographs and other visual resources are very rich in content but at the same time they are inherently difficult to describe. They lack the basic descriptive information, 'the title page,' which in traditional cataloging serves as a source of authoritative bibliographic information. Professional photographers, and even scholars who took images in their scientific expeditions, varied in their documentation and annotation practices. Very few collections will have annotations of individual images or the consistency and accuracy of description will vary from item to item. The lack of item-level description and standardized access points hinders the discovery and use of photographic materials and other audiovisual materials (Turner, 2010, pp. 85-87). In recent years many libraries and archives have begun creating finding aids and publishing them online to raise awareness of their unique collections and to provide minimum access points.

Digitization has removed one of the major impediments in accessing photographic archives and exposed them to the community of scholars, students, and the general public. The advancements in imaging technology have enabled the conversion of fragile and inaccessible analog formats and made possible to view the visual content of historical images in high resolution digital representations. Many of the images became available for public viewing for the first time and digitization has contributed to making 'visible' a large body of historical visual evidence. In addition, digitization projects undertaken by libraries and archives assisted with preservation of fragile and deteriorating materials and contributed to uncovering hidden collections or discovery of misplaced resources.

The process of converting analog source materials into digital format is still ongoing and is far from being complete, but as Palmer (2004) notes, "as research libraries continue to undertake these projects, substantial bodies of previously hidden source materials are coming into public view" (Palmer, 2004, p. 359). Digitization offers a new chance to shed light on unique historical collections that were previously inaccessible due to the limitations of analog formats. In fact, digitization has expanded the range of primary sources and presents scholars with a new body of historical evidence and even a critical mass of materials for analysis or comparison (Matusiak & Johnston, 2014, pp.242-245).

However, the conversion of analog materials to the digital format represents only the first step in making the unique body of historical sources available to scholars. The barriers in the organization of analog collections of visual materials and their intellectual control remain largely unsolved, but now researchers can access digital representations of original materials and trace the links to analog collections, if necessary. Digitization, de facto, is forcing the item-level indexing of visual resources and other non-textual materials, since it's impossible to create digital collections without providing subject terms and other access points. Libraries involved in building digital collections of digitized primary sources and visual materials face many challenges in indexing those resources, providing item-level description and contextual information, and presenting them in a meaningful way to enable their discovery and future

scholarly use. The author will use the case of digitizing the Harrison Forman Collection to explore some of those challenging issues and exemplify the points discussed in the paper.

THE CASE STUDY: DOCUMENTARY PHOTOGRAPHY OF HARRISON FORMAN
Harrison Forman (1904-1978) was a prominent photojournalist, an explorer, and also the Fellow of the American Geographical Society (see Figure 1 for the portrait of Harrison Forman). He witnessed and photographed many important historical events of the twentieth century including the Sino-Japanese War, the bombing of Shanghai in 1937, World War II activities in East Asia, and the conflict between Chinese Nationalists and the communists in the 1940s. Forman's primary interest was in East Asia. In August 1939 however, he happened to be in Paris. At the news of the imminent German invasion of Poland, he decided to travel to Warsaw. He was one of the few Western journalists to document the outbreak of World War II in Poland in September 1939[3].

Figure 1. Harrison Forman in Gansu province, China; around 1936. From the American Geographical Society Library, University of Wisconsin-Milwaukee Libraries.

Forman wrote several books vividly describing his travels around the world, in which he used many of his images as visual documentation. His photographs were also published in many American newspapers and popular magazines such as *Life*, *Travel*, *Reader's Digest*, and *New York Times Magazine*. The published photographs and prints represent only a small percentage of his photographic collection. In 1987, Forman's photo collection was donated to the American Geographical Society (AGS) Library, which is currently housed at the University of Wisconsin-Milwaukee Libraries[4]. The collection consists of approximately thirty thousand negatives, fifty

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[3] Forman's biography is based on his personal papers and scrapbooks housed at the American Geographical Society Library. For more information about his collection, see the Forman Photo Inventory at ,
http://uwm.edu/libraries/agsl/harrison-forman-collection/>

[4] For more information about the American Geographical Society Library, visit the library's website. <
http://www4.uwm.edu/libraries/AGSL/index.cfm>

thousand color slides and transparencies, four thousand photographic prints, scrapbooks, and motion picture films. The original film collection, consisting of nitrate and acetate negatives, was stored by the Kodak Company for several years prior to arriving at the AGS Library. The Kodak Company created the initial inventory of Forman's negatives, based on Forman's notes on the negative sleeves and grouped the images by country. For some unknown reason the small set of images documenting the German invasion of Poland never appeared on the inventory list.

University of Wisconsin-Milwaukee Libraries (UWM Libraries) began the digitization of unique photographic collections form the AGS Library vast holdings in 2001. Forman's documentary photography featured prominently in the early projects, including a set of images of Afghanistan[5] and a unique visual record of the expeditions to northern Tibet in the 1930s[6]. The real impetus to the more extensive digitization of his collection was given by the plan to digitize and preserve all nitrate film negatives housed in the AGS Library. The two-year project, "Saving and Sharing the AGS Library's Historic Nitrate Negative Images" was funded by a grant from the National Endowment for the Humanities (NEH). The goals were to reformat, provide access to, safely re-house the AGS Library's large collection of cellulose nitrate photographic negatives and ensure their proper storage, and provide long-term preservation of their digital representations. The selection of the negatives from the Harrison Forman Collection was chosen for the pilot project. The Harrison Forman Collection is one of the 17 photographic collections digitized as a result of the NEH-funded project.

The digitization of Forman's negatives involved not only the conversion to the digital format, but also an extensive research process to provide access points and accurate description in the metadata records. His negatives came with little or no descriptive information, but included rich historical images that warranted additional research. While conducting research on the images, the librarians came across references to Forman's photographs of World War II in Poland in his 1938-1939 scrapbook. Since the original inventory did not list Poland as one of the countries he visited, locating the images in this extensive collection proved difficult. Forman's film negatives of the Warsaw bombing were accidently misfiled under Paris and other locations. Eventually 88 unique images documenting the beginning of World War II in Poland were identified during the digitization project.

Forman arrived in Warsaw in late August, 1939, and was able to capture images of the city just a few days before World War II broke out. Forman remained in Poland during the first weeks of the war and documented the German invasion of Poland. His photographs depict the desperate efforts of the Polish military to defend the country, the bombing and destruction of Warsaw, and the participation of the civilian population in the city's defense (see Figures 2 and 3 for images of Warsaw in September 1939). A selection of Forman's photographs of the German invasion in Poland appeared in the American press in 1939 in papers such as *The New York Post*, *The New York Daily News*, and *Travel* magazine. Forman evacuated from Poland through Romania at the end of September and managed to bring some of his negatives with him. According to his estimates, about twenty percent of the images finally reached the United States. Many of the photographs, discovered in the Forman Collection at the AGS Library, were never published.

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[5] *Afghanistan: The Harrison Forman Collection*. University of Wisconsin-Milwaukee Libraries, 2002. <http://collections.lib.uwm.edu/cdm/landingpage/collection/af>.
[6] *Tibet - From the Collections of the American Geographical Society Library*, University of Wisconsin-Milwaukee Libraries, 2009. <http://collections.lib.uwm.edu/cdm/landingpage/collection/tibet>

Figure 2. Warsaw bombing in September 1939, civilians cleaning debris from a destroyed apartment building. Harrison Forman, 1939. From the American Geographical Society Library, University of Wisconsin-Milwaukee Libraries.

The nitrate negatives were scanned at 4000 ppi resolution, according to the digitization standards to create digital master files. A handful of photographic prints that were also discovered were used as a source for scanning when negatives were missing. The scanning resolution for capturing photographic images was adjusted depending on the size of the print to achieve a minimum of 4000 pixels on a long side. All master files were reviewed for quality, saved as uncompressed TIFF files, and deposited in the campus digital repository for long-term preservation. A second copy of TIFF files, a so called "service master," was created for post-processing and to serve as a source of derivative images for online presentation. Service copies were processed to remove dust marks, scratches, and to improve contrast in faded images. Derivative images were generated in the JPEG2000 format as a result of an automated process in CONTENTdm, a content management system used for building the online collection.

The photographs were researched and indexed as part of the project to provide additional points of access to the content of the collection. Metadata records were created at item-level for each photograph. Metadata creation represented a significant part of the digitization project and was undertaken to provide access points to digitized images and to extend their usefulness as information resources. Dublin Core metadata standard was used as a foundation for developing a customized metadata application profile. Several Dublin Core elements were refined and new were added to expand the number of access points. New elements were mapped to Dublin Core schema to enable cross-collection searching and metadata harvesting. *The Library of Congress Subject Headings* were used as source of subject headings. Forman's captions, when available, were transcribed and included in the records. Forman's captions are labeled in the metadata records as 'Photographer's Note' to indicate that they were transcribed verbatim from the original source. Forman's comments, often critical of the Polish military leaders, represent the American photojournalist's perspective on the events in Poland. The resources available in the

Harrison Forman Collection, including his scrapbooks and his publications, were used during the research process. Figure 3 presents an example of a metadata record.

Title	Warsaw bombing in September 1939, civilians digging trenches in front of the Zachęta Gallery building
Date	1939-09
Photographer	Forman, Harrison, 1904-1978
Description	Civilians digging trenches in front of the Zachęta National Gallery of Art at the Małachowski square. The gallery was built by the Society for the Encouragement of the Fine Arts (Towarzystwo Zachęty Sztuk Pięknych) at end of the 19th century. Center: Peowiak Monument commemorating Polish Military Organization from 1914. The monument was destroyed in 1940 and reconstructed in 1999.
Subject	World War, 1939-1945--Poland World War, 1939-1945--Campaigns--Poland World War, 1939-1945 --War work --Poland Civilians in war--Poland Galleries & museums--Poland--Warsaw Monuments--Poland--Warsaw
Continent	Europe
Country	Poland
City	Warsaw
Related Resources	Harrison Forman Diary, Poland, August-September 1939 accessible at http://collections.lib.uwm.edu/cdm/ref/collection/forman/id/9. See related item in the Harrison Forman Papers, 1927-1983: Writings, Clippings, Male, "Blitzkrieg in Poland", 1957, Box 2, Folder 14; and Travel, "Filming the Blitzkrieg", 1939, Box 10, Folder 7. The Harrison Forman Papers finding aid can be found at: http://digital.library.wisc.edu/1711.dl/wiarchives.uw-agsl-agslmss0017
Type (DCMI)	Image
Original Collection	Harrison Forman Collection
Original item medium	Black-and-white negatives Cellulose nitrate film
Original Items Size	35 mm
Original Item ID	Forman nitrate negative

Figure 3. Digitized image with an associated metadata. A full record is available at: http://collections.lib.uwm.edu/cdm/ref/collection/pol/id/113

A separate digital collection was created to present this unique set of historical photographs and documents. The online collection, *Nazi Invasion of Poland in 1939: Images and Documents from the Harrison Forman Collection* is open to researchers and the general public at: http://collections.lib.uwm.edu/cdm/landingpage/collection/pol/[7]. In addition to the 88 photographs that were discovered in the AGS Library, the collection also includes digitized copies of newspaper clippings and Forman's articles in an effort to bring together scattered research materials. Digital collection building involved selecting batches of images, extracting metadata records from the local database, and uploading the images with associated metadata into CONTENTdm, the proprietary digital collection management system used for constructing UWM Libraries' digital collections. The collection's home page was customized to highlight unique images and supplementary materials. In addition, the records are searchable from the UWM Libraries' Digital Collections portal[8].

The online collection also includes a link to the diary that Forman kept during his stay in Poland in September 1939. The diary presents Forman's analysis of the complex political situation in Europe in 1939 and his observations of the Polish military and civilian life in Warsaw at the outbreak of World War II. Forman provides a vivid account of the everyday activities in the city and describes preparations for air strikes, women and children digging trenches, and people keeping gas masks with them at all times. Forman notes,

> Quiet clop-clop of horse & buddies in blackout. An anachronism. Cabarets open, but no gaiety. In critical days no longer checked gas masks with hats + coats when entering restaurants, etc. Even danced with masks, for knew you'd had no time, no strength to fight someone who'd picked up your masks at an alarm. It was a grim thought and picture of to what animalistic depths the world has descended in this Twilight of Civilization. Gas masks for babies! Tak! Tak! Tak (Forman, 1939, p.15)

The link to the digitized diary was added to the online collection later, since the manuscript was discovered after the digital collection, *Nazi Invasion of Poland in 1939* was created. The diaries were not found in the Forman Collection housed at the AGS Library. During the research process associated with digitization, however, the librarians learned that Forman had maintained field notes containing information directly relevant to his photography. Forman's diaries were eventually located at the University of Oregon Libraries where they are part of the Harrison Forman Papers 1931-1974, housed at the Special Collections & University Archives. The AGS Library arranged for a loan from the Special Collections & University Archives at the University of Oregon Libraries and digitized all diaries to accompany the digital collections of Forman's photographs. These diaries were extremely helpful in the identification of Forman's photos and in creating descriptive records. A separate digital collection of all Forman's 62 diaries was created and is available from the UWM Libraries digital collections portal[9].

DISCUSSION
As the case study presented in this paper demonstrates, digitization projects lead in some cases to uncovering 'hidden' collections and bringing together scattered primary sources. Digitization

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[7] *Nazi Invasion of Poland in 1939: Images and Documents from the Harrison Forman Collection.* University of Wisconsin-Milwaukee Libraries, 2009. <http://collections.lib.uwm.edu/cdm/landingpage/collection/pol/>.

[8] University of Wisconsin-Milwaukee Libraries Digital Collections < http://collections.lib.uwm.edu/cdm/>.

[9] *The Forman Papers: Travel Diaries and Scrapbooks of Harrison Forman 1932 – 1973.* University of Wisconsin-Milwaukee Libraries, 2011. **<http://collections.lib.uwm.edu/cdm/landingpage/collection/forman/>.**

supports research in the humanities by making available a new body of historical evidence, aggregating dispersed materials, and providing subject description and multiple access points to digitized resources. The enhanced intellectual control of primary sources is one of the added values of digitization. Digitization requires item-level records in order to enable the discovery of these materials in the digital environment. In addition to creating a standardized metadata record, a task familiar to library professionals, the process often requires extensive research to identify people, places, dates, and events. The research component necessary to provide access points, especially for visual resources, represents a new and a challenging aspect of librarians' work in intellectual control. On the other hand, this significant effort in providing description assists researchers in the discovery and use of those materials. As a recent study indicates, extensive and accurate metadata is essential for humanities scholars in the process of evaluating digitized resources and building their own collections (Fenlon et al., 2014, p. 7).

The structure of digital collections and interface design represent another set of challenges. It is unclear whether digital collections in their present design truly support scholars' information seeking behaviors and address their concerns about the authenticity and stability of digitized objects. Digital collections, based on the metadata record model and designed with the omnipresent search box, tend to prompt keyword searching rather than browsing. The design of digital collections should consider the preference of humanities scholars for browsing and take advantage of rich metadata to create browsing pathways. The concerns about the quality and permanence of digitized objects need to be addressed by libraries and archives through their adherence to digitization standards and best practices in the conversion process and by establishing an active digital preservation program. As digitization is becoming a mainstream activity in libraries and archives worldwide, more emphasis is being placed on sustainability of digital collections, quality of digitized objects, and digital preservation (Conway, 2010, pp. 68-73). Hopefully, the active engagement of libraries and archives in digital preservation will alleviate scholars' questions and concerns and will contribute to the building of trust and credibility that has been characteristic of the print environment.

Undertaking digitization projects requires from libraries and archives a major investment of resources not only in the conversion and description of analog materials but also in the infrastructure for presentation of digital collections and in the preservation of digitized objects. Nevertheless, the fundamental roles of libraries and archives in collecting, organizing, preserving, and making available scholarly materials remain the same, although the format of resources and methods of delivery change. The digital environment in which scholarly materials are presented to researchers, however, may require a transformation of some of the roles or undertaking new approaches if digital collections are to provide contextual information and place digitized objects in the historical and cultural tradition.

Thematic digital collections have been proposed as a solution for addressing the lack of context in the presentation of digitized primary sources and for providing additional information to enable their understanding and interpretation. Thematic digital collections bring together digitized primary sources and related materials to support research on a theme. Palmer presents them as a new scholarly genre and notes, "the thematic framework allows for coherent aggregation of content" (Palmer, 2004, p. 359). In addition to a significant pool of digitized primary sources organized around a theme, the collections also include contextual materials, teaching resources, and scholarly contributions, created as a result of using the primary sources in the research process. Thematic collections are heterogeneous in nature with resources drawn from multiple archival collections and supplemented by commentaries and bibliographies.

Although there are some notable exceptions, the thematic approach is rare in digital collections built by libraries and archives, but is more common in digital humanities projects.

The online collection described in this paper, *Nazi Invasion of Poland in 1939*, represents a partial attempt at creating a thematic collection. It brings together scattered photographic images and relevant archival documents, including the photographer's diary, but it lacks additional information that would place those materials in a broader historical context. In addition, the description of primary sources that are of potential interest to Polish humanities scholars and students is created exclusively in English. Multilingual metadata is a new research area in digital library development (Diekema, 201, p. 166; Matusiak et al., 2015, pp.137-139). It needs to be considered not only in the context of resource discovery but also as a way of connecting the digitized materials to their respective cultures and traditions.

Thematic digital collections provide a model for supporting research in the humanities, but will require a transformation of library roles and building collaborative partnerships with researchers. In Palmer's opinion, "the thematic collections concentrating on contextual mass and activity support are coming closest to creating a laboratory environment where the day-to-day work of scholars can be performed" (Palmer, 2004, p. 356). Thus, digital collections as 'humanities laboratories' have been envisioned as collaborative, dynamic environments where humanities scholars can interact with digitized sources, annotate them, and contribute their knowledge.

The digital collection, *Nazi Invasion of Poland in 1939* was created in 2009. Since then, there has been a significant progress in building partnerships between libraries and scholars active in digital humanities projects. In recent years, academic institutions began to create humanities labs to provide a structure and a physical space for collaborative projects between librarians, technology specialists, and humanities scholars (Earhart, 2015, p. 394). A discussion about the nature of the collaboration between libraries and digital humanities has emerged in the library literature (Sula, 2013; Vandergrift & Varner, 2013; Zhang et al., 2015). The researchers emphasize that "digital humanities offer libraries multiple ways to prove their value but they involve expanding beyond collection building and partnering with scholars in the act of creation" (Vandergrift & Varner, 2013, p. 69).

CONCLUSION

Digitization projects often bring to light unique collections that were previously inaccessible and open new lines of humanities research. Digital collections created as a result of digitization initiatives bring together scattered primary sources, provide additional access points, and enhance the description of original materials by adding annotations and contextual information. In many cases, digital collections offer a new potential for humanistic research and facilitate new kinds of scholarly investigation by presenting resources in multiple formats, including a wide range of non-textual resources as well as unique materials that were previously inaccessible due to the limitations of analog formats or the lack of intellectual control. Digital collections in their present form, however, demonstrate some shortcomings in regards to contextualizing digitized primary sources. The development of digital collections in support of humanities research may require the transformation of library roles and engaging scholars in building collaborative digital projects.

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