This paper examines stereographic images as scholarly resources, and begins with a brief history of the stereograph. A discussion and review of the literature related to the stereograph as well as the preservation of photographic objects follows the introduction. In addition to the literature review, collections of stereographs at four repositories were evaluated for usability: The Keystone-Mast Archive at the University of California, Riverside; The Eliot Elisofon Archive at the Smithsonian Institution; the George Eastman House; the Library of Congress. The paper ends with suggestions for future work with the stereograph, in order to facilitate access and use by researchers.

Headings:

Photography Literature

Photograph Collections

Special Collections

Photographs/Conservation and Restoration

College and University Libraries
STEREOGRAPHS AS SCHOLARLY RESOURCES IN AMERICAN ACADEMIC LIBRARIES AND SPECIAL COLLECTIONS.

by
Megan C. Halsband

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Approved by

_______________________________________
Barbara Moran
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CHAPTER I.

INTRODUCTION

Every conceivable object of Nature and Art will soon scale off its surface for us. Men will hunt all curious, beautiful, grand objects... The consequence of this will soon be such an enormous collection of forms that they will have to be classified and arranged in vast libraries, as books are now. The time will come when a man who wishes to see any object, natural or artificial, will go to the Imperial, National, or City Stereographic Library and call for its skin or form, as he would for a book at any common library. We do now distinctly propose the creation of a comprehensive and systematic stereographic library, where all men can find the special forms they particularly desire to see as artists, or as scholars, or as mechanics, or in any other capacity... we must have special stereographic collections, just as we have professional and other special libraries. And as a means of facilitating the formation of public and private stereographic collections, there must be arranged a comprehensive system of exchanges, so that there may grow up something like a universal currency of these bank-notes, or promises to pay in solid substance, which the sun has engraved for the great Bank of Nature.¹

This proposal for the use of stereographs as library materials, by Oliver Wendell Holmes in his 1857 essay “The Stereoscope and the Stereograph,” did not materialize quite as Holmes envisioned. The stereograph does have a history of use as a tool for learning. Indeed the stereograph, as marketed by the Keystone View Company in the early twentieth century, was used in numerous school districts and public libraries.² Institutions


²The Keystone-Mast Archive at the University of California at Riverside has numerous photographs of children using stereographic viewers, at various locations ranging from Des Moines, Iowa to Elmira, New York.
of higher education, such as Vassar College, also utilized the stereographic medium for education.³ Stereographs, two photographic images mounted on card and combined with explanatory text, created numerous possibilities for visual learning in the early twentieth century. [Fig. 1]

Figure 1: “The Stereograph as Educator – Underwood Patent Extension Cabinet in a home Library.” From the Library of Congress Prints and Photographs Division, Washington D.C 20540.

Stereographic libraries however, never appeared, and now this object, once used as an educational tool, has been absorbed by special collections and is buried in online library catalogues as part of a grouping or finding aid. Lack of formal research on

³Pamela Askew, “The Department of Art at Vassar: 1865-1931,” in The Early Years of Art History in the United States, ed. By Craig Hugh Smyth and Peter M. Lukehart, (Princeton: Department of Art and Archaeology, 1993): 60-61. Also, see correspondence from the Keystone-Mast Archive from Dr. John Harvey Kellogg who purchased sets for the use of students at Battle Creek College; also a letter from the superintendent of schools in Norwalk, Connecticut.
stereographs as a medium has contributed to the lack of a standardized resource for repositories and other information; lack of scholarly interest has also meant that there have been few digitization efforts aimed at these objects. Current institutional collections of stereographs reside primarily in archival and special collections, and an examination of four primary stereographic collections will show some of the difficulties encountered by the researcher when attempting to access the items or to gain information about the visual content of the image.

First this study will briefly discuss the history of the stereograph, the use of stereographs by researchers, as well as the conservation and care of stereographs; second, a review of the primary literature on stereographs will show why further study of these objects is warranted. Then four repositories that contain stereographs, the Keystone-Mast Collection, the Smithsonian Institution, the Library of Congress, and the George Eastman House, will be discussed and evaluated in order to demonstrate the disparity in treatment of stereographic objects in the collections, in particular the online visual presentation and search mechanisms. Finally, this paper will discuss issues related to access of stereographs, including preservation and digitization, and suggest methods to improve access to, and therefore use of, stereographs as scholarly resources in academic libraries and special collections.
CHAPTER II.
THE STEREOGRAF: A BRIEF HISTORY

The stereograph presents objects with vividness of first-hand vision. It is a scientific duplication of human sight. It is the most perfect reproduction method that science has yet produced.4

The stereograph5 was introduced to Europe during the 1840s and survived as a popular art form for almost 100 years. One of the first advocates for the stereograph was the writer Oliver Wendell Holmes. His article, “The Stereoscope and The Stereograph” was published in the June 1859 issue of The Atlantic Monthly, where he states:

The first effect of looking at a good photograph through the stereoscope is a surprise such as no painting ever produced. The mind feels its way into the very depths of the picture…the stereoscopic figure spares us nothing,—all must be there.6

For Holmes, the stereograph was simultaneously a universal and an individual experience: universal, in that it provided formerly exclusive experiences of remote places in the world to thousands of people; individual because the stereograph provided a simulation of personal vision. Underlying the idea of experience, whether universal or individual, is always the consciousness of reality. Holmes’ original construction of the


5There are numerous variations on the name for these photographic objects: ‘stereo,’ ‘stereoview,’ ‘stereocard,’ ‘stereoptic.’ For consistency, the term ‘stereograph’ or the adjective ‘stereographic’ will be used throughout this text.

stereograph as simultaneously truthful and fantastic continued well into the twentieth century.

Though it was Oliver Wendell Holmes’ articles for *Atlantic Monthly* that introduced American audiences to the “stereograph,” it was Sir Charles Wheatstone who discovered the stereographic “effect” in 1838. That this coincided with the development of photography meant that stereographic images were some of the first to be produced—in fact stereo daguerreotypes were sold at the 1851 Crystal Palace Exhibition in London. Though present in America by 1851, the stereograph’s popularity did not reach its crest until closer to the turn of the century.

O.W. Holmes assumed the stereograph was a tool that would be used by everyone, creating a very specific image of the stereograph as miraculous, a “fixer” of truth, a “mirror with a memory.” The stereograph was an object whose truth (synonymous with fact) was emphasized by its relation to science and scientific discovery and was constructed as an essential mode of viewing. This association of the stereograph with science, as a type of photograph, corresponds with the general discussion of photography of the period as a new form scientific technology. To quote Holmes:

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7 O.W. Holmes is historically credited with coining the term ‘stereograph,’ as well as developing the stereograph viewer that was widely used and distributed. For Holmes’ additional discussions of the stereograph see: “Sun Painting and Sun Sculpture” *Atlantic Monthly* 8, no 45 (July 1861): 13-30 and “Doings of the Sunbeam,” *Atlantic Monthly* 12, no. 69 (July 1863): 1-16.

8 See Wheatstone’s *Contributions to the physiology of vision: On some remarkable, and hitherto unobserved, phenomena of binocular vision.* (1838-1852); see also Brewster and Wheatstone on Vision (1983).

A stereoscope is an instrument which makes surfaces look solid. All pictures in which perspective and light and shade are properly managed, have more or less of the effect of solidity; but by this instrument that effect is so heightened as to produce an appearance of reality which cheats the senses with its seeming truth.\textsuperscript{10}

...By means of these two different views [contained within the stereographic image] of an object, the mind, as it were, feels round it and gets an idea of its solidity. We clasp an object with our eyes, as with our arms, or with our hands…and then we know it to be something more than a surface.\textsuperscript{11}

Through the stereograph, the viewer could experience the dizzying heights of the Grand Canyon, the grandeur of the Eiffel Tower, the pleasures of the landscaped plantations of Ceylon. As Jib Fowles comments, “Stereography offered a new canon for truth, and Americans seemingly could not purchase enough instances of that truth.”\textsuperscript{12}

By the turn of the twentieth century, there was one primary publisher of stereographs: The Keystone View Company. Started in 1892 in Meadville, Pennsylvania by B.L. Singley, Keystone was not the first publisher of stereographic images in the United States, but it became the largest. By 1910 the Keystone View Company had purchased its major competitors, Underwood and Underwood, H.C. White and Company, and the B.W. Kilburn Company, assimilating the various collections of images together under a single imprint. According to William Darrah, publishers like the Keystone View Company would have “ten thousand titles in print at any given time.”\textsuperscript{13} Keystone

\textsuperscript{10}O.W. Holmes, “The Stereoscope and the Stereograph,” 742.

\textsuperscript{11}O.W. Holmes, “The Stereoscope and the Stereograph,” 743.


\textsuperscript{13}William Darrah, \textit{The World of Stereographs} (Gettysburg, Pennsylvania, 1977): 52.
produced and reproduced hundreds of stereographic images of America and the world through their “World Tour” sets; these sets were categorized by the number of cards included in the tour: 72, 200, 400, 600 and 1200. These sets were published numerous times, in numerous variations, during the lifetime of the company. These stereographs provided “proof” of the world, to thousands of Americans in a highly palatable, easily shared form.

The stereograph had a very particular life as marketed and sold by the Keystone View Company. In this context it was an educational tool, a pleasurable diversion, a new technological phenomenon that rendered formerly distant places and objects visible from home. A social object to be shared with friends and family, the stereograph provided the owner with proof of world knowledge and consequently proof of higher economic and educated status. Between approximately 1900 and 1930, the Keystone View Company sold hundreds of thousands of stereographic cards to the American consumer: both individual cards as well as carefully designed card sets – “World Tour” Sets, “Sentimental and Comic Scenes”, “Religious Subjects”, and “Science and Technology.” And it was not just images that worked to create knowledge and status – the stereographic images were accompanied by captions and small sections of text on the back of the four by seven inch cards – text that taught and directed the viewer towards the significance of the subject represented in the image. In addition, Keystone provided various guidebooks, teachers’ guides and catalogues that served as both marketing material and context. Although images of people, places and things from all over the world could be purchased, the majority of Keystone’s image series were of America – its historic places and figures, its natural wonders and technological marvels. Through the
stereograph, America was documented and rendered visually significant; the stereograph thus provided a means for self-comparison with the world.

Stereographs were carefully produced, coordinated images, despite their construction through means of photographic technology that has long been associated with scientific “fact” or as a “record,” and therefore conceals its fabricated, human construction. However, because the stereograph functioned not only as a form of entertainment but also as an educational tool, the nature of production of the stereographic image is complicated by questions of intentionality and “truth.”

But by the 1930’s, the popularity of the stereograph as an entertainment and form of education declined, and the Keystone View Company ceased active publication of stereographic sets in the 1939. This decline was the result of numerous factors, primarily the development of newer, better technology, such as film; no longer “novel,” the stereograph was replaced by that which was.

For over fifty years - approximately 1890 to 1940, the stereograph held sway as the most popular mass photographic medium – and then, swiftly and silently – stereography faded into oblivion. The more than seventy-year history of the stereograph situates it as a resource with which to view cultural changes that occurred in the

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14Before their ultimate donation to the University of California at Riverside in 1977, the materials were stored in a vault until 1963, at which time they were purchased by the Mast family. In 1979 the Keystone-Mast Archive was established and contains company records, the collection of extant negatives and other information here. For more information about the Keystone-Archive, see the “Perspective and the Past: The Keystone-Mast Collection”, CMP Bulletin 1, no. 2 (1982); see also the California Museum of Photography at the University of California, Riverside website, www.cmp.ucr.edu.
nineteenth and early twentieth centuries, not only in terms of taste and vision but also in technology and technique. The following statements by Robert Weinstein and Larry Booth demonstrate what an important historical resources stereographs can be:

The production, sale and ownership of packages of stereographs – the earliest form of three-dimensional visual image produced after the Civil War – was widespread in the nineteenth century. It was rare to find a home that could afford it without at least one set of stereographs. No item of life was overlooked in these stereographs; everything from nature’s wonders, the major news events of the day, too all often bigoted local humor, were their subjects. They presented historic structures, battlefields, art galleries throughout the world and their famed contents, portraits of kings, queens, statesmen and distinguished individuals. Theater and stage personalities abounded, as did photographs of current news events – covered in exhaustive detail. Stereographs provided information and diversion in abundance for large audiences and were esteemed highly.\(^{15}\)

Also:

The stereograph has the longest history of popularity of any form of photograph…Many times the only photographs we have of particular subjects or areas are stereograph views.\(^{16}\)

Stereographic images present an extensive resource representing the visual perception of the world, particularly that of America, at an historic moment; but their status as common objects resulted in lack of documentation or retention for historic value. O.W. Holmes himself describes this nature of the stereograph: a source of infinite variety and delight, the stereograph was simultaneously an image with inexhaustible factual details (owing to the technology of photography) that the viewer could muse over.


\(^{16}\)Weinstein and Booth, *Historical Photographs*, 187.
forever. The various series, when owned by the middle-class or upper-middle-class American, would have provided countless hours of entertainment, and served as an educational tool to be used by the children of the family. This use would have continued past the initial generation that originally purchased the series, creating a stagnant vision of the world: while world events and knowledge changed, these visual representations did not.

It is precisely this stagnancy that makes the stereograph such an interesting scholarly resource. The purpose of the stereograph was to provide a “truthful” yet wondrous experience for the at-home viewer. All of the sights and spectacles from around the world were delivered to the viewer at home, educating the viewer with facts about the places and peoples shown. The concept of education through travel was not new; rather it grew out of the European “Grand Tour,” which provided gentlemen with an understanding of international politics and history as well as culture and manners. Technological development, both photographic and in the realm of transportation, accompanied by the rise of the middle class meant that education through travel was no longer the exclusive right of the wealthy gentleman, but could now be experienced by the populous at large. Given the accessibility of travel to a larger portion of the population, it is not surprising that stereographic imagery both created and performed to popular taste. The ultimate “goal” of the stereographic images was to render the three dimensional subject represented in as convincing a manner as possible, by presenting a sense of depth that replicated normal human perceptions of space. The images conformed to “typical” categories of images: people/bodies, animals, destination/landscape, cities/villages. Therefore, stereographs provide another format of visual and cultural expression,
allowing the contemporary scholar another primary “text” of popular culture of the late nineteenth and early twentieth centuries. Only through a reconsideration of the value of stereographs will additional research take place.
CHAPTER III.

CONSERVATION AND CARE OF PHOTOGRAPHIC COLLECTIONS

Materials that libraries and archives have historically undervalued are often the most valuable resources for the study of non-traditional subjects and overlooked groups…. How is ‘value’ determined? What defines ‘usable’ and how does that affect the definition of what ‘needs’ conservation?\(^\text{17}\)

Questions of use and value play a role in all conservation and preservation decisions; when considering objects not historically associated with scholarship, such as the stereograph, these questions become much more complicated. Many scholars have generally ignored the stereograph an object of research value, because of its general use as a popular entertainment material. Stereographs, as discussed previously, were originally promoted as popular materials, as novelty pieces for use by the whole family; their use as an object of diversion meant that stereographs were handled by all family members, adults and children, probably without the degree of care afforded to other photographic objects. Knowing the history of use of the stereograph, in addition to the physical state of the materials, is essential to evaluating the current state of the object. The time period in which stereographs were manufactured, the late nineteenth and early twentieth centuries, is indicative of the quality (or lack thereof) of materials used in their production. In addition to being composed of paper and board that is likely acidic and

chemically unstable, stereographs also utilized numerous photographic processes. Understanding the physical conservation needs of stereographs entails knowledge of not only the prior handling and storage of the items, often only known by the damage inflicted, but also knowledge of the deterioration of early photographs. Knowledge of the adhesives and mass manufactured board or paper onto which the photographs were mounted will also be useful to the individual at a repository that contains stereographs. The long term care of stereographs will require the aid of both traditional preservation actions, such as replacing current storage with non-acidic enclosures and proper climate control, as well as digitization, which will provide additional means of access as well as increased visibility.

One of the primary problems, as with many other library materials, is how to determine which should be performed first, conservation or digital preservation (other than for those items that cannot survive the digitization process without conservation first). Nor does it answer the question whether digitization fundamentally is an act of preservation or access. In this case, digitization, while it can reproduce or emulate the object, can never replace the object itself. The experiential nature of the stereograph, meant to produce a three-dimension image, is not (currently) something that can be constructed through an online cataloguing system, or many other easily accessible programs.¹⁸ Conservators and preservationists can aid digitization efforts by providing detailed information to cataloguers, even perhaps digitizing the objects during their

preservation evaluation and/or treatment. Evaluation of materials by conservators will help with both imaging and cataloguing standards, and prevent duplication of efforts throughout the system.\textsuperscript{19} Additionally, “…Cooperative efforts to digitize disparate pieces of a greater whole can create or restore a more usable collection…many materials …coherence, accessibility, and scholarly unity can be enhanced through digitization.”\textsuperscript{20}

Of course, in order to perform these cooperative efforts, both inter-institutionally as well as inter-departmentally, a greater emphasis will need to be advocated by institutional administration, along with an allocation of funds to perform such cooperation. This essay has raised more questions than it has answered, merely scratching the surface of topics worthy of entire works on their own. But the first step to discovering answers is to articulate the questions, and the questions surrounding the stereograph need to be articulated. Hopefully future work will provide updated photographic conservation information and standards, as well as procedures to implement cooperation, advanced digitization procedures to provide both complete digitization of the stereograph (in three-dimensions) as well as descriptors and cataloguing standards.


CHAPTER IV.

THE USE OF STEREOGRAPHS BY RESEARCHERS

Likely it will be up to the academic libraries and special collections that house collections of stereographs to reintroduce scholars to the stereograph, fostering awareness of the materials and leading to research. One of the roles of the academic library is to provide resources for scholars and students; collections at an academic library will vary depending on the mission and collection policy of the library. Historically in academic art libraries, resources for scholars and students consist of not only traditional library materials such as monographs and serials, but also visual resources as well. (Today that list would expand to include the wide array of electronic and digital resources.) Visual resources collections could and would normally include slides (both color and black and white) as well as printed photographic reproductions of book illustrations or objects themselves.

Early visual resource collections started as small, private undertakings. For example, Sir Martin Conway’s collection of photographs, along with the collection of Sir Robert Witt, formed the basis for the Courtauld Institute’s collection of art historical images. However, these collections were not composed of photographs alone; images

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21Mission statements and collection policies vary by library and are often determined by the library’s institutional location and its subject affiliation. For example, an academic library serving the needs of a small liberal arts college will have a very different collecting policy than a specialized art library that is part of a larger research university library system.

cut from journals, catalogues and books would also be found in these types of collections. Owing to the tendency of the time to tip in albumen prints or high quality lithographs into publications, nineteenth century illustrated books were akin to contemporary portfolios,\(^2\) thus the photographically illustrated book was also an art object.\(^3\)

There were numerous arguments in the nineteenth century on the use of photographs as tools for the art historian, but they seemed mostly to fall under the guise of determining photography’s general acceptance, and not as much on what it meant for art history. Anthony Hamber points out that though the writers of art criticism and history in the nineteenth century may have utilized photography as a resource, they were unlikely to expound on this use;\(^4\) therefore, our knowledge of the use of photography as an art historical resource, and its relative extent within the field, is mostly speculation. Craig Hugh Smyth and Peter M. Lukehard in their text, *The Early Years of Art History* (1993), do outline the formation of early academic art history departments, and mention the use of photography by various professionals, specifically by professor Clarence Kennedy at

\(^2\) An interesting avenue for further research might be impetus behind the transition from photograph illustrations within books to lithographically reproduced photograph illustrations. Was it just cost that caused the transition from using the photographic object itself within publications, or some different concept of the photograph as an art object?


Smith College, as well as noted art historian Bernard Berenson. This early use of stereographs as education and research tools is interesting considering the widespread use of photographs within contemporary art historical research, and the current viewpoint of art historians viz. a viz. the stereograph.
CHAPTER V.

LITERATURE REVIEW

The previously discussed brief history of the stereograph, its conservation, and use by researchers relies on knowledge of the related literature. The following literature review will first discuss the literature related to the stereograph, specifically the main textual resources available to researchers. Second, the review will examine the literature on the preservation of photographs and photographic objects, as specifically related to the stereograph.

The Literature on the Stereograph

In addition to issues of access, there are many challenges faced by researchers of stereographic images. There is little recorded information about each set produced by Keystone except for the sales catalogues and the educational texts that accompanied the later sets of images. The Keystone-Mast Archive at the University of California at Riverside, as the official archive of the company and current copyright holder, contains the largest collection of materials on the Keystone View Company. The archive has three catalogues that show the range of the items sold by Keystone: the Key to the 72 Travel Tour of the World Through the Stereoscope (1914), Stereograph Catalog Number 19 (no date) and Stereograph Catalog Number 21 (no date). The archive also contains Underwood and Underwood’s Original Stereographs Catalogue No. 25 (1905), Original Stereographs Catalogue No.26 (no date), and Catalogue 29 (no date) – images which would have likely been incorporated into Keystone sets after the purchase of Underwood and Underwood by Keystone. Additional educational materials were produced by
Keystone, such as the two editions of the *Guide to the Keystone ‘600’ set*, a visual education tool marketed by Keystone,\(^26\) and *The Stereograph and the Lantern Slide in Education* (1939) by G.E. Hamilton. The text, *A Trip Around the World through the Telebinocular in Three Dimension Pictures* (1936 and 1942) by Burton Holmes, writer and lecturer for the Keystone View Company, accompanied later “Tours of the World.”\(^27\)

In addition to the previously mentioned texts, the majority of extant information about stereographs resides in four texts; *Stereoviews: A History of Stereographs in America and their Collection* (ca. 1964) and *The World of Stereographs* (1977) by William Culp Darrah; *Points of View, the Stereograph in America: A Cultural History* (1979) edited by Edward Earle; and *Wonders of the Stereoscope* (1976) by John Jones. The texts by Darrah are considered authoritative\(^28\) and are especially useful for their lists of stereograph photographers, publishers, and materials, arranged in chronological format. He offers a description of the periods within stereographic history (Appendix I),


\(^{27}\)See *Burton Holmes Travelogues (1910 and 1914-1917), The Man Who Photographed the World* (1977) and *The Greatest Traveler of His Time* (2006). Burton Holmes gave numerous travel lectures, many of which were advertised in the New York Times. Lectures were advertised by Daly’s Theatre, as early as 1898 and up until at least 1908. (See the *New York Times Historical Newspaper.*) Possibly that’s why he was selected by Keystone to ‘narrate’ their education series and other catalogues. His network of connections possibly provided the various ‘official’ experts who wrote the information on the back of the stereographic images.

which provides context in which to understand the production of stereographic images.  

Darrah also points out that:

> From this date [1862] onward the number of views produced is almost unbelievable – running into many, many millions. Estimates of the number of different views produced in the United States alone range from two million to five million... By 1875 there were more than 100 American photographers maintaining trade lists of more than 1,000 different views...  

The research conducted by Darrah provides the information necessary to understand some of the specific contexts within which stereographic images were produced. Numerous advances in technology during the late nineteenth and early twentieth century allowed the mass production of stereographic images, resulting in the publication of thousands of stereographic cards in America. These two texts by Darrah, written in 1964 and 1977 respectively, are, however, out of date, particularly in regard to critical analysis of the images. He offers:

> ...at present [1964] there is no manual in any language that deal comprehensively with the history of the stereo view and with the types of views that have educated and amused generations of Americans... This book is an attempt to record the history of the stereograph, to provide a guide to their identification and interpretation and to suggest areas of potential interest to collectors, libraries and scholars.

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29 Darrah notes on page 9 of *Stereoviews* that: “The popularity of views fluctuated considerably, partly because of national events, partly because of cost and partly due to ingenious marketing methods. The history of stereographs may be considered in five periods or six if we consider their decline as a separate phase.”


Darrah himself states that his purpose is not to engage the images at all, but that his texts should merely serve as an identification tool. He argues that his “…brief comments on approximately forty categories of stereo views currently popular among collectors…merely serve to suggest what types of cards are available or to call attention to noteworthy sets or issues…” Darrah does not situate the images within a broader context of visual imagery or provide a discussion of what resulted from stereographic image use as visual aids or educational tools. Darrah’s two texts do provide subject descriptions of the images, generally consolidating the various image sets and topics produced into categories such as “Transportation” or “World War I.”

Darrah’s later 1977 text, The World of Stereographs, provides some information on individual sets or subjects; the primary focus is on America, Europe and Great Britain. This reflects not only Darrah’s emphasis, but also the material available from Keystone. Beyond a cataloguing of general subjects, however, there is no real engagement with the images themselves. Darrah mentions potential future uses of stereographs when discussing his own intentions for writing on stereographs, as mentioned above:

“Curiously, the future may find a great interest in views formerly considered merely travel, native peoples, large game and natural habits and use them as sources of scientific data, especially anthropological.” His statement seems to indicate skepticism in the idea that the images might serve as a research resource, a view that historically has been shared by others, as demonstrated by the lack of additional scholarship. Examination of

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33 Darrah, Stereoviews, 145.
34 Darrah, Stereoviews, 183.
the stereograph as an information resource is one of many possible methods with which to counter this skeptical position and re-introduce the stereograph into contemporary discourse.

Edward Earle’s text, *Points of View*, is particularly useful for its chronology, situating the stereograph within a larger context of both American cultural events and technological advances. Unlike Darrah’s two texts, the book additionally includes an introductory essay that verges on a discussion of interpretation of the images. Its publication in 1979, however, provides little “new” information in comparison with the texts by Darrah, aside from the attempts at subject matter engagement, and to initiate the concept that stereographs might serve as resources for the study of American visual culture.

Like the Darrah and Earle texts, John Jones’ *Wonders of the Stereoscope* provides a discussion of the “types” of subject matter found in stereographic images. The Jones’ text, however, provides physical examples of stereograph images, along with glasses for viewing. By combining the text with the actual objects, this box set provides the reader with the experience of viewing stereographs, more closely re-presenting the stereograph as seen in its original historical context than writing alone can provide.

The primary focus of the Earle and Darrah texts are the images of America, as well as the production of stereographic images within America. As the texts by Darrah and Earle demonstrate, stereographic images were produced in large quantity as a commodity, and so they were a mass media. As mentioned earlier, the main texts on stereographs function more as cataloguing records for collectors than intellectual
engagements with the images themselves. Ignoring stereographic images as part of the visual culture of the period seriously limits an understanding of how this type of visual imagery functioned in shaping understandings of the world.

In addition to these more general texts, there are two recent primary sources on stereographic images of Africa specifically. They are two articles, both from 2007: Rick VanderKnyff, “Parlor Illusions: Stereoscopic Views of Sub-Saharan Africa,” in *African Arts* and Godfrey Muriuki and Neal Sobania, “The Truth Be Told: Stereoscopic Photographs, Interviews and Oral Tradition from Mount Kenya,” in *Journal of Eastern African Studies*. These articles focus on two specific image groups: images of the Congo and of the Kikuyu near Mt. Kenya, respectively. Rick VanderKnyff rightly argues that, for the art historian, the stereograph presents a challenge: “It is seen as gimmicky and constrained by a formulaic approach that emphasizes the quality of the stereo effect over aesthetic concerns…it is a largely anonymous form with few identifiable individual practitioners to canonize.”35 These two recent publications may signal renewed interest in the stereograph as an object of research value, and lead to additional scholarly examination.

This discussion of the literature has concentrated on the main resources on the stereograph, as well as the most recent. There are other texts, articles and dissertations that discuss the stereograph, but have not been evaluated here. However, they are listed in Appendix II as a resource for future scholars.

The Literature on Preservation of Photographs and Photographic Objects

In addition to literature on the stereograph itself, it is necessary to include a discussion of the literature on the preservation of photographic objects. In order to utilize stereographs as scholarly resources, and in order to provide digitization of the objects, proper care and handling must be understood. The long history of the stereograph means that there were numerous photographic processes used to print and publish stereographs; the history of photographic processes is important as well.

Numerous extant texts discuss the preservation and conservation of photographs. Though stereographs are unique photographic objects, it is important to keep in mind that stereographs deteriorate in the usual ways of silver image prints, from the action of harmful residual hypo, adhesives, chemicals in cardboard, storage envelopes and from gases in the atmosphere. Because the prints were often handled in viewing, there may be more damage than usual from dirt and abrasions on the print surface.  

Various articles, such as “Natural Aging of Photographs” by Stanton Anderson and Robert Ellison, have addressed permanence issues, but often the studies seem hard to relate to contemporary working conditions. Most experiments are conducted in closed settings - despite the title – and therefore cannot provide any long-term information on how the natural aging process should appear to those preserving or collecting extant objects themselves. The Anderson and Ellison article focuses heavily on color objects,

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36 Weinstein and Booth, Historical Photographs, 188.

which are generally less stable, and they provide little useful information for those working with early (19th century) photographic objects.

A useful article, “Effects of Enclosure Papers and Paperboards Containing Lignins on Photographic Image Stability,” provides a scientific description of elements contained within paper and board that may contribute to the deterioration of photographs, as well as detailed results of the experiment to test these elements. The article proposes possible correlations between low-level processing of paper items and the effects produced in their use as storage materials for photographic objects. Though the article does not come to any definite conclusions, it does provide information about materials and testing that will be helpful to those researching materials for their collections.

The text by Robert Weinstein and Larry Booth, Collection, Use and Care of Historical Photographs, provides some useful historical information, communicated in a language understandable by those without a degree in conservation. However, some of the methods that they propose for care, and particularly cleaning, of photographic objects may be taken too literally by inexperienced persons. There are fair warnings of taking objects to professionals, but on the whole some of their recommendations read as a “do-it-yourself” text, which could be problematic.

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The essay by Mary Lynn Ritzenthaler, “Preservation of Photographic Materials”\textsuperscript{39} provides detailed information, organized by process, on deterioration issues, storage, handling and care of photographic objects. This text provides information without seeming like a “how-to” guide for the inexperienced.\textsuperscript{40} In addition to publishing \textit{Preserving Archives and Manuscripts}, Ritzenthaler, along with co-author Diane Vogt-O’Connor, has also published a revised and expanded edition of \textit{Archives and Manuscripts} titled \textit{Photographs: Archival Care and Management}. This text is particularly useful for its synthesis of important information, particularly regarding copyright, digitization, outreach, and ethics, as well as containing information from many of the previously mentioned texts; in addition, it also includes appendices of resource lists, as well as a glossary and bibliography.

As with the discussion of the literature on the stereograph, this discussion of the literature on the conservation of photographs and photographic objects has concentrated on the main resources. Additional resources and further readings on the conservation of photographs are listed in Appendix III.


\textsuperscript{40}It is interesting to note that many of the texts on photographic preservation are now nearing twenty years old – many of them are from the 1980’s.
CHAPTER VI.

EXTANT COLLECTIONS

The previous history and discussion of the literature contextualize the following discussion of repositories that contain collections of stereographs, the main resources that would be used when researching the stereograph. One of the most difficult aspects of finding images on the Internet, not only images of stereographs but images in general, is the lack of standardized digitization systems and policies; another difficulty is lack of standardization in cataloguing, assignation of keywords, subject headings, particularly for non-print resources and art objects. Institutions such as the Visual Resources Association (VRA) and the Getty Institute, have initiated “best practices” statements as well as comprehensive vocabularies to aid information professionals; these resources include VRA Core 4.0, which allows a bridge between MARC records and Dublin Core fields, as well as numerous thesauri like the Union List of Artist Names and the Art and Architecture Thesaurus. These standards, along with developments in major digital repositories such as ARTSTOR, will mean that future online digital access to information and images of objects is easier and performed with greater reliability. For, as the following discussion of four collections will show, many institutions may not even perform collection level cataloguing that is linked to the online system.

As mentioned in the introduction, four repositories with stereographic collections were selected for evaluation: the Keystone-Mast Collection, the Smithsonian Institution,
the Library of Congress, and the George Eastman House. All of the collections were evaluated through their online catalogs and websites. In addition, two of the repositories – the Keystone-Mast Archive and the Eliot Elisofon Archive at the National Museum of African Art, part of the Smithsonian Institutions – were selected for visitation by the researcher, in order to determine if additional information might be available to an on-site visitor that might not be apparent to a user relying only on the information available through the Internet.

*The Keystone-Mast Archive at the California Museum of Photography, University of California, Riverside*

The California Museum of Photography, located at the University of California Riverside, California Museum of Photography has a website that is searchable as well as browse-able. However, in order to really access the stereographic image collection and database, one must first know the pathway to view the Keystone-Mast Collection (first click on collections, then permanent, then Keystone-Mast). A “site search” for the term “stereograph” will only produce four results – previous online exhibitions that included stereographs, such as “Stereographs: Three-Dimensional Images/Images from the Keystone Mast Collection.” The subheading then should indicate to the viewer that the main collection of images is elsewhere. When you do view the Keystone-Mast Collection on the Collections Permanent page, there is an option to search the collections, using a fairly dynamic six-section module. The viewer can search by “Image Number,” “Inscription,” “Location,” “Photographer,” “LC Subject Heading” or “Keyword.” In
addition, the program indicates the number of searchable records.\textsuperscript{41} Though this system does provide more capability than the one to be discussed later at the George Eastman House, a few issues need to be addressed. Many of search fields require prior knowledge of the images and the collection: image number, inscription or photographer; or require specialized knowledge of cataloguing (LC Subject heading).\textsuperscript{42} Other search fields are unclear, as in the “location” field, which is designed to search for images of a particular location, may appear to researchers to indicate location of the item. The “Keyword” field would be the most utilized, but since there is no way to sort or limit the results of a keyword search, or to order them in any particular fashion, this search field too becomes cumbersome and unhelpful. Additionally, the lack of continuity between the various search mechanisms for each section of the website becomes confusing and cumbersome.

I was able conduct research at the Keystone-Mast Archive in October 2007. The research at the Keystone-Mast Archive, in addition to demonstrating the lack of primary documents, revealed another difficulty in researching the Keystone images: the different numbering systems in use by the Keystone Company. Keystone assigned image numbers to negatives made by their photographers as well as new numbers to images that were purchased from other companies, such as Underwood and Underwood. Keystone would reissue sets of purchased negatives using their own numbering system, as well as altering the content of the sets of images. In doing so, they changed the order, inserting new

\footnote{\textsuperscript{41}As of December 5, 2007 there were 33,893 searchable records on the Keystone-Mast Collection search page.}

\footnote{\textsuperscript{42}Though the LC Subject Heading section provides a drop-down menu with a list of choices, the subjectivity of cataloguing and lack of true standardization for images becomes an issue. Also, if the researcher is not sure what type of image they are looking for, or want to view the variety of images, this particular search feature is not useful.}
images into the sets when either new negatives were made or when old negatives were destroyed or no longer usable.

Keystone’s practice of re-issue, along with the various substitutions that accompanied new publications, resulted in many variations even within a single series title. Consequently, the study of stereographic images is complicated by the existence of identically titled image sets that vary in content. In fact, the Keystone-Mast Collection has only one complete “set,” a version of the “Keystone Tour of the World 400 Series,” which was owned by the previous holder of the Keystone collections. Without an authoritative source to provide information on the variations that existed for the “400 Series,” in addition to the numerous other series produced, any discussion about stereographs must rely on incomplete information, and numerous assumptions must be made. However, the conventions in constructing the sets and the commonalities between them, as evidenced by an examination of the extant catalogues from the Keystone-Mast Archive, indicate that content and organization may serve as a representative example of additional versions; representative not only of versions that were purchased and viewed in the early twentieth century, but also the stereographic project of representing reality as a whole.

During my research at the Keystone-Mast Archive, I specifically researched images relating specifically to Sub-Saharan Africa. The collection contains

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43This specific set was likely produced sometime after World War I, as the text on the verso of one of the images, “House-building by Masai Women…” states that: “We are in one of several villages in that part of East Africa which was a German colony before the Great War…” Verso of card #242 from the “Keystone Tour of the World Series,” Keystone-Mast Archive, California Museum of Photography, University of California, Riverside.
approximately four file drawers of images, which themselves hold approximately 400-500 images each, that are organized by the subject groupings originally assigned by the Keystone View Company staff. These groupings include such sub-headings as: “General Views,” “Architecture,” “People,” “Transportation,” “Warriors,” “War Dancing,” and others. An interesting aspect of these drawers is the fact that they consist of “print file images,” in other words, the drawers contain prints from all of the negatives made, both those that were chosen for publication (often marked “Good” or “Very Good”) and those not published (marked “Medium” or “Poor”). It is unclear whether this classification related only to the three-dimensional quality of the image, the subject, or a combination of both. I believe that a comparison of the images selected for publication with those found in the print files would be an interesting topic, particularly from an art historical point of view.

The Smithsonian Institution

The Smithsonian Institution, located in Washington D.C., is comprised of a number of different institutions that are united by using a single online research system – The Smithsonian Institution Research Information System (SIRIS). Within SIRIS there are numerous databases that can be searched, but the one of primary relevance to the study of stereographs would be the “Archival, Manuscript and Photographic Collections.” SIRIS provides a way for users to limit the items they are searching for by location, among other fields, and allows the researcher to search the numerous collections

44Often this larger category was separated out further into specific groupings such as: “Men,” “Women,” “Women and Children,” “Warriors” or “Prominent People.”
individually. For example, one can search the “Smithsonian Libraries” as well as the “Archival, Manuscript and Photographic Collections” for the term “stereograph,” retrieving unique result sets. Initially this may be confusing to the user; therefore precise records of the searches performed will be needed in order for the researcher to repeat searches again.

One benefit of the SIRIS system is that the results automatically display a digital image for the records retrieved, if they exist. Each individually returned record could be expanded, which is the only clear way of distinguishing between items that have been catalogued at the collection level and those that have been catalogued individually. As with any other system, SIRIS has a unique interface and structure that can be confusing and overwhelming to the novice user. The sheer size of the holdings of the Smithsonian contributes to this overwhelming feeling as well. Searching the “Archives, Manuscripts, Photographs Catalog” for the general keyword term “stereograph” results in approximately 30,818 results. Distinctions between a “general keyword” search and the additional keyword categories in the SIRIS system - “all name keyword,” “subject keyword,” “title keyword,” and “form and genre keyword” – are unclear, and require precise knowledge of desired subjects. This would present a problem for someone looking to begin their research using the Smithsonian collections.

My research through the SIRIS system was a clear demonstration of this problem. It was not until after performing numerous general searches that I discovered that most of the images I would be interested in were located at the Elisofon Archive. Numerous attempts to limit searches to just the Elisofon Archive through the main Smithsonian access point to SIRIS were not useful, and I therefore had to start my search from the
National Museum of African Art itself. The collections were evaluated in person, in part because keywords and subject headings were assigned to objects at the Elisofon Archive. The difficulty, as with other collections, was that there were no digital reproductions linked to the catalogue records.

*The George Eastman House*

The George Eastman House, located in Rochester, New York, is one of the foremost photographic research institutions and collections. In addition to the Museum and the Richard and Ronay Menschel Library, the Eastman House includes an archive that holds more than four hundred thousand photographic prints and negatives. There is not a firm number on the website of the number of stereographs included in this collection.

The online *Photography Collections: Stereoviews* is little more than a collection of pages with lists and hyperlinks. There are nine online collections listed on the main page. From these links, you are taken to a separate collections page; the stereo views collection page is headed by a scrolling collection of nine images, and at first appears to be the sole content of the page, aside from links to take the visitor back to the Eastman House Homepage and to the Telnet Database. Scrolling down reveals a list of photographers, (or publishers) in alphabetical order, generally with three hyperlinks following each name: “Checklist,” “Thumbnails,” and “Index.” These pages all contain the same basic information: artist, title on object, year, medium, measurements, collection information, accession number. The individual artists or publishers often have multiple
images represented in the checklist.\textsuperscript{45} Clicking on the thumbnail of each individual stereograph provides repetition of the same information, along with inscription information (if any is available),\textsuperscript{46} description of the frame (or card mount), old accession numbers, any notes regarding the object, as well as subjects. Due to the structure of the database, the stereo views are only browse-able, rather than searchable, unlike the UC Riverside and Library of Congress databases.

\textit{Library of Congress}

The collections at the Library of Congress are extensive, and are divided not only into digital collections but also into unique online catalogues. The Prints and Photographs Division at the Library of Congress has a separate online catalogue that allows search for stereographs themselves; the website states that this catalogue is comprised only of half of the library’s collection, yet still has over one million images already. The main Library of Congress catalogue can also be searched, and will return literature in addition to objects and graphic images. One of the most significant digital catalogues is the American Memory Project, which can be searched as a whole or by individual collections, divided thematically. The American Memory Project includes a number of stereographs, and is interesting, as it shows how the Library of Congress has classified the images, and would allow researchers to search by topic or for a specific visual representation of a theme.

\textsuperscript{45}For example, selecting the checklist of Adolphe Braun results in 123 images.

\textsuperscript{46}Original titles, prices or accession numbers may have been written or letter pressed on the verso of the cards. Often this information was included on the front of the cards surrounding the photographic print.
There are five main areas which result from a general search for “stereograph*” on the Library of Congress website as a whole. There is a resource section, or an “about” page, on stereographs, which is useful, and also provides additional resource pages, including a bibliography, links to related sites, and suggested search areas within the Library of Congress holdings/collections. This page clearly indicates that both item level and collection level cataloguing have been used, and that materials can be found in both areas. Why both mechanisms were used is not discussed. There is an additional resource page located in the American Women section of the American Memory Project – which expands on the information provided in the general page. The researcher can also search via subject index (which lists stereographs chronologically) or through a stereographic card search mechanism. But as with other collections, it is difficult to search the catalogues for the new and unknown.

The four collections chosen for review were attached to trusted institutions, like the Smithsonian and the Library of Congress, which researchers would rely upon for authoritative information. As these collections demonstrate, no standards exist for providing online access to stereographs; nor are there standards for presenting the information via the Internet. It is possible, however, that as online information systems develop and become larger, that institutions such as the Library of Congress may provide a model for others, and that the disparity between collections of similar types of objects, such as those reviewed here, will become less.

http://memory.loc.gov/pp/stereoquery.html
CHAPTER VII.

CONCLUSION

The abundance of subjects and extent of the longevity of stereographs has been confirmed in the few texts previously discussed that chronicle the manufacturing history of the stereograph viewer as well as the stereograph card. The potential research value of these objects has, heretofore, been severely neglected. On the one hand, this statement demonstrates the low “demand value” of the stereograph, which is often a deciding factor in determining whether an object receives preservation assessment, going directly opposite the argument that stereographs should be given conservation treatment and potential digital preservation. However, I believe that this heretofore low “demand value” would change, should these objects be digitally preserved, as their visibility and ease of access would increase, then necessitating conservation treatment so that the stereographs could be handled by researchers viewing the object in person.⁴⁸

This set of factors introduces a number of questions: Who decides what objects receive preservation treatment? How should objects that have as-yet unrecognized, or potential artifactual value, be addressed?⁴⁹ Which should come first, digitization or conservation? Why would researchers need to see the object if it were digitized anyway?

⁴⁸This chain of events is not as linear as it seems, and also assumes that demand for ‘in person’ use would rise, given increase in visibility.

And, as Janet Gertz posits: “…is digital conversion a preservation technique or is selection for digitization fundamentally an issue of access?” Answers to these questions require a real understanding of selection criteria for preservation treatment, how to determine the most appropriate treatment, and how to produce an effective, useful digital program.

Numerous factors in addition to demand value determine whether an item receives either preservation or digitization, or both. Resources, both in materials and time, constantly present complications for selection. Future value is difficult to determine. However, it is important to keep in mind the following considerations when selecting objects for preservation:

Low use may signal that a collection had marginal intellectual value, but there are many other reasons for valuable materials to have generated little interest. …The value of digitizing such materials may go beyond the simple fact that the resulting files can be widely distributed. Broader access, as it creates a new community of users, can also facilitate more active scholarship.

In conjunction with this understanding of “future use value,” the viewpoint of the Modern Language Association of America negotiates the difficult factors, describing a model of behavior towards preservation of materials that serves as a useful standard:

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There is an obvious practical consideration that also supports the retention of textual artifacts (handwritten as well as printed) after their texts have been copied: the fact that the accuracy and stability of reproductions can never be guaranteed. For this reason, the preservation of the sources of photographic or electronic reproductions would seem a prudent course even if those reproductions were the equals of the sources; but since they cannot possibly be, a concern for maintaining our inheritance of textual artifacts is not simply desirable but imperative…their survival depends both on the materials out of which they are made and on the nature of the events that befall them. But the attitudes that people hold about them can be instrumental in either mitigating or exacerbating the destructive effects of these factors.  

As the evaluation of selected extant physical collections has shown, the question of whether or not to retain the object after digitization remains for future discussion; the issue of digitization itself must be addressed first. The value of the “future use” of stereographs has yet to be determined, and the argument that stereographs deserve to be digitized can be said of many different cultural heritage items that now reside in libraries and archives. Considering the two recent publications on the stereograph however, I believe that interest in the stereograph will increase, and therefore the demand for digital reproduction. This signals, therefore, that the stereograph is and will be a resource for scholars in academic libraries and special collections.

In order to spark further interest in the stereograph, libraries and special collections may consider developing both physical exhibitions of stereographs in their collection, as well as developing online exhibits or research resources. The first step of exhibition should lead to renewed interest, and possibly new projects. And as new

collections are processed, finding aids developed, and online catalogues expanded, more information about stereographic collections will become available.

Collaboration between institutions with major stereograph holdings would also allow greater access to information about stereographs as well as access to the objects themselves. Possibilities for collaboration may be as simple as including references to other collections in online finding aids and research guides, or as complex as developing a standard method of display and level of information provided about each object. Time will tell whether any of these recommendations are put into practice, but this paper serves as a first step towards the larger ideals of providing information on stereographs to researchers.
APPENDIX I:

HISTORY OF THE STEREOGRAPH TIMELINE FROM STEREOVIEWS BY WILLIAM CULP DARRAH

1. The Pioneers…………………………………1850-1860
2. The Excitement………………………………1860-1865
3. The Grand Flowering in America……………1865-1873
4. Flooding the Market………………………....1873-1881
5. Mass Production and Distribution……………1881-1920
6. The Decline…………………………………..1920-1935
APPENDIX II:

ADDITIONAL LITERATURE RELATED TO RESEARCHING THE STEREOGRAFH


APPENDIX III:
ADDITIONAL LITERATURE RELATED TO THE CONSERVATION OF PHOTOGRAPHS AND PHOTOGRAPHIC OBJECTS


http://www.loc.gov/preserv/care/photobib.html
http://www.loc.gov/preserv/care/photolea.html
http://www.loc.gov/preserv/care/photostn.html

http://www.loc.gov/loc/lcib/0007/conservation.html


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