# Supporting the Changing Research Practices of Art Historians

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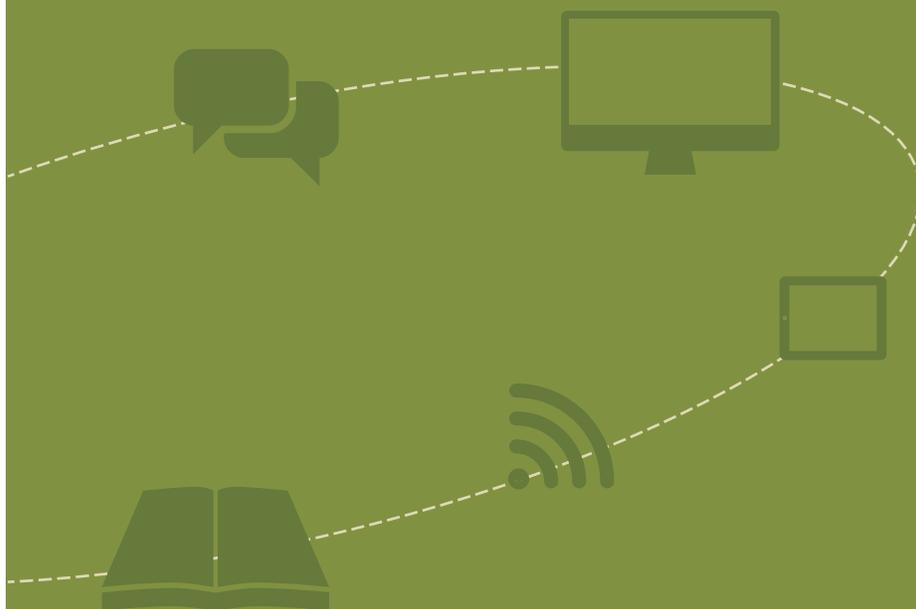
ITHAKA S+R

April 30, 2014

Ithaka S+R is a strategic consulting and research service provided by ITHAKA, a not-for-profit organization dedicated to helping the academic community use digital technologies to preserve the scholarly record and to advance research and teaching in sustainable ways. Ithaka S+R focuses on the transformation of scholarship and teaching in an online environment, with the goal of identifying the critical issues facing our community and acting as a catalyst for change. JSTOR, a research and learning platform, and Portico, a digital preservation service, are also part of ITHAKA.

ITHAKA is interested in disseminating this report as widely as possible. Please contact us with any questions about using the report: research@ithaka.org.

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Preface

Ithaka S+R's triennial faculty surveys have traced the trends and changes in scholarly practices since 2000. Librarians across the country have used the findings of the survey to shape their services in response to faculty needs and requirements. The combination of abundant electronic resources and the technological capability of delivering information in convenient ways gives librarians a much enhanced ability to tailor services to meet new needs. That good news is tempered with the realization that disciplines vary dramatically, and even though librarians are eager to customize and make maximally useful the services they provide for scholars, they must understand the specific changes in research methods that characterize each academic field. This is a tall order for academic librarians, as budgets are constrained, staffing is inadequate, and user demand is greater.

We established the Research Support Services Program to assist librarians, IT specialists, and other professionals who support the scholarly process by conducting in-depth studies of specific disciplines. By interviewing scholars about their research and teaching roles and by talking to doctoral candidates in the field about their expectations for their research agendas in the future, and by exploring the types of resources they need to be successful in their work, we are able to offer practical and actionable advice to those who support scholars about the types of services that could be of greatest assistance.

Having completed studies of historians and chemists, we turn in this report to art historians. This is a rich and diverse field of study, and the necessary support services must come from libraries, archives, museums, and technology providers. Digital technology has facilitated access to vast collections of resources that simply were not available before, and yet, the primacy of the actual art object has not diminished at all.

It would be unwise to draw conclusions from only three disciplines, but there are some interesting similarities among the three groups of scholars we have studied thus far. Scholars in the three fields have similar needs for assistance in managing and organizing non-institutional (i.e. personal or lab group) digital and digitized collections of primary source materials (digitized archival materials for historians, datasets for chemists, and image files for art historians). Meeting these needs will challenge support organizations to think differently about the services they provide and how they provide them.

This report makes clear that the needs of art historians can be successfully met only through the collaborative work of many support organizations. Our hope is that the professionals in these organizations will find this a useful beginning for productive conversations with art historians as they seek ways to support their multi-faceted, and often complicated, scholarly work.

Acknowledgements

Many individuals and institutions made this project possible, and we would like to express our gratitude. First, we would like to thank the Getty Foundation and the Samuel H. Kress Foundation for their generous support of our research.

We would like to thank the members of our advisory board, who were extraordinarily generous with their time as they provided us with guidance in our research and read drafts of our work throughout the course of the project. Our advisory board members are:

Stephen J. Bury, Andrew W. Mellon Chief Librarian, Frick Art Reference Library

Patricia Fidler, Publisher for Art and Architecture, Yale University Press

Anne Collins Goodyear, Co-Director, Bowdoin College Museum of Art

Paul Jaskot, Professor, DePaul University

Catherine M. Mardikes, Bibliographer for Classics, the Ancient Near East, and General Humanities, University of Chicago

Max Marmor, President, The Samuel H. Kress Foundation

Kathleen Salomon, Assistant Director, The Getty Research Institute

Joan Weinstein, Deputy Director, The Getty Foundation

We would also like to thank all of the institutions, departments, and libraries that participated as research sites in the course of the project, including the Getty Research Institute, the Department of Art & Archaeology at Princeton University, the Seattle Art Museum, the Department of Art & Art History at Swarthmore College, the Kress Foundation Department of Art History at the University of Kansas, and Yale University's Robert B. Haas Family Arts Library. We would also like to thank all of the individuals who helped us facilitate our research visits, especially Sandra Brooke, Kimerly Rorschach, Tomoko Sakomura, Kathleen Salomon, Linda Stone-Ferrier, and Allen Townsend.

Additionally, we would like to thank all of our interviewees. We are sincerely grateful that they took the time to speak with us and reflect on their work. A list of interviewees is included in Appendix I.

Finally, we would like to thank our colleague Deanna Marcum for her input throughout this project. While this report has benefited from the input of many individuals, we take final responsibility for its contents.

Executive Summary

Ithaka S+R's Research Support Services Program is a series of projects that investigate the research practices of scholars on a discipline-specific level. This investigation of the discipline of art history was conducted in 2013-2014. The project is intended to provide actionable findings and recommendations to institutions and professionals who support art historians in one or more stages of their research.

The primary research for this project consisted of 70+ interviews with faculty members, curators, librarians, visual resources professionals, and museum professionals. The research was guided by an advisory board, whose membership is listed in the acknowledgements section.

This project identified five primary findings that suggested opportunities for new funding, services, tools, or initiatives. These findings, along with the recommendations they engendered, are described below:

• While growth in some types of digital research methods has been slow in art history, other methods that rely in part on digital tools have had an important impact in the discipline. While it is still in its developing stages, the research approaches of "digital art history" will likely differ substantially from the methods that have been popular in other humanities fields. Funders and departments have an opportunity to catalyze and shape these methods through policy and funding choices.

• Art history is a discipline made up of deeply interconnected scholarly communities, institutions, and collections. In their research, scholars often take advantage of the resources of multiple institutions. Institutional-level planning is not always rooted in the closely networked nature of the field. Through collaborative planning, libraries, museums, and other institutions may be able to broaden the services that they offer to art historians while respecting the unique research practices of the discipline.

• Digitization and online search portals have helped researchers quickly discover many new primary sources for their research. However, the process of searching for primary sources is still very complex due to the lack of centralized search resources for art and cultural heritage objects. Museums and other stewards of important primary source collections can help build a discovery architecture for the future of the field by exploring new ways to connect their collections online.

• Digital images have become an integral part of art historians' research processes. Most scholars maintain large collections of files for research and teaching. However, they have not yet systematized the processes to organize and manipulate these files, and they do not always have the right tools available to manage their personal research collections. Librarians and visual resources professionals, in partnership with art history departments, may have an important role to play in building key skills for working with digital images, particularly among younger scholars.

• Finally, the professional training and methodological grounding of graduate students varies greatly program to program and advisor to advisor. Art history graduate programs need to focus attention on the careful development of students' research skills as they prepare them for entering a difficult job market.

There are a number of important issues that this project was not designed to investigate in great depth, particularly the impact of copyright law on research and publication and the effects of funding disparities among departments and institutions. These issues appear throughout the report narrative as they arose, but, since Ithaka S+R did not set out to examine these issues, they yield no formal findings or recommendations.

Introduction

The goal of Ithaka S+R's Research Support Services program is to foster a scholar-centered understanding of evolving research support needs in various disciplines. In each discipline, Ithaka S+R has conducted in-depth interviews with scholars in order to learn more about the important changes in research methods and practices. This project, like the others in this research program, transforms this research into actionable insights about the types of research services that scholars need at both the level of their individual institution and at the network level.

This report is intended primarily for the broad community that helps support art historians' research in the United States. It summarizes some of the important recent trends in art historical methods and practices in order to help libraries, visual resources departments, museums, publishers, scholarly societies, and other types of organizations better understand researchers' processes and goals. We hope that our research will help enable the creation of new types of research services that will enhance scholars' work and enrich the discipline of art history. The "Findings and Recommendations" section outlines some of the areas where there are opportunities for new tools, services, and funding. While readers from other audiences may find this report interesting, the research for this project was scoped in such a way that it will be most relevant to research support providers.

Art history is an extraordinarily diverse discipline that can include many different kinds of research. In this project, we have used a very broad definition of the field of art history. The interviewees were drawn from a variety of specializations and institutional settings. They included scholars who work with an incredible variety of primary sources, including paintings, sculpture, archival collections, digital media, rare books, manuscripts, illustrations, architecture, and ancient artifacts. In the interest of embracing this diversity, we have used the broad descriptor "objects" throughout the report to refer to a range of primary sources. We have also sought out art history researchers wherever they work, regardless of their institutional affiliation or status. As part of the project, we visited academic departments, museums, libraries, and research institutes.

While this study may contain many conclusions that are relevant to researchers and institutions outside the United States, it was focused solely on the U.S. This scope limits the project in some ways, but it helped us achieve a greater depth of detail in our observations of scholars working within the U.S. Many of the

interviewees have lived or worked abroad or otherwise have experience in the academic cultures of other countries, and their experiences helped contextualize our perspectives.

Methodology

The research for this project was based on interviews with scholars in the broadly-defined discipline of art history. These interviews were organized around a series of site visits at various institutions. The site visits included three studies at academic institutions, one at a research institute, and one at a museum. Ithaka S+R completed visits at the Getty Research Institute, Princeton University, the Seattle Art Museum, Swarthmore College, and the University of Kansas. The project also benefited from an additional short visit to the Yale University Haas Family Arts Library.

The site visit candidates were selected with the help of its project advisory committee. Among the site visits for this project were academic departments in each of the following categories: a combined art and art history department, a combined art and archaeology department, and a standalone art history department. The latter two award the PhD in addition to undergraduate degrees. The site visit locations were also selected to represent different types of educational institutions. Thus, they include a large public research institution, a large private university, a small liberal arts college, a medium-sized art museum, and an art history research center that is not affiliated with a university.

Ithaka S+R's goal in pursuing a site visit-based approach was to position each of the interviews in a larger institutional framework. The visits allowed us to bring to each interview a basic understanding of the research resources available at each site. In addition, this methodology allowed us to develop a more sophisticated understanding of each scholar's position within the larger mission of his or her department or institution. In this report, we have excluded most of the information that is specific to any individual institution. We made this decision because many of the conclusions that we could draw from each site visit may not be broadly applicable, and we wished to protect the anonymity of interviewees.

The interview protocol for the project was developed at the beginning of the project with the input and assistance of the advisory committee. While this protocol was used to provide general guidelines for the interviews, the topics covered in each conversation varied based on the research interests and methods of the scholar. A full list of interviewees is included in Appendix I. The comments made by interviewees have been anonymized throughout the report.

Art history is a broad field that can be defined in ways that include or exclude certain specializations and proximate disciplines. We did not create a specific definition of "art history" for the purpose of this project. We felt that it would be difficult and restrictive to create deterministic divisions. We have erred on the side of inclusiveness, and thus we have included some interviewees whose primary academic department is not art history, and indeed some interviewees whose primary methodological approach cannot be called art historical. The point of commonality for all of the interviewees is that they practice some form

of critical analysis of art in the course of their research. However, the majority of the scholars who were interviewed for the project work in art history departments and use art historical methods. We cannot claim that this report is representative of the full diversity of research practices in fields such as archaeology or media studies, though researchers in those fields may have many points of similarity with the majority of our interviewees.

We recognize that the interviewees, identified in Appendix I, for this project may not be representative of all art historians. With this in mind, we have attempted to make some generalizations that will be helpful to readers. Not all of these conclusions will resonate with all scholars or at all institutions.

Terminology

We have used terminology that we hope will be useful and intelligible to both scholars and research support providers, but to do so we may at times deviate slightly from the norms of either group. We have described this language below, and throughout the report we have referred back to these definitions when necessary.

First, we categorize all sources used in art history as either primary sources or secondary sources. This may deviate from the usage of some scholars, who may not consider the artifacts that they study to be "primary sources"; we have adopted this categorization for the convenience of the reader, and we do not intend to argue that art historians should in fact label all artifacts as primary sources. Primary sources in art history may include paintings, photographs, sculpture, digital media, artists' personal documents, incunabula, manuscripts, illustrations, architecture, ancient artifacts, and more. Secondary sources may include items such as scholarly books, journal articles, older published materials (such as art reviews), and more. The definition of an item as a primary or secondary source depends on the context in which it is used.

We have used the term "object" to describe any item or material to which an art historian might apply his or her framework of critical analysis. This category is a subset of primary sources, since not all of the primary sources that a scholar writes about are subjected to this type of analysis.

As described in this report, an "archive" is any collection of non-published sources. Archives can contain primary and secondary sources, and they can also contain visual materials that can be analyzed as objects. "Archival methods" refers broadly to the processes involved in visiting archival collections, working with an archivist, requesting archival materials, and working in an archival setting.

Finally, the word "image" is used to describe reproductions of primary sources. Images can exist in digital form, but they can also include slides or photographs. They are frequently found in visual resources collections and photo archives. Images include reproductions of objects like paintings or sculpture, but they also include reproductions of textual materials such as an artists' correspondence. While images might be considered secondary sources, scholars often use them

in ways that are more similar to the manner in which they use primary sources. Thus, when we refer generally to "secondary sources" we do not intend to include images in this grouping.

Research Methods and Practices

Art historians use a broad variety of research approaches and methods. This section describes both the types of research processes that scholars apply to their work, as well as some of the specific practices that they use in the course of searching for and interpreting information. As described in this report, the term "methods" refers to scholars' work processes, rather than methodological frameworks that art historians use to articulate or present their analysis. The analysis below focuses on how researchers conduct their research, not the types of research questions that they ask; these questions usually extend far beyond individual objects and address much broader social, historical, or epistemological questions. Furthermore, this is not meant to be an exhaustive treatment of the discipline, but rather a description of common research approaches that resonated with many of the interviewees.

Types of Research Approaches

There is a tremendous diversity of research approaches within the discipline of art history, so much so that some interviewees described it as a series of fields ("art histories") rather than a single discipline. Most art historians described their methods as a set of tools that they can apply to their research, rather than as a specific framework or process. Many scholars have a highly interdisciplinary approach, in which they "piece together different disciplinary methods" in pursuing their work.

Scholars' methods are informed by the types of research questions they ask, which can vary widely from project to project. For example, some scholars emphasized that they are particularly interested in artists' techniques; they might spend time studying the particular techniques of one artist, or how those techniques influenced other artists and gradually spread. On the other hand, some scholars use archival sources if they believe that this provides the best window to understand the purpose and meaning of an object to its contemporaries.

As mentioned in the methodology section, the use of the terms "object" and "primary source" in this section and throughout this report is not meant to be reductive of the variety and complexity of art historical research. Please refer to that section for a precise definition of how each of these terms is used here.

Critical Analysis of Objects
Viewing and analyzing objects is the method that lies at the center of art historical research. Art historians deploy specific analytical processes that involve close attention to detail and the integration of extensive background knowledge. Art historians sometimes organize trips specifically to view certain objects or

exhibitions, often in conjunction with other research. They also see objects opportunistically and take detailed notes and photographs so that they will be able to revisit them if they ever want to write about an object they have seen in the past.

Almost without exception, interviewees said that despite advances in the quality of digital reproductions, it remains important for them to see or interact with the objects that are at the center of their research and scholarship. In order to accurately and comprehensively assess the size, shape, form, color, and other physical properties of an object (whether it be a building, a painting, an illustration, or an ancient artifact) art historians must often travel to see it in person.

Many scholars said that this "personal experience" of observing an object plays an important role in their research process, and traveling to see objects in person can also expose scholars to new sources. One art historian said of his own research, "My travel has stimulated a lot of my work and interests. Seeing the originals is very important for an art historian. I hesitate to publish on something that I haven't seen in person, perhaps even multiple times."

Art historians are more willing to use digital reproductions as their sole means of viewing an object when that object only plays a minor role in their work, but each case requires the researcher to make a judgment call. Only a handful of interviewees could give examples of times when they wrote an article or a chapter that hinged on an object they had not seen in person. In those cases, the scholar judged it to be nonessential to see the object, sometimes based of the type of object or sometimes because it was very impractical for them to travel to see it. One interviewee gave an example of both cases: in one instance, he made a research trip where he spent an entire day examining a single sculpture before writing about it, but in another, he wrote an entire article about another object using only photographs. He said he was able to stay home in the latter case because the article was focused on an analysis of the imagery the object contained, rather than a close study of its size, form, and function.

As noted above in the methodology section, art historians use a great variety of objects as sources for their work, and this makes it difficult to generalize about the types of institutions that scholars rely on in their research processes. Many researchers work with artworks or artifacts held in museums, but others look at buildings or architectural features, while still others work with ephemera, incunabula, or other objects in special collections libraries. Sometimes scholars analyze objects at an archaeological site or an active religious site. This diversity creates challenges for art historians, since they often have to work in research environments that are not necessarily arranged to facilitate their work. When a scholar studies an object in a museum, he or she can expect certain privileges and services from the institution, and the museum's staff will have a general understanding of the researcher's goals. In other settings, it can be much more challenging for art historians to get access to the types of support that they need.

Due to the continued importance of examining primary sources in person, scholars' ability to secure funding for travel plays an important role in determining how they will select their topics. This applies not only to their need to examine objects, but also to their trips to work in archives and research libraries, interview artists, etc. Institutional and departmental travel funding for faculty members,

curators, and graduate students varies widely from institution to institution. This can make it much more difficult for scholars at less well-resourced institutions to pursue certain research projects.

Archival Research

Archives contain a rich variety of types of primary source materials that art historians use in their research. Archives can include collections of visual materials that serve as the object of an art historians' analysis, such as illustrations, photo archives, and architectural plans. They can also include collections of textual archival material that serve as supporting primary sources for scholarship, such as artists' papers or institutional records.

The manner in which scholars engage with these types of materials varies widely by individual. Some scholars rely extensively on textual archival sources and put them at the center of their research. For these art historians, travelling to the institution that holds materials related to their subject of interest remains an important part of the research process.

Researchers' self-reported archival research methods closely resemble those of historians, as reported in Ithaka S+R's previous report on research practices in history.[1] Most interviewees who work in archives said that they use a fairly standard process of locating materials, communicating with archivists and curators to plan their research trip, and then travelling to see sources in person. In order to take full advantage of a research trips, faculty members and graduate students often pack them with visits to as many relevant institutions as possible. Scholars who are looking to maximize the reach of their research typically consult online finding aids and catalogs in planning their research trip. Sometimes they correspond with an archivist, and when necessary they obtain letters of recommendation or other materials that will be necessary to gain access to an archive.

Among the most important shifts in scholars' practices in archives has been the use of digital cameras, which have transformed note-taking and documentation practices. One experienced scholar recounted how early in her career she used to copy text by hand while in an archive. Now, scholars typically take a picture with a camera-equipped phone or a digital camera. This has created a new set of research tasks around organizing and interpreting personal images. These issues are discussed in greater detail later in this report.

While scholars still need to see many archival sources in person when they contain visual materials, digitized copies of textual archival sources can, under the right circumstances, substitute for visiting an archive. Two interviewees mentioned instances where the digital availability of archival materials had allowed them to forgo expensive travel to an archive. In both cases, these scholars used collections of an artist's personal papers that had been systematically digitized by the institution that held those materials. However, some interviewees still preferred to work with the original materials for various reasons. One art historian said that she finds she can make unexpected connections and find other materials if she is onsite at the location where her research materials are held.

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1   Schonfeld and Rutner, *Supporting the Changing Research Practices of Historians,* http://www.sr.ithaka.org/research-publications/supporting-changing-research-practices-historians.

Digitization projects must be conducted with care and consideration in order to capture the types of details that art historians need to examine in the course of their work. Occasionally, digitization is executed in ways that are only minimally helpful to scholars: in one instance, a scholar said that she was interested in both the text and image in a source she was using, but only the images had been digitized, so she still had to travel to consult the object in person.

Technical Art History

Some researchers apply scientific methods to gain a deeper understanding of the objects they study. Conservators and technical art historians carry out analysis of objects that requires specialized equipment, laboratory analysis, or advanced imaging. In doing so, they may rely on their own interdisciplinary training or they may work with a team that includes collaborators from fields such as chemistry or computer science. Much of the important research in technical art history is carried out by conservators and other museum-based researchers, sometimes in collaboration with conservation scientists at museums and in academe.

While technical art history provides an important set of knowledge for all art historians, there are several factors that set it apart from the rest of the discipline. First, conservators and technical art historians often work in multidisciplinary teams. This type of work requires scholars to work in a different mode, where they may act as a "research broker" in bringing together a team and managing many parallel research activities. They also have to be willing to publish in different formats, since their team-based projects may lend themselves more toward multi-author journal articles similar to those in the sciences. Second, technical art history scholarship is sometimes an odd fit for art history departments. Scholars who use technical methods may find that tenure and promotion requirements are not designed to recognize the types of research projects on which they work, and PhD programs are for the most part only beginning to integrate training in technical art history approaches into their curricula. These and other factors have somewhat hindered the further integration of technical art history approaches into the discipline.

Interviews and Contact with the Artist

Interviews with artists can play an important role in the research of art historians who work on contemporary art. Scholars described research methods that ranged from formal, recorded interviews with artists to informal conversations and studio visits. Researchers who conduct artist interviews discussed the sometimes difficult balance required in order to maintain an appropriate relationship with artists. One interviewee said that scholars who are in contact with an artist have to make a decision about how to position their work: either as advocacy, criticism, or scholarship. He said that in his opinion, a "healthy" relationship with an artist must allow for diverging opinions about the artist's work.

Scholars of contemporary western art are not the only art historians who rely on interviews. Some researchers' study of contemporary art from other cultures may involve in-depth observational visits and interviews with artists. Other researchers find themselves working with the families of deceased artists. One interviewee described the process of working with a deceased artist's family to access sources that were in their possession. This required careful consideration of how

to handle details about the artist's personal life, though in this particular case the researcher did not feel constrained in what she could write. Some curators also interview artists as part of their research; this is discussed in greater detail later in the report.

Interdisplinary Research Methods

A significant percentage of art historians—possibly even a majority—consider their work to be interdisciplinary. Many scholars identify strongly with at least one other discipline, even if the great majority of interviewees said their primary self-identification is as an art historian. Some specializations lend themselves particularly well to interdisciplinary approaches, including fields such as the history of the book and book arts, medieval studies, and media studies. In addition, the interrelationships between different types of art create numerous opportunities for interdisciplinary research. Several interviewees said that they see an easy fluidity between analysis of objects and analysis of other types of sources, all of which can be considered as "texts" that carry both literary and historical meaning.

Scholars from other disciplines also use scholarship and methods from art history and apply them in a way that has relevance to their field of study. Interviewees of this type said that they were interested in bringing art history to bear on research questions in their own disciplines, rather than speaking directly to an audience of art historians. Scholars from other disciplines whose work touches on art history and visual culture often have to rely on the published interpretations of specialists for orientation within areas of study that are less familiar to them. Once they have established this orientation, they can begin to draw their own conclusions and make new connections to their own field. They are frequently interested in making connections between objects that have been interpreted by art historians and other texts outside of the scope of art historical scholarship more narrowly defined.

While scholars sometimes cross disciplinary lines, fewer interviewees said they had done any work outside their primary time period. Those that did so asserted that the methods they used were more or less the same even when the materials that that they were studying differed dramatically.

Digital Art History

This project took a broad approach to understanding the impact of technology on the discipline, and considered a wide range of activities that might be labeled as digital methods. These digital methods ranged along a spectrum, from those that are technology-enabled, where new software or technology has a transformative impact, to those that are technology-facilitated, where technology has a more incidental impact.[2] This project uncovered a diverse set of projects that fit somewhere along this spectrum of digital art history.

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2 This distinction is influenced in large part by Johanna Drucker's definition of digital art history. Drucker has applied a fundamental dividing line in digital art history methods by asking: "What new research questions can be asked?" Drucker makes the distinction between the already ubiquitous "digitized" art history, in which scholars take advantage of the wealth of digitized materials, and "digital" art history, which will involve a substantial transformation of research techniques and methods that has not yet come to pass. See Drucker, "Is There a 'Digital' Art History?" 5-7.

The awareness of "digital humanities" in art history seems to have lagged behind the actual use of technology in the discipline. In particular, Diane Zorich's 2012 report on the state of digital research methods noted that many of the techniques commonly classified as "digital humanities," such as geospatial mapping or text mining, are not yet widespread in art history.[3] (In general, the term "digital humanities" did not resonate strongly with most scholars interviewed, even those who are familiar with new digital research approaches.)

Many of the transformative uses of technology in art historical research have come in areas that can either be considered "subfields" of art history or as related fields, such as archaeology, architectural history, and technical art history. For example, it has become relatively common for architectural historians and archaeologists to use three-dimensional modeling to enhance their ability to view, interact with, and teach their subjects. Architectural historians, particularly those who study the ancient world, build models of cities and individual buildings to understand what they might have looked like. One interviewee explained how computer modeling helped him reconstruct the sightlines in an ancient city and develop a hypothesis about why the city was laid out in the way that it was.[4] Similarly, conservators and technical art historians have used new types of imaging to answer new research questions. One example is Reflectance Transformation Imaging, which allows scholars to view an object with a variety of different light sources, something that might not have been available to them in a traditional museum setting. Some museums are making these and other new types of images available through online catalogs, such as those created through the Getty Foundation's Online Scholarly Catalogue Initiative.[5]

Even in the core of the discipline, digital methods have started to enable researchers to substantially transform their methodologies and ask new types of research questions. The first set of digital approaches to art historical research has been through the quantitative analysis of large sets of metadata about works of art using sources like the Getty Provenance Index.[6] In addition, there have been some efforts to use technology to gather quantitative data from images of artwork. This approach might enable researchers to gather entirely new types of information about art, or it might allow them to gather and analyze information on a much larger scale than was previously possible.[7] These projects are still new and somewhat experimental; they have an approach that is markedly more quantitative than most art history research.

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3   Zorich, *Transitioning to a Digital World*.

4   See also the work of Diane Favro, which includes projects such as "Digital Karnak" (http://dlib.etc.ucla.edu/projects/Karnak).

5   OSCI allows museums to layer different types of visualizations that enable scholars to use richer and more detailed digital surrogates, with layered x-ray images or three-dimensional visualizations. See, for example, the OSCI catalogues at the Art Institute of Chicago (http://www.artic.edu/collections/books/online-scholarly-catalogues).

6   See Fletcher and Helmreich, *The Rise of the Modern Art Market in London*.

7   See, for example, the Digging into Image Data to Answer Authorship-Related Questions (DID-ARQ) project at the University of Illinois: http://isda.ncsa.illinois.edu/DID/.

Finally, there are a number of other technology projects that could be said to lie somewhere toward the technology-facilitated end of the digital art history spectrum. These are projects that may not necessarily open up new research questions or methods of analysis, but which have an important impact on the way scholars work. For example, the Getty Research Institute's Scholars' Workspace project plans to create a new way for researchers to collaborate on creating critical editions of primary source texts. This tool will make it easier for scholars to collaborate, but it does not necessarily introduce a new type of method to the discipline. Some digital tool and database development could also be said to fit into this category. Digitization projects such as the Blue Mountain Project at Princeton University have been developed with an eye toward opening content to reuse in digital research.[8]

Interviewees who are using new digital methods expressed concerns about quality control within the field, since they do not want their research to be compared with other technology-based research that they think is of lower quality. They tended to apply a narrower definition to "digital art history," and even expressed mixed feelings about how digital methods should be recognized in tenure review processes. Almost all senior researchers who are engaged in digital methodologies said that they have steered their graduate students away from experimentation, since they see it as a risk to an untenured scholar's career.

Collaborative Research Methods

Collaboration among multiple scholars is not typical of art history as it is practiced in academic institutions, where the "lone scholar" model remains prevalent. However, in certain subfields of the discipline it is much more common or even the norm. Museums and research institutes appear to be particularly well-suited to collaborative work. Digital projects often require collaboration, and in the future they may help foster a trend of increased collaboration within art history.

In some specializations, branches, and related fields, collaboration is much more common than in the core of art history departments. If archeologists and historians of ancient architecture are doing original fieldwork, they have to collaborate extensively with a team of specialists who work on their site, and they might report to a site director. In technical art history, art historians often work on team-based projects with other art historians, conservators, and scholars and scientists from other disciplines.

Similarly, scholars who have worked on digital art history projects reflected on the new types of collaborative relationships that they sometimes require. Conceiving and completing a successful digital research project in art history often calls for a level of technological expertise and training that goes far beyond basic computing skills and which therefore requires specialized expertise. In some cases, interviewees needed to collaborate with other faculty members in computer science, since their research required novel or sophisticated technology. These types of relationships can be complex, since they have to advance the work of each research partner.

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8   http://library.princeton.edu/projects/bluemountain/

Collaborations are more frequent within museums and research institutes, or where at least one member of a team is based outside an academic department. Interviewees attributed this to museum culture, particularly the fact that the curators and other museum staff, who routinely collaborate on exhibitions and museum publications, do not have to work toward tenure. Scholars at academic institutions can benefit from the more collaborative environment of a museum by working on a project with a museum colleague. One faculty member gave the example of her previous collaborations with conservators and curators. She worked with them during the physical analysis of a painting she was studying; as their goals were different, though, they did not publish together. She enjoyed working in the museum context because there was no "turf war" over who could take credit for the work. In addition, she felt that she had learned substantially from their approach to understanding the painting, since they had more knowledge of the materials and tools that the artist used to create it.

The traditional publication model in art history can create challenges for scholars working on collaborative projects. In two-person collaborations, the most common option is to co-publish. A few different interviewees spoke to the incredible difficulty of co-authoring an article in a way that requires both scholars to work closely together throughout the process. Examples of two-person collaborations where both scholars work on every part of the argument are very rare. However, in one case, a scholar who had tried this type of close collaborative writing said it had a transformative effect on each collaborator's ideas and the ultimate writing product that they produced together. In projects that involve more than two collaborators, researchers may have to look for other models for publishing their work. For example, in a team-based, multidisciplinary technical art history project, different members of the team may have to publish separately in order for the art historians to have single-author outputs that they can use in tenure review processes.

Current Research Trends

While this project did not focus on "research trends" within the discipline, many interviewees noted the profound impact on the discipline of the growth of certain specializations, particularly contemporary and non-western art. In the opinion of many interviewees, the shift toward hiring more faculty in modern and contemporary art is driven by student demand. Opinion is divided regarding this trend. One scholar who works on an earlier time period believed it was good to meet this demand because the study of contemporary art helps students think critically about the world they live in. Other scholars expressed concern that the increased level of resources devoted to modern and contemporary art draws resources away from other specializations within the field. One interviewee said that, as a non-modernist, she had felt marginalized in her graduate program, since so many of the courses available were outside her field, even while she acknowledged that this was based on demand. Many scholars outside the field of contemporary art expressed some suspicion of the specialization as a whole; they complained that some scholars who work on contemporary art lack critical distance, and that the field is driven by fads that come and go quickly.

Many interviewees welcomed what they saw as an increased focus on non-Western art in recent decades. Scholars in these fields face a unique set of challenges within their departments. As compared with faculty members who study European or American art, faculty members in those non-western fields often have to teach across singularly broad ranges of time and geography. In some cases, they also have to advise graduate students in areas that are not central to their own research. Curators are also called on to have general knowledge in areas that are far outside their regular area of expertise. Several scholars with experience working with colleagues abroad said that this internationalization of focus is more pronounced in the U.S.

Some scholars expressed the opinion that the field of art history is too focused on a narrow subset of visual culture, and that other interesting research opportunities, particularly historical ephemera and digital media, are being ignored.

Discovery of Sources

The way scholars discover the objects and sources that they will use in their work is a very complex aspect of their scholarly practice. Each scholar develops a customary approach to looking for information about a topic that takes advantage of a number of different tools for searching for information, but the way in which they approach their search varies based on the task at hand. Art historians' methods for finding and engaging with new primary sources is highly idiosyncratic and difficult to systematize, but this section describes some of the approaches that were common to many scholars. It also describes the impact of digital images and digital search tools, which have transformed researchers' discovery practices. While this discussion deals mostly with primary sources, it also touches on secondary sources, since the discovery process for both has increasingly become closely linked in the digital environment.

Finding Primary Sources and Shaping Research Topics

The manner in which art historians identify and shape their research topics is deeply influenced by the primary sources that they are exposed to during their research process. Scholars constantly view and analyze images and consult primary sources, whether they are seeking them out specifically or encountering them coincidentally. This process of engagement with primary sources cuts across individual research projects or topics. Each art historian's methods of discovering sources and shaping research hypotheses around them are highly individual, and thus it is difficult to characterize the field as a whole.

Scholars described various modes of engaging with primary sources and images of primary sources, which range from looking for them systematically to casually or even serendipitously encountering them. All of these modes are important at different points in the research process. At the appropriate points in a research process, art historians focus their search for primary sources in a systematic way. One researcher described how he developed an area of interest based around a set of objects with a particular pattern, and then set out specifically to look for images of similar examples of the same pattern by culling through a large corpus of published images. Interviewees also described a process in which they gradually but purposefully "collected" a group of images relevant to a research topic.

Through this process of evidence-gathering, they evaluate and extend their research idea as they encounter a corpus of images of relevant primary sources. One faculty member said that she identified a topic that she thought would be interesting, and then over the course of the coming months and years she kept a mental inventory of all of the primary sources relevant to that topic. Finally, serendipity is an important part of the way that art historians find primary sources. One researcher described how she discovered her book topic when she took a break from her work and wandered into an exhibition. Another researcher said he finds his research topics in the course of his reading: "Something piques my interest and I try to find out about it."

Art historians can engage in a search for primary sources from a variety of different angles. As shown in the examples above, sometimes they are researching a thematic topic, whereas in others cases they are searching for specific evidence in support of a hypothesis. A significant number of researchers said that they start their research process by analyzing an object that interests them, and then they focus on the object and explaining its context. In particular, curators often take this approach in their research because it can help them describe their collections.[9]

Some scholars put a premium on "discovering" new objects (i.e. bringing them into the scholarly discourse for the first time), and they focus their research accordingly. In many cases, "new" materials have been cataloged, described, and digitized, but they have not yet been analyzed for a scholarly audience. Most curators pay special attention to their role in exposing and describing the objects in their institutions' permanent collections, as a means of encouraging further research by other scholars. Many scholars believe that being the first person to publish about an object could attract significantly more interest to their work. Others differ on this subject: one scholar countered that although he considers it important to publish books and articles that describe newly discovered objects, he feels no need to do so in his own work.

Each researcher is drawn to his or her research topic for different reasons. Some interviewees said that they always prefer to study work that they consider "good art." One scholar suggested that publications get more attention in art history if they deal with subjects that are "visually compelling." On the other hand, other scholars either explicitly reject the application of aesthetic criteria to their choices of research topics, or these criteria may be irrelevant to the way that they approach their research topic. Instead, they might analyze an object based on its influence on subsequent artists, its impact in contemporary culture, or other measures of significance.

Finding Sources in a Digital Environment

In the past, the discovery process through which art historians encountered new primary sources and revisited familiar ones occurred either through directly seeing those sources or through viewing reproductions of them in "traditional"

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9   The object-first research approach is also typical of the way some art historians teach: one of the most frequent assignments for undergraduates is to write about a work of art in a local (often a campus) museum. Another variation on this assignment is to give students an object and ask them to identify it and explain its context and significance.

photographic media. Scholars could view the original works, or they could use surrogates, usually in books, but also in places like slide collections or photo archives. The creation of digital surrogates has upended the discovery process and created a new means of encountering sources, one that is often (though not always) more efficient than other processes. The proliferation of digital images has also enmeshed primary and secondary sources so that they are much more closely related than they were in the past. While digitization has increased the availability of information, the realm of digital sources in art history can be difficult to navigate. Furthermore, many special collections remain uncataloged and as of yet have no online presence.

Search Engines and Tools

Search engines like Google have upended scholars' search processes in part because they have intermingled primary and secondary sources. There were numerous examples of interviewees who found secondary sources while looking for primary sources. One scholar gave an example of a time she had performed a Google search for a painting she was writing about, and on the same page found a bibliography of writing related to the image that included numerous journal articles she had not previously known about. Another interviewee said that he often finds images and other important sources while he is putting together image slides for teaching or lectures.[10] In a similar vein, scholars often use secondary source literature (both print and digital) as an entry point for finding primary sources. Several interviewees said that footnotes and catalogue descriptions were their primary means of finding new objects or archival materials. Two interviewees mentioned examples where their research topic required them to bring together similar objects that had been geographically dispersed. Both of them started with literature searches, since this allowed them to find most of the related objects that had been published previously.

More generally, art historians value search engines because they have created alternative pathways for finding relevant information. One scholar mentioned that she had searched for the title of a painting on Google and realized that the title was actually an important phrase that had fallen out of common use, but which connected the painting to a larger field of research. Another researcher mentioned that she found on eBay postcards that depicted original works of art that are now lost, and now she frequently returns to the site to see whether there are any similar items for sale.[11] In yet another case, an interviewee had found calligraphic samples that helped her make comparisons to other objects she was studying. Some researchers said that they had found that searching an artist's name on Google or ARTstor is a good way to find images of primary sources they do not already know. Several scholars mentioned that this technique had helped

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10 Non-digital sources can also bring together sources in ways that invite new discoveries. One example is photograph archives, which have lost some of their importance as sources of high quality images, but which some scholars look to because they provide interesting opportunities for serendipitous discovery of previously unknown objects.

11 Reproductions can sometimes acquire importance independent of the original object, particularly in cases where they portray a work of art that is no longer extant, or a painting before it went through a transformational restoration process.

them uncover important images and sources. In all of these ways, Google supplements and extends the "traditional" scholarly search tools that are available to art historians.

While digital searches have increased in importance, there are still important gaps in the tools that scholars have for finding and accessing images. One common complaint from scholars is that there is no good way to find other examples of one of an object's iconographic features, such as an item depicted in a painting or a human figure in a mural. Currently, looking for other examples is time-consuming manual process.[12] There are still many opportunities for the improvement of digital image searches.

Accessing Online Collections

Search engines for art history are only powerful to the extent that there is content available for them to index. The ecosystem of sources for digital images is still fragmented and dispersed. There is a vast array of small, specialized digital collections in art history. Many of these resources are not indexed by Google, and researchers have to know where to look for certain collections within their specialization. One scholar said that with these small, dispersed collections, the online information environment is "just as intricate as physical libraries," and so it requires specialized knowledge and experience to navigate. Scholars frequently expressed anxieties that they could be missing important content.

Small-scale digitization projects and non-academic websites pose a particular challenge to discovery. One interviewee said that she only ever learns about smaller digitization projects and online sources "by accident," since there are so many of them that she feels she is unable to keep up with their proliferation in her field. One art historian said that his greatest research need with regard to primary sources was for an "easily accessible center for helping me though what's available on the internet now, directed toward me, as a scholar." Some of these resources have to be licensed by libraries, so access to them is not universal. In addition, some scholars use online sources that are not designed explicitly for academic purposes. An interviewee mentioned that she has located images before by using a local tourism website that had images of artwork in churches. In her 2012 report, Diane Zorich suggested that a "registry of projects in digital art history" might be needed to deal with this discovery problem.[13]

Among the most important online resources in art history are museums' websites and online catalogs. Only a small portion of museums provide high quality online images of a significant portion of their collections, but this has already had an important impact on scholars' ability to discover and access images. In the digital age, online access to images has started to overtake printed exhibitions catalogues, in terms of its importance as a source of images for scholarship and teaching, in large part because online collections offer greater accessibility and functionality. Still, some museums only provide basic information about their collections online, with no images. Others have yet to make a database or catalog of their collections available online, though many interviewees mentioned that

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12   The Public Catalogue Foundation's "Your Paintings Tagger" project in the U.K. has taken a crowdsourced approach to creating better discovery tools. It allows individuals to add metadata about paintings' content, which could theoretically give researchers a new way to find objects relevant to their work. See http://tagger.thepcf.org.uk/.

13   Zorich, *Transitioning to a Digital World*, 16.

this is becoming a more important priority everywhere.[14] One curator said that the most important "promotion" that she can do is making her collections searchable online, since she feels that "otherwise, they may as well not exist." These databases help scholars assess whether or not they should visit a museum in person, a crucial part of planning research trips.[15]

Some museums have also made portions of their collection available via an online database or tool that aggregates objects from multiple museums, such as ARTstor, Google Cultural Institute, the Digital Public Library of America, or Europeana. These aggregations provide more convenient search tools for some use cases, but their coverage of museum collections is not yet expansive enough to have had a transformative impact on the discipline.

There is a further discovery problem for "hidden collections" that have no online presence, either because they have not been described at all or because records describing them have not been placed online. This project uncovered many examples of collections with no online catalog or finding aid; these included a collection of serials, an artist's correspondence archive that was held in a museum, a poster collection in an arts library, a retired scholar's personal image collection and archive, and more. While all of these materials are available to scholars, they all had little or no web presence, and they are difficult to find out about and access. As scholars rely more on digital search tools, these collections may go unnoticed. Those responsible for stewardship of collections often seek alternate ways of sharing information about them. For example, one interviewee used an institutional blog to create a web presence for collections that might otherwise be overlooked.

Librarians play some role in spreading news about newly digitized materials, but few researchers said that librarians were their most important guides to new resources. Librarians disseminate information about new resources using their Libguides or writing personal emails to faculty members and graduate students who are working on related topics. However, even subject specialist librarians struggle to keep up to date on all of the available resources.

Discovery of Secondary Sources

Art historians occasionally struggle to find the secondary sources that they need, but in general, interviewees expressed confidence in their ability to locate and obtain the necessary secondary sources. Furthermore, few researchers expressed any anxiety about locating new secondary literature as it is published.[16]

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14 Kristin Kelly has documented the patchwork of different types of policies with which museums in the U.S. and abroad have approached online images, and this report will not review those in detail. See Kelly, *Images of Works of Art in Museum Collections: The Experience of Open Access.*

15 Some interviewees at museums expressed concern about placing so much information online without much context. One curator said that working with scholars who are interested in her collections is one of her most important roles as a member of the research community, and that with more information available online she worries about the erosion of this role.

16 Ithaka S+R's work among historians and chemists revealed that scholars in both of those fields often feel a great deal of anxiety about keeping up with new literature as it is published. Art history may be different because of the small size of the field relative to these two other disciplines. See Long and Schonfeld, *Supporting the Changing Research Practices of Chemists,* http://www.sr.ithaka.org/research-publications/supporting-changing-research-practices-chemists and Schonfeld and Rutner, *Supporting the Changing Research Practices of Historians,* http://www.sr.ithaka.org/research-publications/supporting-changing-research-practices-historians.

Many scholars and librarians recognize the limitations of the available secondary source discovery tools and the importance of planning for the next generation of tools. In interviews, some subject specialist librarians questioned the value of traditional research starting points; one librarian said that she has always shown students how to use certain established research tools such as EBSCO's Art Index, but now she is not sure whether this is still the best approach to finding information. The Getty Research Institute cited the relative ineffectiveness of traditional abstracting and indexing services when it discontinued its updates to the Bibliography of the History of Art in 2009.[17] New explorations such as the Future of Art Bibliography (FAB) initiative have emerged to explore ways to enhance discovery tools in art history. FAB aims "to evolve and promote a more feasible, flexible, and sustainable (by virtue of shared contribution and responsibilities) bibliography of the field in all its traditional and emergent forms."[18]

Scholars' Personal Collections

An important research practice for almost all scholars is the creation of a personal research collection over the course of their careers. These collections include traditional materials such as books and journals, but at their heart are scholars' extensive personal digital image collections for use in their research and teaching.

Personal Image Collections

Almost all art historians at colleges and universities keep large personal collections of digital images that include both photographs they have taken and images they have downloaded from online sources. Art historians have always built personal collections, and to a certain extent the formats of their collections are always in transition. The 1988 report *Object, Image, Inquiry: The Art Historian at Work* documented scholars' decisions about when to use photocopies, 35 millimeter slides, or microfilm.[19] Digital images have replaced these collections and vastly expanded the number of materials that scholars can keep.

These collections range in size from hundreds of images to tens of thousands of images. They also range widely in their quality and content. Among collections of self-taken photographs, some researchers simply photograph works of art in museums for their own reference, when those images are not already available online. However, other researchers have collections of rare or unique images they have captured in the course of their research. This includes images taken during their trips to archives. One interviewee had thousands of images of remote, difficult-to-access architectural examples accumulated during the course of a research trip. Another was the first who had worked on a small private collection and had access to take photographs of it.

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17 See Lee Rosenbaum, "A Biblio-File Brouhaha", http://online.wsj.com/news/articles/SB10001424052702303491304575188564075303390. The debate over the BHA highlights one of the unique aspects of discovery in art history, which is that many of the research tools are created by institutions and non-profit providers. In many other disciplines, major commercial providers or academic societies build discovery tools that they license to libraries for scholars to use. Perhaps because of its relatively small size, art history has attracted less commercial attention. Instead, researchers often rely on large institutions like research institutes and museums to provide the research tools that they need for their work.

18 Fabian and Salomon, "Future of Art Bibliography Initiative," 180.

19 Elizabeth Bakewell et al., *Object, Image, Inquiry,* 13-18.

Scholars often have some basic organizational system for their image files. Most organize their personal image collections in a hierarchy of folders on their computers' operating systems. Sometimes they embed a small amount of metadata into the folder names or the filenames, or they focus on creating filenames that will be easily findable during searches. Scholars organize these collections by location, research trip, archaeological dig, artist, course, etc. based on their personal needs. A very small minority of interviewees uses some other type of software program or application, such as Lightroom, Flickr or iPhoto to manage files. Graduate students appear to be slightly more likely to experiment with software programs for managing their files. Many scholars have some simple form of file backup: they either duplicate their files on multiple hard drives or, less often, on a network drive that is backed up by their university. For scholars who work internationally, data security can sometimes be a concern. One interviewee spoke about her system of duplicating and hiding storage devices to keep them safe from possible theft.

When they need images for teaching or research, many faculty members choose to scan the images themselves, even if they have a visual resources professional at their institution. The choice of whether or not to use a visual resources center seems to be mostly a function of preference and habit, and it depends on the individual.

There is not a culture of widespread image sharing in art history. While scholars will occasionally informally share files through email, they do not often request images from each other. Some interviewees expressed reticence about sharing images online, since they often mix their own images with downloads and thus they are unsure about the copyright status of their personal collection. In the current environment, each scholar builds his or her digital collection in isolation, often duplicatively, and shapes it specifically to his or her needs.

Other Types of Materials

Many scholars build personal collections of journal articles and other short-form materials. Some prefer to keep a physical collection of most of their reading materials, even if they have printed those materials from an online database. This practice is more common among older scholars who began their careers before the wide digital availability of journal articles and other basic online resources, and who keep hundreds if not thousands of journal article reproductions in their offices.

On the other hand, many art historians have begun to make very efficient use of digital tools. Citation management programs like Zotero have reached a broad audience in the field, and tablets have become popular for reading shorter pieces like journal articles. One of the primary advantages of digitized materials is that researchers can easily create personal digital libraries that they can access when they are travelling. Some scholars build and manage these files very systematically, while others do not spend as much time building a collection of secondary sources.

Similarly, many scholars build personal book collections that support their research and teaching. Many scholars reported that they keep the bulk of their book collections at home, but practices vary. There was little evidence one way

or the other about how scholars' personal book-buying habits are changing. One librarian said that based on her observations, she believes that scholars are less able to build significant personal libraries than in the past due to the expense of art books.

Museums and Curatorial Research

This project focused on two different aspects of museums' missions: their role as stewards of collections that art historians need for their research and their role in producing new scholarship. While museums play many other roles that are vital to their missions, the scope of inquiry in this project was limited to these two functions. The role of the curator serves as a focal point for the analysis below, inasmuch as it touches on both the stewardship and scholarship functions of the museum. This section gives a very short summary of some of the research work that curators carry out in developing exhibitions, preparing publications, and overseeing the care, preservation, and growth of the collection.

Building and Describing Collections

Curators are responsible for carrying out research about the collections they oversee. Some interviewees described this as one of the most interesting and rewarding parts of being a curator, but given the other demands on their time, not everyone can devote a significant amount of time to this task. Sometimes curators conduct research on the collection in the course of other projects, such as preparing an exhibition—as one interviewee said, "you are always trying to kill two birds with one stone in a museum." Curatorial staff members add to their knowledge of the collection when they prepare exhibitions that draw upon the museum's permanent collection or pursue other special projects such as public presentations. Some curators' scholarship is designed expressly to draw the attention of scholars to the collections they oversee. One interviewee said that one scholarly form that curators have at their disposal is an "exploratory treatment" of an object that is meant to push an object into the published scholarly discourse and attract the attention of other scholars who might be interested in doing further analysis.

Curators can work to develop collections in ways that they think will have an impact on scholarship and advance the missions of their institutions. Many interviewees gave examples of how they hoped their role in acquisitions would influence other scholars or encourage new research. For example, one curator said that she was collecting in an area where she considered museum resources to be sparse in the United States, in order to build a distinctive corpus of materials. Another curator said that in her acquisitions, she always prioritizes "preserving the voice of the artist" and tries to guide the interpretation of the artists' work. Often curators' work in acquiring leads to opportunities for their own scholarship, publishing on new acquisitions.

One of the tools that curators can use to document research about their collections is the accession or object file, which may include a broad variety of information about each object. However, several interviewees noted that curators cannot

always devote much time to building and maintaining them. Some institutions have pursued better ways to store and manage these files in the digital environment, which can call into question the continued maintenance of traditional object files.

In addition to their role in building and cataloging collections, curators sometimes play an important role as liaisons between private collectors and scholars. Curators have to build their collection through acquisitions and by cultivating relationships with potential donors. One interviewee spoke about how curators can play an important role in showing private collectors how much they can contribute to the scholarly discourse if they "go public" with their collections by donating them to museums.

Curators also engage directly with living artists, since they are sometimes placed in the role of interpreting their work for a broader audience or acquiring it for a museum. As part of their effort to document an object in their collection, they may interview the artist or otherwise speak with him or her about the meaning of an artwork. One curator said her role in this process is to "take your clues from the artist and the artist's ways of working." Curators must be sensitive to their role as the "market-maker" for some artists' work, especially when they are in the position to commission works for an exhibition.

Creating Exhibitions

The way a curator shapes an exhibition is in some ways similar to the manner in which the scholar crafts a scholarly monograph. Curators work with a theme or thesis that will shape how the artifacts are presented and interpreted. They sometimes have an obvious central artifact or collection around which they shape an exhibition checklist, but usually they have to draw items together in a creative way that compares or juxtaposes them. Curators use previous exhibition catalogues on similar subjects in their research; this is crucial to helping them position their own work contextually. Travelling to major art exhibitions and art fairs also helps curators in contemporary art keep up with major trends. Museums must assess the timeliness of proposed exhibitions based on other exhibitions and scholarship being conducted in the field. They must also ask: 'Has it been done before at another museum, or is this a fresh idea?' The curator's process of creating an exhibition includes many consultations with colleagues, which one interviewee compared to the process of peer review in publishing. They discuss their ideas with colleagues at other institutions, and depending on the process of the individual museum, they may have to take it through a formal review with their museum colleagues, director, or board. The work of preparing an exhibition can be highly collaborative, since curators must work with exhibition designers, conservators, educators, marketing staff, and others who are contributing as well.

Some exhibitions are considered more "scholarly" because they focus on an emerging area of academic interest or articulate an important new thesis for the first time. There can be significant reputational value associated with an exhibition that contributes substantially to scholarship. Curators working at university art museums and galleries are often well positioned to put together exhibitions with such a scholarly focus. Small spaces in museums at academic institutions

may lend themselves to niche shows that will not attract a huge audience, and there is little or no revenue pressure on the institution compared to municipal museums. On the other hand, many public museums must be conscious of more practical concerns when crafting an exhibition program. In particular, they have to be very mindful of projected costs and attendance, since this revenue can be crucial to balancing their budgets. Some interviewees also said that museums at academic institutions are particularly well-suited to interdisciplinary exhibitions, since they frequently enjoy unique access to scholarly expertise and library resources in other disciplines.

Museum Publications

Museum publishing has traditionally been the most important way for museums to broadcast their collections to a wider audience. There are many different types of museum publications. Exhibition catalogues serve to capture the ideas and objects associated with an exhibition and disseminate them in a form that is widely available to scholars.[20] Collection catalogues, on the other hand, focus on publishing information and scholarship about an institution's permanent collection. Each format is very flexible, since many different types of written and visual content can be included in such catalogues, but the unifying feature of most catalogues is that they are rich in images. Some catalogues include scholarly essays, while others are targeted at a popular audience. Some interviewees identified "scholarly catalogues," which make original arguments that contribute to the scholarly discourse, as a distinct category of publications. Catalogues can also include content such as transcriptions of interviews between artists and art historians; some scholars value and contribute to such publications because they consider them an essential primary source and a significant contribution to the understanding of an artist's work.

The cost of producing high quality exhibition catalogues is very high, so some museums have to strictly limit the number of publications they produce. One interviewee said that the financial constraints of museum publishing can help focus curators and museum administrators on the essential questions: 'What is the most appropriate type of publication?' and 'Who is it for?' She gave an example of an exhibition that produced a volume of interviews with the artists whose work was on display; she considered this a format that can provide an interesting perspective to museum-goers while at the same time creating an important primary source for scholars.

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20 Some curators expressed the opinion that their exhibitions can have a lasting scholarly impact even without a large accompanying publication, while others see publications as an essential part of ensuring this impact.

Museums play an important role in teaching, whether or not they are connected to an academic institution. While this was not a primary subject of research in this project, many scholars spoke about how they use museum collections in their teaching. The transformative changes to museum teaching activities over the past decade were readily apparent in many of the interviews. Many interviewees spoke about the challenges and opportunities of teaching in a gallery, print room, or museum seminar room where the objects, including objects that are not routinely on display, are physically present. Seminars can be held entirely in a museum and take advantage of the opportunity to bring objects into the teaching space or teaching gallery. One interviewee uses the museum database as a teaching tool, so he can draw up examples for students to see as the conversation in his advanced seminar evolves. Many interviewees said that the physicality of teaching with objects adds an important dimension to their students' education.[21]

Research Collections and Art Libraries

There are many different types of art libraries at academic institutions, museums, and research institutes. These libraries are best understood in terms of the services and collections they offer, since each has a unique mix of these components, based on their institutional history and the user populations that they serve. This section describes some of the types of collections and related services that play an important role in art history research.

Special Collections

Special collections libraries hold a significant proportion of the objects and other primary sources that art historians study. These collections include rare book libraries, prints and drawings collections, manuscript collections, graphic arts collections, and more. Interviewees mentioned using content types that included collections of rare books, historical auction catalogues, rare art journals, artists' papers, photo archives, graphic arts, ephemera, records of galleries or architectural firms, scholars' papers, curatorial records, etc.[22] These collections may be located in an arts library, but they may also reside elsewhere within an institution, such as in a museum, a visual resources collection, or a special collections library that does not have a particular focus on the arts.

Many interviewees said that their most significant working relationship with a librarian or archivist is with the individual who helps them access primary sources. Most often, that individual is not at their own institution, but rather at the special collections library that holds materials central to their research. One interviewee described a common experience: she planned a trip to Europe

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21 There has been a great expansion of museum teaching activities in departments outside of art history, in large part due to the efforts of the Andrew W. Mellon Foundation's 15-year College and University Art Museum Program. See Goethals and Fabing, *College and University Art Museum Program,* http://mac.mellon.org/CUAM.

22 Certain visual resources collections—especially photographic archives—are extensive and unique enough that they should perhaps be considered under the umbrella of special collections, as well.

with help from a archivist through email communication, but it was only when she arrived at the archive that her face-to-face conversations with the archivist helped her stumble upon truly valuable research resources. These relationships can continue to yield value over years of research.

At large museums and universities within the U.S., special collections are sometimes spread over several different departments in ways that can be difficult for scholars to navigate. In some cases, historical boundaries between departments and collections might not make sense from the researcher's perspective, since the materials in each repository are similar or closely related. One researcher gave an example of a time when he was using a copy of a rare book; he thought he was using the only copy at the institution, only to discover later that a second copy existed in another collection at the same institution, but it was cataloged under a slightly different title. Some institutions have many siloed digital asset management systems or collection catalog tools that vary by collection or department. In other cases, collections are known to be unique, but they are not thought of as "special collections" and therefore they are not treated in the same way as other collections. One curator gave the example of an artist's archive that is cared for in a campus museum's curatorial department, but which consequently has no provision for access by scholars, since the museum does not have a reading room where researchers can be supervised when they are looking through the unprocessed collection.

Most scholars who use sources from institutions in the U.S. noted the increasing shift toward openness, broader digitization of collections, and easy online access. On the other hand, many scholars noted that working with materials from institutions abroad remains challenging. Interviewees gave examples where they had to work through layers of bureaucracy to access objects and archives. One scholar said that during one of her research trips, she encountered an archive that was closed due to a lack of funding, and another institution where the only staff member with access to the collection was away at the time of her visit. Careful planning, letters of introduction, and personal connections are still important to easing the process of doing research in archives abroad.

Many institutions have sought to broaden access to their special collections through digitization projects.[23] As is mentioned above in the section on discovery, many digitized collections are available through the websites of the institutions that digitize them, but other projects, such as the Getty Research Portal and Digital Public Library of America, bring together digitized special collections from multiple sources. Throughout this report there are examples of the ways in which digitized special collections allow researchers to discover objects that they otherwise would not have known about, go through a much greater volume of materials, and plan more efficient research trips.

From librarians' and archivists' perspectives, it can sometimes be difficult to demonstrate the concrete value of special collections to their own institution. Many of the users for these collections come from outside the institution, and this type of usage is not always inherently valued by the institution.

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23 Other Ithaka S+R research projects have investigated issues related to the sustainability and discoverability of sources like these. See Maron and Pickle, *Searching for Sustainability,* http://www.sr.ithaka.org/research-publications/searching-sustainability.

While this report has emphasized the role of objects, archival materials, and other types of primary sources in the research process, secondary sources and scholarly literature play an equally important role in the discipline. This section focuses on secondary sources and the art libraries that provide them, with an emphasis on the ways in which art historians' use of these materials sets them apart from other scholars.

Library Research Collections

One of libraries' crucial touch points with scholars is their management of research collections. Consultation of secondary source literature is a key part of art historical research, as it helps scholars to connect with the scholarly discourse in their area of interest. There are a variety of content types and use habits that make art historians unique in their use of library collections. This section describes scholars' use of some important content types, along with some of the special considerations that are important to maintaining art research collections.

Books and Other Sources

Art historians use books in ways that distinguish them from researchers in other fields. They sometimes use books primarily as sources for high quality images. Print books (both monographs and catalogues) allow scholars great flexibility in examining images because they can place the books side-by-side to compare images. Scholars can also easily scan images for their personal digital collections. Several researchers mentioned that they trust the reproduction quality of images in books more than that of digital images. In particular, one interviewee whose work hinges on color said that he always prefers images in printed books. Scholars reported that they do not generally read monographs cover-to-cover, but instead use images, tables of contents, and indexes to navigate to sections that are most relevant to their research. Several interviewees emphasized the importance of the index as a means of accessing information in a published book.[24]

Art history is unique because there are still a great number of publications that do not have parallel digital versions. In particular, there are few ebooks on scholarly topics in art history. This is largely due to the high costs of image permissions, which are discussed in the section on publishing below.[25] Additionally, there are many significant journals and other print publications that are not yet available in digital form. Several scholars gave the example of Japanese art history journals, most of which are only available in print. Those art history ebooks that are available sometimes come with serious restrictions like excised or watermarked images.

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24 One scholar said that a carefully composed analytical index can significantly speed his research, but that he has noticed a decline in the quality of indexes in more recently published books.

25 There is a larger debate within the art history community about art historians' format preferences and whether they will accept electronic publishing. (See especially Whalen, "What's wrong with this picture?") This discussion of preferences sometimes overshadows more important factors influencing art publishing, particularly the economic tradeoffs confronting publishers and libraries.

Most scholars expressed disinterest in the small number of ebook titles that are available, in large part because they are often inferior at serving scholars' needs for images. Print books still allow researchers more flexible use of images than digital platforms, since they can compare them side-by-side or scan them. One area where digital versions of books (including scanned versions of print books) add significant value is that they make books searchable.[26] However, even when they use a digital version for keyword searches, most interviewees said that they still prefer print versions for reading large sections of text and accessing images.

Interlibrary loan is an important means for accessing books in art history, even at institutions with excellent art libraries. For researchers at institutions with only basic art research collections, it is an essential service. Scholars use WorldCat and Google Books to find books outside of their own institutions, and samples from Google Books help scholars evaluate whether it is worthwhile to request the book. In this way, these tools create a "pathway" to an ILL request. Many art historians are aware of the costs of requesting a book through ILL, and some of them said that this makes them more conservative about requesting books.

Even though secondary source materials are not yet ubiquitously available online, digital materials have begun to transform the ways that scholars use books and journals. Interviewees gave numerous examples of how digital journals or books have changed their research processes. One interviewee commented on the "unbundling" that she has already witnessed, especially in terms of how her students view book and journal materials that they use for class. Since much of their e-reserve material is scanned and placed on the course's webpage, it has been decontextualized and students don't necessarily think about whether a course reading is a journal article or a book chapter.

In addition to books and journals, art historians value a broad range of types of secondary sources. Ephemera, auction catalogues, art books for a popular audience, catalogues raisonnés, and various types of "gray literature" permeate the field. Many scholars have very specific and individualized needs for sources, some of which may be hard to categorize as belonging in either special collections or regular library collections. For example, access to historical periodicals is important in certain areas of art history. Criticism written by the artists' contemporaries helps the art historian understand how the work was received at the time it was created, and in some cases it helps them "decode" the symbolism of an object. One interviewee described how she gathered the dates of an artist's major shows, and then looked at the reviews from periodicals that appeared at those approximate dates. Auction catalogues can expose art in private collections and help scholars track provenance. Several researchers mentioned that they had used curatorial files as an archival source or a way to locate other sources, and in one case a scholar had used files from an artist's estate's office.[27]

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26 In general, interviewees did not use the term "ebook" with any precision. Sometimes, they used it to refer to Google Books scans of print books, rather than born-digital ebooks. Scholars typically use Google Books scans of print books to search the text of books, rather than "ebooks." Additionally, "ebook" is also often taken to connote e-only publication, rather than dual-format publication. This lack of precision may reflect the current scarcity of online publishing in the field.

27 Depending on the context, some of the types of materials identified here might also be used as primary sources, rather than secondary sources.

Collections Development and Management

Art historians' distinctive research needs and habits have specific implications for how libraries build and manage their collections. Maintaining a quality research collection requires special expertise, both in art history and in foreign languages. Most importantly, print collections are still central to art history research, a factor that increasingly sets the discipline apart from other fields.

At art history research libraries, building research collections can require very specialized expertise because of the diversity of materials that scholars need. In order to build a research collection that includes the broad variety of materials beyond current journals and books, librarians need to be familiar with the discipline and the research interests of their users. Collecting these specialized materials in a meaningful way remains an art rather than a science.

In order to support art historians' regional specializations, librarians must also acquire foreign-language materials from around the world. Several scholars who work on Asian art mentioned the incredible importance of having access to a librarian with language training in their field. Many of these scholars use print materials that are not easily available in the United States or specialized online databases, and they need special support to be able to find and access these materials. In order to do this, they often work in concert with both an arts librarian and an East Asian language specialist.

For a variety of reasons cited above—including the lack of availability of digital versions and scholars own preferences and habits—art librarians have continued to collect and maintain large print collections. Several librarians mentioned that they have had to work to put in place exceptions to blanket collections management policies, particularly those that give e-books preference in library acquisitions. This reliance on print will likely continue until the art publishing landscape shifts significantly toward digital formats.

The unclear preservation status of some digital materials makes some librarians feel uncomfortable with deaccessioning print materials. One librarian mentioned the difficult decision of whether or not to discard print copies of auction catalogues, which are now usually available online as well as in print. She said that she is unwilling to give up the print in part because auction houses may someday decide to remove this content from their websites or start charging subscription fees for it. Collecting print copies is the only way to ensure long-term access to the material. This uncertainty also applies to some ebooks, where the long-term permissions status of some images may be in question.

Library Services and Facilities

Libraries' physical spaces and services also play an important role in art historians' research processes. Some of the important issues related to these topics are discussed below.

Physical Spaces

Physical convenience is still an important factor for art historians, whether their institution maintains a branch library for art history.[28] Most interviewees prefer their offices and/or classrooms be in the same building as an arts library or on the same part of campus as the library that holds arts materials. There are a variety of reasons for this, but the most important factor is scholars' need to have ready access to print books, and since portions of many art collections do not circulate, physical proximity is still the best guarantee of easy access. As noted above, books are still the art historian's most important source of images, and scholars need ready access. Even scholars who use a library delivery service for most of their materials preferred proximity to the art research collections.

While proximity to research collections is preferable, researchers at institutions that do not have outstanding collections in their field are generally able to overcome this obstacle. Most interviewees felt very comfortable with requesting materials through ILL, which generally gives them access to all of the materials they need. One scholar remarked that it means that she cannot always "run over to the library," but she can ultimately still get access to the books that are important to her. The ability to browse through collections is important to some art historians, but only a few interviewees actually identified shelf browsing as an important part of their research process.

Based on the observations in this project, graduate students are often the heaviest users of the art libraries' physical spaces, in part because of their need to be close to research collections before they have built up the extensive personal collections typical of senior faculty members. Many art libraries have carrels or rooms that are formally or informally designated for graduate students.

In addition to serving the needs of researchers at their own institution, some academic and museum research collections serve a broad audience of art historians who travel to do research there. Scholars occasionally make research visits to use the resources of institutions other than their own. Museums and smaller academic institutions often develop formal or informal relationships with local universities that allow their curators, researchers, and students to access larger academic research collections. Researchers also visit some libraries in person because of the limited circulation policies of many art libraries. Scholars' research visits to other collections are relatively infrequent, but a handful of interviewees said that they make extensive use of the strong resources of nearby institutions. This was especially true at some Northeast institutions, where individual scholars may commute to the institution where they teach but prefer to do their research at another nearby library.

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28 Scholars who work on interdisciplinary research subjects mentioned that the proximity issue can be more complex for them. If their institution has a standalone arts library, they often find themselves using both the branch library and the main library with some frequency.

Teaching and Reference

Undergraduate and graduate students are the main source of reference requests at most academic libraries. Graduate students bring more complex research questions related to their dissertation research. One interviewee said these can range from narrow library-related questions such as, "How do I find a master's thesis from a UK institution?" to "How should I go about conducting historical research on an entire period?" Faculty members do not often make research requests, in large part because their work is so specialized and they know the sources better than a general art librarian could. One interviewee said that the faculty members who do come in for help are generally those who are less familiar with technology and online resources.

Library instruction sessions within undergraduate art history classes are very common services at academic art libraries, and the demand from instructors for those sessions has not abated at the institutions that participated in this study. These sessions usually yield follow-up research consultations with a smaller number of students.

Services for Curators

Museum libraries typically offer more hands-on research assistance to curators. Many of these libraries have a smaller in-house audience than do academic libraries, and the curators that they serve may have less time to spend in the library than their colleagues in academic departments. One interviewee described the role of the museum librarian as a "colleague with the expertise in the 'how' of research." Some museum librarians collaborate frequently with members of the curatorial staff. When curators are not familiar with the newest research resources, they rely on library staff to supplement their methodologies and substantively assist in their research projects.

Services for the Public

Museum libraries serve a different population than most academic libraries, and this is usually reflected in their services. For example, at some institutions there is a section of the collection that has been put on reserve for volunteer docents who need to prepare to lead museum tours. The Seattle Art Museum also maintains a teacher resource center for local teachers. Most museum libraries also welcome members of the public, since they consider this to be part of the larger educational mission of the institution. These users most often request more information about works of art that they own, and they may have little or no knowledge about how to conduct this research themselves. Each institution has a different policy for how to handle these requests: some will demonstrate how to find relevant information, whereas others will actually do a limited amount of research on the patron's behalf. At some public museums, such research requests from the public dominate the library's reference work.

Visual resources collections and the visual resources profession embrace many functions related to making analog and digital images available for teaching and research. This study focused on the ways that visual resources professionals and visual resources collections impact faculty members' research at academic institutions. Most visual resources collections and services primarily support teaching, but they sometimes also play a role in faculty research, and in a broader sense they play a large role in some faculty members' day-to-day work as scholars. Visual resources professionals provide unique services to art historians, and they do not have a direct counterpart in other disciplines.

One of the ways that visual resources professionals sometimes support researchers is by lending their expertise on copyright. Visual resources professionals often have relatively extensive knowledge of copyright law and how it relates to image use. They are often called on to share this expertise with faculty members who are publishing or working on digital projects. While many visual resources staff members take on these roles at their institutions, these tasks often fall outside of their official job descriptions and formal training.

Visual resources professionals sometimes also have expertise on digital imaging that is unique in their departments. They usually know more than faculty about image sizes and file formats, and therefore find themselves helping to prepare images to send to publishers for book and journal projects. Some visual resources professionals now work either independently or in conjunction with a campus IT department to support the use of scanners and projectors. Some of them also help manage institutional subscriptions to or support for the use of major image databases like ARTstor, which some researchers see as an important resource for their research.

Most visual resources professionals have thus far not engaged deeply with faculty members about managing personal digital image collections, since their work is largely confined to institutional collections and classroom instruction. As the complexity and importance of personal digital collections grows (especially as these collections relate to digital humanities projects), there may be an increased need for services to help faculty manage and curate non-institutional image collections. Whereas it used to be possible for visual resources collections to accession some of the slides of retiring faculty members and add them to institutional collections, personal digital collections make this process more difficult. Faculty members often store their images with little or no metadata, and their materials might have little or no relevance without contextual information. Furthermore, personal collections cannot be shared widely because scholars rarely track the copyright status or sources of the files that they keep.

The role of visual resources professionals has already been transformed in the wake of increased digital availability of images, and it will likely continue to change in the near future. There is a perception in some quarters that visual resources departments are under threat; in recent years there have been multiple examples of collections closing or reorganizing, and this trend may spread to more institutions.[29]

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29 Examples include Cornell, University of California Irvine, and the Art Institute of Chicago; see Sundt, "The 'Crisis'—Revelations, Reactions, Reinventions."

Networks and Scholarly Communication

Professional Networks

Maintaining relationships with peers is an important part of gaining access to resources in many fields of art history. Scholars find they must create a network of curators, archivists, librarians, and colleagues who will keep them aware of developments in the field and connect them with sources that they need for their work.

Academic conferences are an important part of networking for art historians, and many interviewees reported that they regularly attend either the College Art Association's annual conference or the regular meetings of another scholarly society that serves their field of specialization. The College Art Association's annual conference is the largest conference in art history in the U.S., and many researchers said it is a crucial part of how they stay in touch with others in the discipline. Other specialists, for whom CAA's conference programming is less relevant than that of other conferences, see its principal value in the job search and recruiting opportunities it presents. These interviewees mentioned that they make much stronger connections to their peers in specialized scholarly societies, such as the Renaissance Society of America or the Association for Asian Studies. These conferences tend to be more interdisciplinary, and some scholars feel like they provide a more relevant audience and set of panels than CAA.

Many scholars are engaged with international scholarship in one form or another. Some actively travel to conferences in other countries and publish in other languages, while others try to read the relevant literature from other countries. Interviewees reported that their colleagues in other countries often approach their topics with a different set of methodological concerns, and that they also ask completely different types of questions. These differences can be especially pronounced in non-western cultures. There are also differences in how scholars are expected to speak about their work; one scholar said that in Japan she had been told to be more careful to express deference in areas that were not her direct area of expertise. Another scholar said that there is a "bias against theory" in the country that she studies, so she has to adjust her work whenever she hopes to publish it there.

There are many other ways for scholars to network with each other, as well. For example, invited talks serve to introduce scholars to their peers at other institutions. One senior scholar said that she always encourages her younger colleagues to invite their peers to campus to give talks as a way of building reciprocal connections that will help them in the future. Similarly, at museums, exhibition loan requests can be an important way for curators to build connections with their colleagues at other institutions. In some segments of the discipline, there are also active emails lists that scholars use to make announcements or ask research-related questions. These news lists can help scholars stay aware of important new exhibitions in their field.

Scholarly "Competition"

Fear of competitive publications from other scholars is particularly strong in some subfields of art history, and because of this some researchers are reluctant to share information about their research. One scholar mentioned an actual instance of having been "scooped," where another researcher had actually copied unpublished research for his own publication. Fear of being scooped was more common among younger scholars and graduate students, who are typically careful about when and where they talk about their current research. One interviewee said that she knows of a senior scholar who is starting to work in her area of interest; she hesitates to share her sources publicly, and she worries that she is at a disadvantage because she has fewer travel resources. The fear of duplicate research also seems to be more predominant among scholars who are working with materials that are not yet widely known, since they feel that they have something to gain by being the first researcher to bring them into the scholarly discourse.

Publishing

This study did not include an extensive investigation into the art publishing sector, but many interviewees did comment on their experiences as authors. This section briefly discusses some of the types of scholarly books that are prevalent in art history, as well as some of the challenges facing art history publishing in general.

Monographs

Art history monographs can take on a number of different forms. Even the term "monograph" appears to have some flexibility and ambiguity in terms of how it is used. In particular, some scholars insisted that a monograph is a book that treats the work of a single artist, while others think it can cover multiple artists and themes as long as it has a single author. Monographs' formats and production quality also vary widely. There is a spectrum between heavily text-based monographs with few color images and large-format monographs with high-quality color reproductions.

Books of contributed essays were described by several scholars as a good way to publish new perspectives in a user-friendly format. These volumes appear to be growing in importance within the discipline.[30] However, several scholars said that they are a better medium for tenured faculty members than for younger scholars, since they may not be assigned as much weight in tenure and advancement deliberations. This is also true of museum catalogues. One interviewee noted: "My perception is that in terms of tenure review, probably a museum catalogue is not considered as prestigious or as valuable as a book on a particular subject written by a single author."

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30 In their 2006 study, Ballon and Westermann found that the number of edited volumes had grown since the 1990s. See Ballon and Westermann, *Art History and Its Publications in the Electronic Age*, 8-9.

Scholars and institutions have showed some willingness to rethink the way that they publish, and the discipline may be entering a period of greater experimentation and hybridization in its scholarly outputs. A few art historians said that they are willing to be part of new digital publishing initiatives, but that they are worried about tenure requirements. One scholar said that she loves the idea of being able to revise her text in the future, if she ever takes a new perspective on the topic of her book. However, these interviewees also said that they are still attached to the idea of having a print version of their publication along with a digital version. New initiatives in digital publishing may eventually make scholars more comfortable with new publishing formats.

Challenges in Art Publishing

There are a number of key challenges in the scholarly art history publishing sector. There is a perception that publishers are suffering financially and that it is becoming increasingly difficult to publish scholarly monographs. In addition, the continued difficulty and cost of obtaining image permissions for publication presents a challenge to both authors and publishers.

Some interviewees reflected generally on the idea that it is difficult to publish in art history, and that fewer presses are willing to publish their work.[31] From scholars' perspectives, this is one of a set of issues about how art historians should publish their work and be awarded tenure. Some interviewees expressed a belief that monographs should be deemphasized, since it has become difficult across the board for younger scholars to publish them. One senior scholar expressed concern that the quality of published material in his specialization has suffered because of the intense pressure to publish. According to this formulation, scholars publish before they have had time to fully develop their research skills and hypothesis, and they frequently "double publish" similar materials in multiple locations.

Many interviewees were acutely aware of the financial pressures that have caused several scholarly publishers to cease or shrink their art history publishing programs. The difficulty of obtaining publication permissions for images has a direct and profound impact on scholars, since they often have to seek out and pay for permissions on their own. The process for obtaining images and permissions is expensive, time consuming, and convoluted, as has been documented extensively in other sources.[32] Furthermore, researchers must sometimes work in an environment where the legal limitations on the publication of images are obscure or ill-defined.[33]

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31 There is an active debate about the health of art historical publishing and whether or not it is actually becoming more difficult to publish a book. Pisciotta and Frost, along with other researchers, have described a growth in the number of art-related titles published in the past decades, with a doubling in the number of titles between 1991 and 2007. The authors observe: "This period happens to correspond to the broad cultural discussion of 'the death of the book,' but, judging simply from the increase in titles, the art book did not seem to be going quietly." (Pisciotta and Frost, "Trends in Art Publishing from University Presses," *Art Documentation*, 7) On the other hand, these studies also point to the fact that a small number of university presses share a large portion of the production for art books, with 10 university presses producing 53% of the titles. This leaves the discipline vulnerable to changes by individual publishers. Cambridge University Press, for example, scaled back its art publishing dramatically during the last decade. An analysis of art history publishing between 2000 and 2004 showed that Cambridge University Press produced 713 titles during this period, which represented 8.8% of the total share of production, but now the Press produces few art history titles. (Ballon and Westermann, *Art History and Its Publications in the Electronic Age*, 14, 17)

32 See especially Bielstein, *Permissions, A Survival Guide*.

33 For example, Kenneth Crews has described how some museum copyright policies add confusion through "copyright overreaching." See Crews, "Museum Policies and Art Images", http://ssrn.com/abstract=2120210.

There have been various recent efforts to ease the process of obtaining image permissions. Several museums have taken direct action to open up access to images for scholarship in both print and digital forms. Institutions have taken different approaches in opening up access to images of artwork that they hold in their collections and which is in the public domain.[34] Some of these policies, such as those in place at the National Gallery of Art, the Yale Center for British Art, and the J. Paul Getty Trust make high resolution digital images of public domain art objects available online with few restrictions on how scholars are allowed to use them. Others, such as the Metropolitan Museum of Art, make such images available for download—in this case, through ARTstor's IAP program—but still restrict their use to noncommercial, educational, or personal purposes. Similarly, the Victoria and Albert Museum makes images available for free for educational and academic purposes, but licenses them for commercial uses. Some museums do not provide high resolution images on their websites, and instead require scholars to contact the museum or a third party partner in order to obtain the digital images.

While museums' moves to open up their image collections for use in published scholarship have had some substantial impact, the publishing process continues to be challenging for scholars. The diversity of sources that scholars use makes it more difficult to create a standardized approach to image acquisition and permissions, since many objects are held by small institutions, many of which do not focus on supporting the study of art history. Smaller institutions often have less expertise in fulfilling permissions requests, and some of them continue to see it as an important source of revenue. Libraries and other institutions with special or unique collections, many of which contain artifacts subject to copyright restrictions, also sometimes find themselves in the role of providing images and granting image permissions for publication. Scholars have to educate themselves about the permissions process when they prepare to publish their work.

The College Art Association has recently taken a leadership role in supporting research around copyright issues and fostering further community discussion of their impact through its work on fair use standards. The recently published "Issues Report" from the CAA Fair Use Project further details these issues as they relate to publishing in art history and other uses of copyrighted materials.[35]

Graduate Student Education

Graduate school is where art historians become familiar with the practices and methods of art history. This project investigated some of the means by which they are introduced to the discipline, taught about research approaches, and introduced to the job market.

The techniques needed to conduct original research are sometimes taught in courses about theory, but in some graduate programs they do not have a major role in the curriculum. Optional training sessions for graduate students in

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34 See Kristin Kelly, *Images of Works of Art in Museum Collections: The Experience of Open Access.*

35 See Aufderheide, Jaszi, etc., *Copyright, Permissions, and Fair Use among Visual Artists and the Academic and Museum Visual Arts Communities: An Issues Report.*

libraries and visual resources collections are not always robust, in part because they are rarely required as part of the curriculum. Many interviewees knew about them, but few indicated that they had attended them or found them useful. Digital research methods are rarely taught within academic departments, and several faculty members mentioned that they had discouraged their students from pursuing new types of methods because they might be risky from a career advancement perspective.

Interviewees commented on a number of different gaps that they see in graduate student training. First, learning to work at libraries, archives, and other institutions outside the United States is an important skill for graduate students who work with international topics, yet it is not always a focus in graduate programs. Second, graduate programs do not always help students learn how best to scope a research topic. One interviewee expressed the opinion that graduate programs do not do a good job of training students to think in terms of eventual publication, and much of the work they do in preparation for their dissertation is out of scope of what might eventually be publishable.

There are different perspectives about the importance of language training for graduate students. Some advisors strongly emphasize language training for their students, while others leave that decision to the student. Many faculty interviewees spoke passionately about the important role of language training in graduate programs. In the opinion of some scholars, institutional pressure to reduce graduate students' time-to-degree is discouraging mastery of multiple languages. This may be a factor in the increase in the number of students pursuing specializations that require less language study, such as modern and contemporary art, though it is difficult to establish a cause and effect relationship.

Informal interactions with peers are an important part of methodological formation. Several students mentioned the importance of peer groups as a means of learning about research methods. They feel more open discussing methods with their peers than they might with faculty members. Graduate students in smaller subfields sometimes perceive less value from being in an art history department, since they have fewer peers to draw on. One interviewee said that in this situation you have to "make your own peer group" that might include students from other departments or other institutions.

Considerations related to the job market occupy an important place in most students' planning for the future. For example, most of the graduate students interviewed had thought carefully about the scope of the courses that they could teach, and had worked to position themselves so they were "marketable" when looking for jobs. Similarly, career considerations also influence research projects and dissertation topics. Several experienced faculty members and curators said that they caution their undergraduate students about continuing their education in graduate programs in art history, given the difficult job market for graduates of Ph.D. programs. A few current graduate students said that they would prefer to teach at institutions without graduate programs because they did not want to educate more art historians who might be unable to find jobs.

Some faculty members see working with graduate students as an important part of preparing and conducting their own research. Through discussions with their students and the effort that they put into organizing graduate seminars, they can

advance their own research interests and test new ideas that they will eventually publish. One interviewee said that she values the fact that her students "say really smart things in class and are not afraid to push on my claims."

Preparing for Museum Careers

There are widely divergent views of the curatorial profession among graduate programs and individual scholars. Some think of graduate programs primarily as venues for training future faculty members, while others embrace their role in training students for roles in museums. However, there seems to be at least a growing openness to museum careers and provision for training students for those positions.

Many scholars outside of art history departments shared a general sense that museum careers have historically been looked down upon from within PhD programs. Among the experienced scholars who shared this view, some pointed out that there has been a substantial shift in this area in recent decades. One interviewee said that the graduate program that she was part of has changed dramatically in a relatively short period of time, and that now students are actively encouraged to explore careers at museums. Many graduate students seemed to share the view that opinions have changed. Some said that museum positions were looked on not as an "alternative career path," but as a core of their programs, and those departments are proud of their record of sending graduates to museums.

Graduate students expressed varying degrees of comfort about sharing their career aspirations with their advisors. Some curators mentioned that they had always expected to pursue a career in a museum, and that this played a role in their selection of an institution and an advisor. There is a lingering perception that certain faculty members favor students who want to remain in academia. However, this may be a perception more than a reality, since many faculty members actively embraced the idea that their PhD students would eventually seek careers in museums.

There is not much specialized training available for museum-bound PhD students. Instead, they have to find their own training opportunities outside of their academic program. Curatorial internships provide important training opportunities to students at the graduate level and sometimes even the undergraduate level. These internships function as apprenticeships that help students adapt their training in academic research to the multi-faceted responsibilities of a curatorial position. One curator said that she likes to use internships to gradually introduce students to different parts of the curator's role. For her, this starts with the basic research that goes into creating an object label. Some graduate students reported that they had worked their way through a series of internships, and that this had played a major role in the formation of their research interests. Internships in other museum departments provide similar opportunities to students who are interested in pursuing a career in another functional area of the museum. One interviewee who had worked extensively in museum internships ultimately decided not to pursue a curatorial career, but mentioned that it still gave her useful connections to colleagues in her field of study.

Findings and Recommendations

The following is the summary of Ithaka S+R's five key findings. It covers areas where we see the most need for action or the most opportunity to improve research services for scholars. These are not the only important findings of the project, and there are many other conclusions contained throughout this report that may resonate with members of the art history community.

Each of these findings describes an important issue facing the art history community today. Below each of these statements is a recommendation or series of recommendations, followed by "opportunities" related to each issue. The opportunities are ideas for actionable plans or service concepts that have the potential to meet researchers' needs in new ways, or otherwise have a positive impact on the discipline. Some of these opportunities are directed at particular types of institutions, while others are more general. These findings are numbered for the convenience of the reader, but they are not presented in any particular order.

Finding 1: Art historians are already applying technology to their research in significant ways, though their methods do not always fit into the narrowly-defined category of "digital humanities."

Some commentators have seen art history as a field where technology-enabled methods have had little or no major impact. This is in part due to the strict definition of "digital humanities" methods that have been carried over from other disciplines, especially literature, which have a strong focus on quantitative analytical techniques like text mining. However, the application of this framework to art history oversimplifies the use of technology for the study of art. There is a broader spectrum of research projects that may fit under the umbrella of digital art history. Some of these projects may be technology-enabled, and use technology to answer new types of research questions or apply completely new analytic techniques. Others may be technology-facilitated, and use technology as a medium for new research practices without necessarily transforming researchers' methods.

The impacts of technology-enabled methods have begun to be felt across many subfields of art history. 3D modeling and analysis have been in use for many years in fields such as architectural history and archaeology, and they are becoming more common across the discipline. In addition, conservators and technical art historians are systematically applying scientific techniques to their research subjects in ways that deeply implicate technology. Some scholars are now partnering with computer scientists to pioneer new methods for computer-aided analysis of large corpora of images.

There are also a number of important technology-facilitated types of research efforts that may have important impacts on the field, such as important databases that bring together images or information in ways that facilitate new perspectives and fresh analysis. These types of projects may not necessarily open new pathways to exploring research questions, but they have the potential to impact art historians' research practices.

Recommendation:

Art history is a singularly diverse and interdisciplinary field of study. Consequently, the idea of digital art history needs to be reframed to encompass a broad scope of research activities, some of which may be technology-facilitated without being quantitative in nature and others which may be technology-enabled. In order to best serve the discipline, institutions and funders need to have a scholar-centric approach to the use of technology that recognizes the current research objectives of art historians.

Opportunity: *Interventions to Encourage the Exploration of Digital Methods*

There are still many questions that have to be addressed in digital art history. Will quantitative research methods become more prominent in the field, or will there be other models of digital research? What types of collaborative models will emerge as the best approach to digital projects? There is an opportunity for scholars to catalyze these important explorations in a way that is responsive to the uniqueness and diversity of art historical research. At present, though, new digital methods are still seen as risky and experimental. Even where there are excellent support services for art historians who want to apply digital methods, only a minority of art historians who are interested in using these methods. Institutions and funders wishing to stimulate more interest should consider other types of interventions, such as dedicated grant programs to support these activities or tenure and advancement systems that are responsive to new methodological innovations. These investments will meet with the most success if they are focused on the types of digital projects that scholars consider meaningful rather than promoting digital methods for their own sake.

Finding 2: Institution-level planning sometimes overlooks opportunities for improved research services for scholars.

In their planning for how to develop and manage collections such as research libraries and visual resources, administrators often plan only at the level of their institution. This type of planning is sometimes too narrow, since it fails to take into account the potential for collaborative agreements and partnerships with other institutions that might present the opportunity to expand the resources available to scholars. On the other hand, institution-level planning is occasionally too broad, since it minimizes the particular needs of art historians, which set them apart from researchers in other disciplines.

Meeting the research needs of art historians requires a networked community of cultural and educational institutions. In art history, no institution holds all of the primary and secondary sources that its scholars need to conduct their research. For secondary sources, art historians use interlibrary loan frequently to access books and periodicals they need in their work. Scholars who work in large metropolitan areas often work in other institution's libraries. For access to primary sources, they rely extensively on museums and archives outside the institution where they maintain their primary affiliation. For example, many museum libraries serve a broad audience of users from other institutions. When the museum's leadership examines the value of its library, they might consider those visiting researchers a secondary audience, especially if they are not associated with any

revenue. Similarly, a university may think of its own faculty members as the only users of its art history branch library, when in fact it serves scholars at a broad range of smaller institutions through research visits and ILL requests. The interdependence of research support services in art history is not always reflected in formal partnerships between institutions. At many colleges, universities, and cultural institutions, administrators do not always plan with consideration for the broader audience of scholars who use their resources.

At the same time, institutional policies do not always recognize the unique research habits of art historians, which translate to different ways of using research collections. Art historians feel that they need convenient access to print copies of books and journals, since the high-quality of print reproduction images is important to their work, and this sets them apart from scholars in most other fields. At research libraries that are moving more of their collections to offsite facilities, art librarians often have to defend their constituents from institution-wide collection management policies. Similarly, the value of departmental image collections and teaching support staff may seem idiosyncratic and unnecessary to campus administrators. Furthermore, while teaching practices were not a focus of this report, art libraries play an important role in pedagogy, and art historians' teaching needs should not be overlooked in collections planning efforts.

Recommendation:

Research libraries, visual resources collections, and other research collections should reflect on their interdependence with nearby collections and make this a substantive part of their strategic planning. Collaborative planning holds the opportunity to significantly improve services for scholars. Furthermore, administrators should make provision for the unique needs of art historians at their institutions.

Opportunity 1: *Collaborative Planning for Library Collections*

Art history libraries are particularly well-suited to collaborative collections management. In geographical areas where public libraries, academic libraries, and museum libraries maintain overlapping collections, there are opportunities to cooperatively develop better, more efficient library collections and services. These collaborative arrangements can help build shared collections and services that are highly valued by scholars and which use scarce financial resources as efficiently as possible. The largest art research libraries, many of which maintain non-circulating collections or which fulfill a significant percentage of ILL requests in the discipline, should consider ways to formalize their roles as repositories that serve the entire discipline. Networks of libraries at the national and regional level will be able to provide the most comprehensive collections for scholars, while also reducing the strain on any individual member of the network. Existing networks like the New York Art Resources Consortium have already taken steps to collaborate on collections development and management, and they may provide a good blueprint for similar partnerships at other institutions.

Opportunity 2: *The Next Generation of Visual Resources Collections*

The decline in faculty members' use of both analog and digital local image collections at academic institutions has raised broad questions about the future of the visual resources field as a whole. However, this has also created an opportu-

nity for visual resources professionals to rethink their roles going forward. The visual resources community has already articulated some of the possibilities. For example, visual resources professionals may play an important role as educators and educational coordinators as visual literacy comes to occupy a significant place in university curricula. There may also be opportunities for them to provide more specialized research services (including services for digital art history) by building networked resources at a time when not every institution can maintain a visual resources department and collection. Departments may be able to share collections, expertise, and staffing across institutional boundaries.

Finding 3: Art historians need better tools for discovering objects.

The use of online tools has transformed the way art historians discover and access their primary sources, particularly the objects that stand at the center of their research. Researchers can now start with a general image search tool like Google or ARTstor, a specialized image database relevant to their specialization, or a catalog of collections at a museum or library. Many of these tools provide richly detailed information about objects, sometimes along with high-resolution images of those objects. While these developments have greatly enhanced researchers' discovery processes, there are still significant barriers to discovering basic information about cultural objects.

At a very basic level, many museums and cultural heritage institutions still have only limited information about their collections online. While much effort has been devoted to making digital images available, detailed metadata about objects is still the basic unit that allows scholars to locate their research materials. In recent years, many museums have renewed their efforts to make descriptions of their collections available on their websites. This is an important step, but it is only a baseline for making information available digitally, since these institutions still rely on scholars to know of the existence of their collections or find them through web searches.

In addition, most of the collections that have been made available online are disconnected from each other and difficult to find. Records about objects are still siloed by institution and by specialty, and scholars still have trouble finding information about objects that are relevant to their work. While it may make sense for a large museum to organize all of its disparate holdings together, this makes no sense from the user's perspective, since scholars' research generally cuts across the collections of many different institutions. Hundreds of museums in the United States use similar systems to store information about their collections, but they have not adopted shared cataloging standards or built a common infrastructure for sharing information. The library community has created a central repository for bibliographic records, but there is no analogous "WorldCat for cultural objects" that serves scholars of art. Even within individual institutions such as large museums or universities, information about collections exists in multiple databases and catalogs that are not at all connected. This focus on individual collections, rather than on the needs of scholars, has made it much more difficult for art historians to locate their primary sources. In this context, it is possible that many important objects have been overlooked or ignored in scholarly discourse simply because they are difficult to find.

Recommendation:

Large museums, universities, and cultural institutions should begin to plan thoughtfully for how they want scholars to find and use their metadata and images in an online environment. There is an immediate need for them to focus their attention on making detailed metadata about their collections available on their websites. Objects are effectively hidden from view until there is information about them online, so this is an important first step in improving scholars' access to primary sources relevant to their research. Many institutions have already expedited or prioritized the process of making materials available, or they have gone a step farther and provided images of many of the objects in their collections.

There have been numerous efforts to create metadata standards that will help institutions unify information about their collections, and many of them have met with mixed success. These efforts are crucial to improving the infrastructure for discovery and collaboration in art history, and the museum and archive community should make them a priority.

Opportunity: *A Discovery Architecture for Cultural Objects*

There is an opportunity for museums and cultural institutions to establish a vision for discovery tools that search across their collections. There are a number of large organizations that could take a leadership role in this effort, but it cannot be accomplished without the cooperation of a broad range of cultural heritage institutions. Museums' websites will probably never be an ideal discovery portal for scholars because each institution's search capabilities only go as far as the scope of its own collection. In this environment, museums need to think about how to build pathways for researchers and other users to find their content.

One scholar argued that the future of the discipline was to create a "semantic web for images" that would use metadata to expose the rich interconnections between different objects. Unifying detailed metadata from within an institution or from multiple institutions has the potential to create a powerful source for discovering objects. Some organizations are already working toward centralized discovery platforms. The Digital Public Library of America is moving in the direction of creating a central discovery platform for many different types of sources, and ARTstor's participation in this initiative is ensuring that metadata from museums will enrich DPLA's content. However, these efforts lack the reach and traction within the museum community necessary to transform discovery in art history.

The first step toward this goal is to begin building a common framework for working on discovery issues. What types of object description standards can help institutions collaborate? Should museums focus on creating a single platform for the discovery of information about objects? Should they create a common metadata framework for exposing their data to search engines and other services? Is there a way to link to bibliographic information about where images have been published? This vision for discovery infrastructure needs to be extendable in ways that allow it to serve objects that are not in the care of a major museum. How can a discovery framework make available information about smaller and also private collections, etc.? How can it help create a digital presence for the objects in such collections?

Advancements in discovery in art history will have far-reaching spillover effects in other disciplines that also use cultural objects. Art history is a small field relative to other humanities disciplines, yet it embraces an imposing diversity of research topics. Museums have reached a very broad academic audience over the past decade, which reflects the broad relevance that their collections can have in a variety of different disciplines. Discovery tools which expose these collections in systematic ways will benefit a broad variety of scholarly fields.

Finding 4: Scholars need better skills and research tools for working with digital images.

Digital photography and the wide availability of images of art have opened up new horizons for scholars, who can now maintain large personal collections of digital images for their research and teaching. Over the past decade, it has become easier for scholars to scan or download images for teaching and research, and there has been a related decline in the use of many institutional visual resources collections. While this trend has empowered scholars and increased ready access to images, it has also created the illusion that any problems related to access and storage to images have been solved. While art historians have started to take advantage of digital imaging, many of them still know little about it or about image management and preservation.

There is a deficit of knowledge among art historians about managing and utilizing collections of digital images. Few art historians receive any formal training about proper digitization, photography, image quality, digital preservation, or digital projection. They cannot always evaluate the quality of a digital image or assess the best way to display it. Moreover, they often fail to take advantage of tools for storing and retrieving their collections. Scholars' images usually sit in folders on their computers. At many institutions, they make little use of their departmental or institutional image management tools or backup services, in part because these tools often charge by amount of storage space and thus provide a disincentive to large-scale use. The inefficiencies and risks associated with some of these practices reflect the limited knowledge of many scholars about the basic principles of proper management and preservation of personal digital collections.

In a broader sense, many art historians lack a systematized approach to organizing their digital research materials. Some senior scholars spoke about the careful filing systems that they kept for slides and print journal articles in the pre-digital environment. This process has become increasingly convoluted as the number of databases and research tools continues to increase. There are no "best practices" for organizing research information.

Recommendation:

Digital media have become an important part of art historians' work practices, and they should occupy a prominent place in their training. The lack of training in the use of digital images in art history needs to be addressed systematically at all types of institutions. Fluency in using digital tools and manipulating digital images will be an increasingly important skill for the next generation of art historians. Basic digital skills are also an important precondition to the expansion of the field of digital art history.

Opportunity: *New Support Services for Personal Information Management*

In the digital age, scholars have taken on many of the tasks of organizing their own research information and personal collections. As scholar's personal collections of digital materials grow, they need new types of training on how to create strategies for organizing and preserving their important sources. They now need specialized knowledge and skills in working with digital images and tools. In a broader sense, they also need responsive services that help them deal with issues of personal information fluency in the research process.

Optional training sessions on research practices for graduate students are not often well-attended, in part because they are usually not mandatory and also because they fail to address many of young scholars' most pressing needs. Training programs could be more effective if they were responsive to students' specific needs and integral to the other parts of their training in their department.

Finding 5: Graduate students have limited exposure to research methods and professional networking opportunities.

Art history departments' diversity is key strength in some respects, but it can complicate graduate education. The diverse nature of the methods used in art history can make it difficult for graduate students to acquire the research skills that are most relevant to their work. In some cases, graduate students work with advisors who have similar specialties, but very different methods. For example, an advisor and a student may both study Italian Renaissance art, but one of them might have an approach based in archival research, while the other is more interested in close technical analysis of artworks. At some universities, there are extensive discussions about methods among students and faculty members, and the faculty members think of their discussions with students as one of the important ways that they develop their own scholarly arguments. However, this is not universally true. The nature of students' relationships with their advisors varies widely based in part on personal styles. In some of the less well-represented specialties, the topics that a graduate student chooses to pursue may differ substantially from those of his or her advisors. Some students are effectively alone in their research area and chosen methodology within their institution.

Recommendations:

Graduate programs should take careful account of the skills that they provide their students, in light of both shifting research methods and the tight academic job market. Current graduate students will likely work in different environments and use different techniques than today's art historians. Many of them are open to greater experimentation in collaboration and digital art methods, but they will need to be able to leverage their graduate training in order to apply these techniques.

Opportunity: *Networking and Training Programs for Graduate Students*
There is an opportunity for institutions, scholarly societies, and funders to create programs to help graduate students learn about specific research methods and to connect to peers and more senior scholars. For example, a mentoring program could systematically connect students to seasoned scholars in their specializa-

tion at other institutions who can supplement the advice of the students' advisor. Method-specific training programs can immerse students in selected research techniques and bring them together with other practitioners.[38] Many students are already building informal networks that connect them to peers and mentors at other institutions, but this can be difficult for students who have for the most part have limited travel funding for conferences or other purposes.

Issues out of Scope

This project could not comprehensively cover all of the important issues facing the community of art historians today. Some of these issues resurfaced again and again during the interviews, and are worthy of further discussion and research in their own right.

Restrictions on the Use of Images

There has been extensive documentation of the ways that copyright restrictions have affected the field of art history, especially in the areas of publishing and the digital humanities. The interviews for this project confirmed many of the conclusions that have been drawn previously by other authors: art history publishing is challenging and expensive for authors, and the number of research materials available from legitimate online sources is lower than it might be under other circumstances. The College Art Association's Fair Use Project, which is currently underway, addresses copyright issues directly and may yield many practical solutions for the discipline.[39]

This project's findings extend the understanding of copyright's effects in two key ways. First, concerns about copyright have likely played a role in impeding a more robust culture of image-sharing in art history. The current copyright dynamics have created an environment in which every scholar collects images, but few feel comfortable sharing their collections. Scholars are generally able to obtain the images that they need, either through a visual resources collection, ARTstor, a Google search, a museum website, or a scan from a print book. However, sharing images that are important to them with their peers is more complicated.

Second, the way that scholars choose research materials is driven in large part by their need to access and publish high-quality images of art objects. For example, art history has a reputation as a discipline that values print books more than other fields, and many have attributed this to a quasi-sentimental attachment to print. However, this trait has more to do with the ways that print books allow scholars to use and manipulate images. Scholars can place physical books alongside each other to compare images, and they can scan images from books and add

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38 Programs like the Rare Book School's Andrew W. Mellon Fellowship of Scholars in Critical Bibliography, which brings together a group of younger scholars seeking to improve their knowledge of methods in the study of book history, may provide a good model for training in art history. Another example is the Summer Teachers Institute in Technical Art History, a partnership between NYU and Yale funded by the Samuel H. Kress Foundation.

39 See Aufderheide, Jaszi, etc., *Copyright, Permissions, and Fair Use among Visual Artists and the Academic and Museum Visual Arts Communities: An Issues Report.*

them to a personal digital collection without worrying about restrictions on the image file. In this and other instances, art historians' use of research tools reflects their need to find ways to work around the unavailability of images.

The Academic Job Market

This project also surfaced many questions about the future of the tenure system and the general unavailability of jobs at colleges and universities. While these topics did not fall directly within the scope of this project, they frequently become a significant factor in some of the research decisions made by art historians.

The job market is an area of intense concern for many younger scholars and graduate students. Several interviewees said that they had ethical concerns about being involved in training new graduate students, since they felt that there was little chance that these students would find employment. Younger scholars often make important career decisions, particularly the decision about whether to seek work at a museum or an academic institution, based in large part on the availability of jobs. Some more senior scholars expressed different types of related concerns, such as when they questioned how the pressure to publish may be hurting the quality of research in the discipline. The larger issue that drives many of these concerns—funding for art history departments and institutions—is a perennial concern for many scholars. Even for a tenured professor, funding for things like travel and visual resources can have an enormous impact on their ability to produce quality research products.

Conclusion

Each of the recommendations listed above presents an area where improvements to research services and systems can make a tangible difference in the work of art historians. They touch museums, libraries, visual resources collections, publishers, and scholarly societies, and they present opportunities for these existing service providers to expand and reinvent their engagement with the discipline. The needs we have identified here will continue to evolve at a rapid pace. Art historians' engagement with technology will probably continue to deepen in the future, and this will have extensive implications for how they carry out their research.

The diversity of our conclusions reflects the diversity of art history, but this report touches only on the methods and work practices of art historians. It does not address the purpose of the discipline and the research questions that drive its scholars, nor does it address some of the other central issues that confront it. However, we hope that our work can serve as an important cornerstone in discussions of public engagement, art historical education, and the future of the discipline.

Appendices
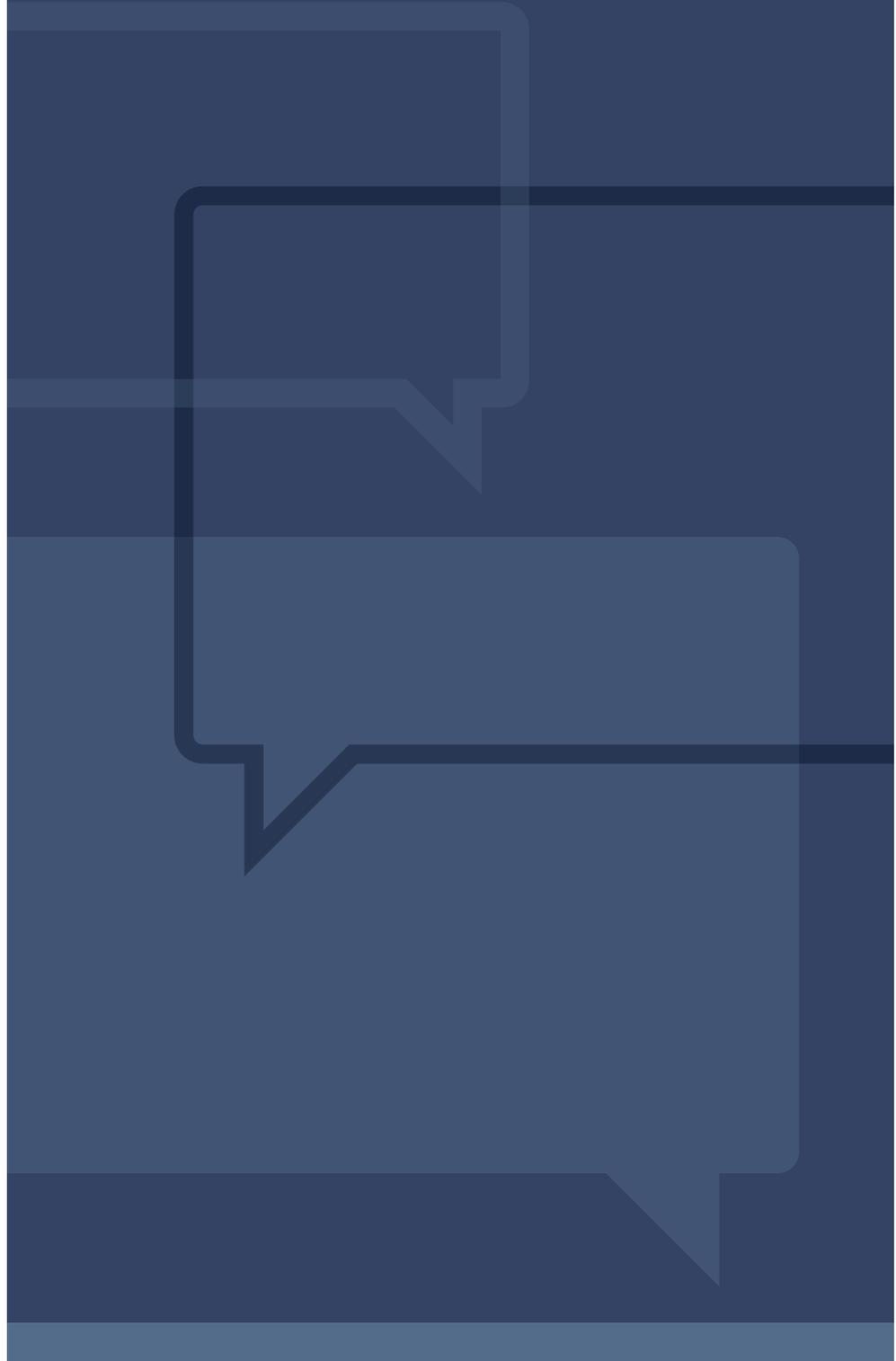
Appendix I: List of Interviewees

Murtha Baca, Getty Research Institute

Andi Back, University of Kansas

Kelly Baum, Princeton University Art Gallery

Sandra Brooke, Princeton University

Jack Perry Brown, Art Institute of Chicago

Catherine Bussard, Princeton University

Robert Carlucci, Yale University

David Cateforis, University of Kansas

Yueh-Lin Chen, Seattle Art Museum

Kim Collins, Emory University

Sally Cornelison, University of Kansas

Michael Cothren, Swarthmore College

Susan Craig, University of Kansas

Rachel DeLue, Princeton University

Nick Dorman, Seattle Art Museum

Susan Dreher, Swarthmore College

Johanna Drucker, University of California Los Angeles

Kate Ezra, Yale University Art Gallery

Nicole Fabricand-Person, Princeton University

David Farneth, Getty Research Institute

Gail Feigenbaum, Getty Research Institute

Pamela Fletcher, Bowdoin College

Zora Hutlova Foy, Seattle Art Museum

Rebecca Friedman, Princeton University

Jennifer Friess, University of Kansas

Anne Garrison, Swarthmore College

Mimi Gardner Gates, Seattle Art Museum

Anne D. Hedeman, University of Kansas

Wendy Heller, Princeton University

Christopher Heuer, Princeton University

Elizabeth Honig, University of California Berkeley

Gordon Alan Hughes, Rice University

Constance Cain Hungerford, Swarthmore College

Trudy Jacoby, Princeton University

Patricia Junker, Seattle Art Museum

Bryan Just, Princeton University Art Gallery

Maki Kaneko, University of Kansas

Marni Kessler, University of Kansas

Michael Koortbojian, Princeton University

David Levine, Southern Connecticut State University

Camilla MacKay, Bryn Mawr College

Sally Mackay, Getty Research Institute

David S. Mather, San Diego State University

Pam McKlusky, Seattle Art Museum

Amy McNair, University of Kansas

Julie Mellby, Princeton University

Thomas Morton, Swarthmore College

Mark Olson, University of Kansas

Andrea Packard, Swarthmore College

Joanne Pillsbury, Getty Research Institute

Marcia Reed, Getty Research Institute

Patricia Reilly, Swarthmore College

Efthymia Rentzou, Princeton University

Ellen Rife, University of Kansas

Sophia Rochmes, University of California Santa Barbara

Kim Rorschach, Seattle Art Museum

Jae Rossman, Yale University

Tomoko Sakomura, Swarthmore College

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