



# Archival Elements

Newsletter of the Science, Technology, and Healthcare  
Roundtable of the Society of American Archivists  
Summer 2006

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## Message from the Co-Chairs

**Joan Echtenkamp Klein**  
University of Virginia Health Sciences Library

**Janice F. Goldblum**  
The National Academies

The Science, Technology, and Health Care (STHC) Roundtable Meeting is on Thursday, August 3, 4:30-6:00 pm, and will consist of both a business meeting and a program, "Science and Society: In Their Own Words." The program is a session proposal that was not accepted for the SAA joint meeting: "We received a record number of submissions-more than 140-for a schedule that had room for about half that number, making the competition extraordinarily difficult... We all regret that yours was one of many excellent proposals for which we simply could not find room." We hope you will agree that the STHC Roundtable offers a perfect venue for the session.

Our Roundtable meeting is dedicated to the memory of Joan Warnow, a long time STHC member. Joe Anderson, Joan's colleague at the Center for the History of Physics at the American Institute of Physics will speak about Joan and her contributions to scientific archival programs.

An agenda for the Roundtable Meeting is provided below. Please be thinking of session ideas to submit to the Program Committee for the 2007 SAA meeting in Chicago. We encourage the use of the STHC listserv

(sthc-1@lists.ucla.edu) for getting feedback on session topics and speakers.

2006 STHC Program, “Science and Society: In Their Own Words.”

Our program highlights the diverse and inter-disciplinary content of science, technology, and health care collections and collecting institutions and the contributions such collections have made to archival and manuscript practices and historical studies. The archives of scientists, physicians, and technologists encompass more than laboratory notebooks, patient records, anatomical drawings, or models of apparatus. Collections document individual careers and professional concerns as well as the intersections between science, society, and public policy and are valuable resources for social and cultural historians as well as historians of science. This session examines three distinct collections spanning American history from antebellum medicine to the twentieth century genetic revolution: Dr. James Carmichael’s correspondence from patients, 1819-1830; the papers of Joseph Henry, widely considered the foremost American scientist of the 19th century and the first director of the Smithsonian Institution; and the papers of Joshua Lederberg, who received a Nobel Prize in 1958 for his work in bacterial genetics and was a pioneer in applying computer science to biomedical research. Speakers will examine these collections’ documentation strategies, usage, and the creation of affiliated databases, publications, and exhibits projects.

Joan Echtenkamp Klein (Historical Collections, University of Virginia Health Sciences Library) will discuss a unique collection of letters to an antebellum Southern physician that voices patients’ perceptions of illness and the website that makes the original letters available and provides context for them. Marc Rothenberg (The Joseph Henry Papers Project, Smithsonian Institution) will discuss how researchers utilize the ten published letterpress volumes, the website, and over 130,000 documents in the Henry Papers database for research ranging from education reform in Japan to technological innovation in the lighting industry. Walter Hickel (History of Medicine Division, History Associates Incorporated and National Library of Medicine) will highlight the Joshua Lederberg papers and online archive, with particular attention to Lederberg's extensive role in science, space exploration, and national security policy. Alison Oswald (National Museum of American History, Smithsonian Institution) will chair the session.

**STHC Roundtable Agenda**

*Our 2006 Roundtable meeting is dedicated to the memory of Joan Warnow,  
a long time STHC member*

Welcome and Introductions

Council Representative

Program Committee Representative

Program: "Science and Society: In Their Own Words"

Alison Oswald (Chair), National Museum of American History, Smithsonian Institution  
Joan Echtenkamp Klein, Historical Collections, University of Virginia Health Sciences Library

Mark Rothenberg, The Joseph Henry Papers Project, Smithsonian Institution

Walter Hickel, History of Medicine Division, History Associates Incorporated and National Library of Medicine

Business:

Report on 2005-2006 activities ( Joan Echtenkamp Klein, Co-Chair)

Election of new STHC Co-Chair

*Archival Elements* Newsletter (Ewa Basinska, Editor)

10th anniversary of STHC-L, the STHC listserv

Proposed program ideas for SAA 2007

"Contributing Finding Aids to AIP's Physics/Astronomy Consortium" (Jennifer S. Sullivan, AIP)

Roundtable Round Robin: "Hot Topics" from STHC Membership

New business

Adjournment

Our chief concern is to ensure that the STHC Roundtable reflects the interests of its participants. We welcome all suggestions relating to the above topics or concerning any other issues members might like to see addressed at our meetings. Please do not hesitate to get in touch with either of us:

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**Joan Warnow, In Memoriam**  
**Joe Anderson**  
Center for History of Physics, American Institute of Physics

Joan Warnow-Blewett, Archivist Emeritus of the American Institute of Physics, died on Tuesday, May 30, 2006. Joan was a good friend and an extraordinary colleague, and she was a forceful voice for change in the archival profession. Her work here at the AIP History Center, along with her many publications and presentations, helped shape modern archival practice.

Joan retired in 1997 and moved to North Carolina with her husband, physicist John Blewett. She maintained

her ties with the AIP History Center, first as an occasional consultant and later as a member of our Development Committee. John died in 2000, and Joan married noted Yale historian Martin Klein in 2005.

For information on Joan's remarkable career, see the AIP Center for History of Physics:  
<http://www.aip.org/history/historymatters/warnow.htm>.

*June 2006*

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## Around and About Archives

### **Chicago Area Medical Archivists Medical History Symposium**

**John Zwicky**

**Pediatric History Center, American Academy of Pediatrics**

A few years ago, a group of Chicago area archivists for medical societies, institutions and libraries organized themselves into an informal unofficial group known as Chicago Area Medical Archivists. We usually meet about three or four times a year to discuss common interests. Our Fall meeting in October is always a Medical History Symposium. We all take turns hosting the Symposium, which features speakers on an endless variety of topics, all relating to health and medicine, including veterinary medicine. Speakers include physicians, academics, archivists, medical librarians, and anyone else who can speak on a topic of interest. The audience naturally is just as varied with archivists, medical librarians, physicians, other health workers and staff members at host institutions in attendance. Attending archivists also have exhibits highlighting treasures in their repositories. We hold the Symposium as part of the activities honoring Archives Week.

The American Medical Association hosted the first Symposium in 2002. One of the speakers was the team physician for the Chicago Cubs. The American Society for Clinical Pathology, Northwestern Memorial Hospital Archives, and the American Academy of Pediatrics have hosted the other symposia. We have learned about medical education, ether, obstetrics, nephrology, dentistry, veterinary medicine, stamps of medical interest, football at medical colleges, medicine in World War I, and certification of laboratory personnel among other things. We even had a film festival at one symposium featuring films from our repositories. At one symposium, a pediatrician had a show and tell presentation about infant feeding devices, which have evolved into baby bottles. We have all learned a lot and had an enjoyable time in the process. We would encourage other archivists to hold Symposia on topics of interest to their repositories.

*May 2006*

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## **Archives for Women in Medicine Commences**

**Giordana Meccagni**

**Countway Library, Harvard Medical School**

The Center for the History of Medicine at Harvard Medical School's Countway Library is pleased to announce the Archives for Women in Medicine, a project of the Joint Committee on the Status of Women at Harvard's Medical and Dental Schools in association with the Countway Library. The JCSW recognized and acted upon the need to represent and document the special role that women have played in mid and late 20th century

medicine, and the lack of accessible material on that subject.

The Archives for Women in Medicine is an initiative to document the history of women in medicine, starting with HMS and the affiliates. In particular, we are interested in looking at the social phenomenon that brought women to the forefront of their careers, and honor the lives and achievements of women in medicine. Working from our solid base of early pioneers, we will continue to acquire collections of other noteworthy women doctors. Our goals are to:

- \*Provide better access to collections;
- \*Acquire collections of personal and professional papers of outstanding medical leaders;
- \*Celebrate women in medicine, publicize our collections, and reach out to our communities.

For more information, please go to:

<http://www.countway.med.harvard.edu/rarebooks/awm.shtml>

*June 2006*

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## **Columbia University Health Sciences Library**

**Stephen E. Novak**

**Augustus C. Long Health Sciences Library, Columbia University Medical Center**

The Columbia University Health Sciences Library's Archives & Special Collections has acquired the records of the Maternity Center Association, an organization which for almost a century has been among the nation's leading advocates for better pre-natal and maternity care.

The records date from 1917 to the 1990s and are about 250 cubic feet in size. Included are annual reports; board minutes; administrative correspondence; educational materials; newspaper and magazine clippings; scrapbooks; publications; midwifery school and childbearing center records; fundraising materials; photographs; and film.

The Maternity Center Association, which recently changed its name to Childbirth Connection, was founded in 1918. It was a pioneer in the establishment of prenatal clinics, founded the nation's first nurse-midwifery school, led innovative publicity campaigns to reduce maternal and infant mortality, and founded the nation's first urban free-standing birth center. Today, it continues to promote safe, effective, and satisfying maternity care for all women and their families through research, education, and advocacy.

Maureen P. Corry, Executive Director of Childbirth Connection, said "we're very pleased that Maternity Center Association's extensive records that tell the fascinating story of childbirth in the US will be going to Columbia and available to interested parties."

David Rosner, professor of history and socio-medical sciences and director of the Center for the History and Ethics of Public Health at Columbia University, said "the Maternity Center is an extraordinary institution, one whose history encompasses and exemplifies some of the most important issues that have dominated American health care over the last century. Its records will be of importance to scholars in a wide variety of disciplines."

A project archivist will soon be hired to process the records over an 18 month period.

*July 2006*

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## Archival Projects at LISA V

**Ewa M. Basinska**  
**Institute Archives and Special Collections**  
**Massachusetts Institute of Technology**

LISA stands for Library and Information Services in Astronomy. Every four years, since 1988, librarians, archivists, and scientists from astronomical institutions in more than twenty countries gather to discuss the current challenges and issues in their field. This year's conference, hosted by the John Wolbach Library of the Harvard-Smithsonian Center for Astrophysics in partnership with the MIT Libraries, took place in Cambridge, Massachusetts, on June 18-21.

While most of the talks focused on current and innovative solutions to the rapidly increasing demand for integrated access to a multitude of observational data and other electronic resources, two sessions focused on historical subjects and archival projects. Owen Gingerich, a well-known historian of astronomy, captivated the audience with his stories of the old and rare astronomical almanacs that he has been collecting for the last four decades. Brenda Corbin, formerly of the United States Naval Observatory, presented the works of the nineteenth century artist, Etienne Leopold Trouvelot, whose interest in astronomy resulted in a set of spectacular drawings and sketches of aurora, solar protuberances, and various celestial objects, including the Orion Nebula and Milky Way among others. While Trouvelot's astronomical prints have a lasting artistic value, their creator will also be remembered as the person who (quite accidentally) brought the gypsy moth to the United States. Liz Bryson, of the Canada-France-Hawaii Telescope (CFHT), talked about the oral history project she conducted to preserve the history of CFHT early years.

Three talks described archival projects that were initiated within the last few years. Ellen Bouton, of the National Radio Observatory (NRAO), talked about the beginnings of the archival program to collect and preserve institutional records and personal papers documenting the history of NRAO. Trying to gain intellectual and physical control over the records scattered among many storage areas at NRAO sites in four different states, she followed the guidelines described by Joan Warnow and others in the AIP Study of Multi-Institutional Collaborations (1) and sought advice from the staff of the AIP's Center for History of Physics. Karen Moran, of the Royal Observatory in Edinburgh (ROE), talked about the efforts to preserve materials documenting the history of the Observatory. While the archival materials dating back to the eighteenth century cover more than two hundred years of astronomy in Scotland, there is also a need to capture the more recent activities of ROE, especially as, with the demise of the *Quarterly Journal of the Royal Astronomical Society*, no annual reports have been published since 1996. Specola 2000 is an Italian project to preserve the archival materials in twelve astronomical observatories. The project, presented by Luisa Schiavone of the Astronomical Observatory in Turin, was initiated in 1999 as a joint effort of the several institutions and organizations, including Ministry for the Cultural Assets and Activities, Italian Astronomical Society, and National Consortium for Astronomy and Astrophysics. It has been divided into several stages: survey of archival materials held in each of the observatories, inventory of the records dating from the beginning of the eighteenth century to 1960, index of the correspondence, cataloging of the photographic materials, and "virtual" recovery of the documents held by other institutions. Information about the current status of the project and inventories of archival materials held by five participating observatories can be found at [http://archivi.beniculturali.it/divisione\\_III/progspecola.html](http://archivi.beniculturali.it/divisione_III/progspecola.html).

Listening to those talks, I became convinced of a genuine need for much closer collaboration between archivists and librarians, especially in such well-defined fields as astronomy and astrophysics. Their combined expertise could lead to developing long-term archival programs geared towards preservation of existing materials and proper documentation of the functions and activities of various astronomical observatories and institutions both

in the US and in the rest of the world. One such preservation project was initiated (and is almost completed by now) in 1996 by Brenda Corbin (then at USNO) and Donna Coletti (Wolbach Library, Center for Astrophysics) and supported by the NEH preservation grant to microfilm the Wolbach Library's 3,000 volume collection of historical observatory publications dating back to the eighteenth century.

1. *AIP Study of Multi-Institutional Collaborations. Phase II: Ground-Based Astronomy, Materials Science, Heavy-Ion and Nuclear Physics, Medical Physics, and Computer-Mediated Collaborations.* Joan Warnow-Blewett, Joel Genuth, and Spencer R. Weart with contributions by Ivan Chompalove and Wesley Shrum, College Park, MD: AIP, 1999.

July 2006

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## **Conferences, Meetings, and Workshops**

### **SAA Washington, DC, July - August 2006**

The Science, Technology, and Healthcare Roundtable will be meeting on Thursday, August 3, 2006 from 4:30 - 6:00 p.m. For the agenda see "Message from the Co-Chairs".

For the full SAA program, please see the following:  
<http://www.archivists.org/conference/dc2006/dc2006prog.asp>

The STHC-themed sessions are listed below:

**103. "X" Marks the Spot: Archiving GIS Databases**

9:30 - 11:00 am, Thursday, August 3, 2006

**204. Sixteen Tons: The Diversity of Heavy Industry Archives**

1:00 - 2:30 pm, Thursday, August 3, 2006

**STHC Roundtable Meeting - Science and Society: In Their Own Words**

4:30 - 6:00 pm, Thursday, August 3, 2006

**406. Overcoming Another Obstacle: Documenting the History of a Community's Disabled**

2:30 - 3:30 pm, Friday, August 4, 2006

**802. Managing Change in the Archives**

2:15 - 3:45 pm, Saturday, August 5, 2006

**808. Providing Access, Maintaining Privacy: The Challenge of Administering Health Care Records Under HIPAA**

2:15 - 3:45 pm, Saturday, August 5, 2006

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<b>SAA Science, Technology Health Care Roundtable: Steering Committee Members (2005-2006)</b>		
R. Joseph Anderson - <i>Past Chair</i> American Institute of Physics College Park, MD	Ewa M. Basinska - <i>Newsletter Editor</i> Institute Archives Massachusetts Institute of Technology Cambridge, MA	Jean M. Deken Stanford Linear Accelerator Center Menlo Park, CA
Janice F. Goldblum - <i>Co-Chair</i> The National Academies Washington, DC	Joan Echtenkamp Klein - <i>Co-Chair</i> Health Sciences Library University of Virginia Health System Charlottesville, VA	Jodi Koste Tompkins-McCaw Library Virginia Commonwealth University Richmond, VA
Suzie Long Missouri Southern University Joplin, MO	Lisa Mix Library and Center for Knowledge Management University of California, San Francisco	Stephen E. Novak Augustus C. Long Health Sciences Library Columbia University New York, NY
Alison L. Oswald Smithsonian Institution Washington, DC	Tim L. Pennycuff Lister Hill Library of the Health Sciences University of Alabama at Birmingham Birmingham, AL	Rose Roberto - <i>Web Liaison</i> Westminster Libraries & Archives London, England United Kingdom
Paul Theerman National Library of Medicine Bethesda, MD	John Zwicky American Academy of Pediatrics American Society for Clinical Pathology Chicago, IL	

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**The Einstein Papers Project: The Documentary Edition of  
Albert Einstein's Writings and Correspondence**

**Ze'ev Rosenkranz**  
Einstein Papers Project  
California Institute of Technology

*Note from Editor: The following text is based on a paper presented at the 69th Annual Meeting of the Society of American Archivists, held in New Orleans, August 14 – 20, 2005.*

The year 2005 was celebrated worldwide as the Einstein Year, because it marked the 100th anniversary of Albert Einstein's *annus mirabilis*. In 1905, Einstein published four groundbreaking papers that shook the foundations of modern physics. Those papers dealt with Brownian motion, the light-quanta hypothesis, and the special theory of relativity. The original manuscripts of those articles are not extant, but published versions



were reprinted, with scholarly annotations, in Volume 2 of *The Collected Papers of Albert Einstein*. Last year, countless conferences, symposia, exhibitions and other events, dedicated to Einstein's life and work, were held all over the world to celebrate the centenary of the publication of those four papers.

In my paper, I will focus on three separate entities: the Estate of Albert Einstein in Princeton and New York, the Albert Einstein Archives in Jerusalem, and the Einstein Papers Project, which is currently located at the California Institute of Technology in Pasadena. Even though these are all distinct entities, their histories have been interwoven to a great extent.

Let's start with a brief history of Einstein's personal papers and the Einstein Estate. In the early years of his career, Albert Einstein was not the sort of person to retain every piece of paper that passed through his hands. There are no surviving manuscripts of any of his groundbreaking papers from 1905, which were written when he was only 26. Indeed, it seems as if prior to 1919 he made no systematic attempt to preserve his papers. When the volume of his correspondence increased vastly in the fall of 1919, as a consequence of his dramatic and sudden rise to fame shortly after his general theory of relativity was confirmed by British astronomer Arthur Eddington and his team, Einstein employed his step-daughter, Ilse Einstein, as his secretarial assistant. Ilse achieved the first semblance of well-ordered files. In April 1928, Helen Dukas took over as his secretary and began to preserve his papers more systematically. However, copies of all outgoing correspondence were not kept even then. Soon after the Nazis' rise to power in 1933, Einstein's papers were rescued from Berlin by his son-in-law, Rudolf Kayser, with the help of the French Embassy. They were brought to Einstein's new home in Princeton and kept there until well after his death. With few exceptions, almost all materials left at Einstein's summer house in Caputh, outside Berlin, were destroyed in order to prevent their falling into the hands of the Nazi authorities.

In his will of 1950, Einstein appointed his secretary Helen Dukas, his close associate Dr. Otto Nathan, and his step-daughter Margot Einstein as trustees of his estate. Dr. Nathan also served as the sole Executor of the Einstein Estate. For a quarter of a century after Einstein's death in 1955, Helen Dukas and Otto Nathan devoted themselves tirelessly to organizing his papers and acquiring additional materials. Their primary intention was to enable publication of a historical edition of Einstein's papers. They succeeded in enlarging the size of the collection from around 14,000 items, available at the time of his death, to 42,000 items in the early 1980s. In the 1960s Helen Dukas, in consultation with Professor Gerald Holton of Harvard University, reorganized the material, thereby rendering it accessible to scholars and preparing it for future publication in *The Collected Papers of Albert Einstein*. To facilitate editorial work, the papers were transferred from Einstein's home to the Institute for Advanced Study in Princeton, while remaining the property of the Einstein Estate. In 1971, the Estate and Princeton University Press signed an agreement to publish Einstein's papers. However, a conflict between the Estate and Princeton University Press over the choice of the first editor of the Project led, in 1978, to a court case submitted to one of the New York arbitration courts. After three years of arbitration, the court ruled in Princeton University Press's favor and Helen Dukas, Otto Nathan and Margot Einstein relinquished their roles as Trustees of the Einstein Estate. In consequence, in 1982, they carried out Einstein's stipulation in his Last Will and Testament of 1950 that designated Hebrew University of Jerusalem as the "final repository" of his papers. The Trustees transferred both the papers and the rights to his literary estate to Hebrew University.

The second part of my paper focuses on Einstein's personal papers. After their transfer to Hebrew University in 1982, they have been housed as the Albert Einstein Archives at the Jewish National and University Library in Jerusalem. In subsequent years, additional materials were transferred from Einstein's Princeton residence, including his personal collections of reprints, photographs, medals, and diplomas, as well as his private library of books and musical scores. In 1988, the Dibner Fund of Wilton, Connecticut, established the Bern Dibner Curatorship for the administration of the Albert Einstein Archives. I served as Curator of the Einstein Archives from 1989 to 2003. Today, the Einstein Archives engages in the whole gamut of contemporary archival functions: preservation and conservation; service to users; accessioning and description of new archival materials; making the material more accessible (and I will get to a specific facet of enhanced accessibility later

on); and a very extensive outreach program, including a variety of publications, a traveling exhibit in many languages, and a website.

The third part of my paper concerns the Einstein Papers Project at Caltech. The Einstein Papers Project was established in the late 1970s at the Institute for Advanced Study in Princeton by Princeton University Press, following the agreement between the Estate of Albert Einstein and Princeton University Press. Professor John Stachel of Boston University became the first editor of the Project and moved the Project to Boston University in the early 1980s. The Einstein Papers Project produces *The Collected Papers of Albert Einstein*, a multi-volume documentary edition of Einstein's writings and correspondence. The edition is based on 50,000 archival items from Einstein's personal papers housed at the Albert Einstein Archives in Jerusalem, and on 15,000 additional documents discovered by the editors over the past twenty years. To date, nine volumes of *The Collected Papers* have been published, and the tenth volume will be published in July. Twenty-nine volumes are to be published by the end of the Project. The documents included in the volumes span the broad range of Einstein's life and work – his complex family life, his scientific theories and discoveries ranging from relativity to quantum mechanics, his public involvement in such movements as pacifism and Zionism, and his concern for social justice and civil liberties. The edition of *The Collected Papers* is divided into two series: "Writings" and "Correspondence." The "Writings" series contains Einstein's books, published and unpublished articles, lecture notes and research notebooks, as well as accurate records of his speeches, interviews and other oral statements. The "Correspondence" series presents letters written by Einstein as well as all significant letters sent to him. The volumes are published in chronological order, with each volume covering a specific time period. So far, the "Writings" series has covered the period through 1921, and the "Correspondence" series through 1920. In each volume the documents are printed in their original language, mostly German, and the scholarly apparatus and annotations in English. In addition parallel translation volumes are published. They include translations of the documents into English, but no scholarly apparatus is included. The Project has been located at Caltech since 2000. Professor Diana Buchwald is its Director and General Editor.

One fruitful collaboration between the Einstein Papers Project and the Albert Einstein Archives, which I had a privilege of co-initiating, was the creation of our joint website: *Einstein Archives Online*. The website was launched in May 2003 and contains high-quality images of 900 digitized scientific and non-scientific manuscripts, written in Einstein's own hand, from the Einstein Archives. It also includes a detailed finding aid to the collection and a combined database encompassing approximately 43,000 archival items. In the first week after its launch, the site received over 18 million hits. The URL for the website is: <http://www.alberteinstein.info> and I highly recommend that you take a look at the site to see amazing reproductions of the original manuscripts. In my opinion, they provide an excellent substitute for what one could see in Jerusalem.

The volumes of the Einstein Papers Project are a rich source for historical research. To date, the main focus of the project has been on Einstein's scientific theories and interactions, because during the period covered (from Einstein's early years until 1918) Einstein was mainly concerned with his scientific work. Therefore, the main target audience for the first eight volumes was a relatively small community of historians of science. Following World War I, Einstein became a major public figure in Germany and in the world at large, and his interests and activities in political and social issues increased to a remarkable extent. This change is reflected in the ninth volume, published in October 2004, and the overall trend will continue in further volumes, which should be of increasing interest and relevance to historians and researchers from other sub-disciplines of history, such as German history, Jewish and Zionist history, American history, the history of the peace movement, the history of socialism, etc.

*The Collected Papers* have been extensively used by sundry biographers who, over the past few years, have highlighted various revelations about Einstein's private life in new works of varying seriousness. It seems as if the publication of every volume of *The Collected Papers* is followed by new sensational biographies and newspaper articles.

In many publications and lectures about Einstein, wide-sweeping generalizations are often made. Many of them are not based on historical research using the primary sources available in the Archives, but rather on Einstein's publications, or on secondary literature and newspaper clippings. In my opinion, one of the main values of the Einstein Papers Project is that each volume is dedicated to a specific period, providing us with new insights into Einstein's life and work. We thereby hope to construct a new picture or image of Einstein that would be a closer approximation to the real person, as opposed to the mythical figure. With each volume of *The Collected Papers* we come closer to achieving that goal.

In addition to the general editor, the Einstein Papers Project employs three full-time editors and several part-time editors. As one of the two full-time editors who focus on the non-scientific documents included in the volumes, I specialize in Einstein's family correspondence and his correspondence relating to Jewish issues. During the four years I have been with the Project, I have worked intensively on material pertaining to the following issues:

- a. Jewish-related issues, including Einstein's induction into the German-Zionist movement, his intensive involvement in plans for establishing the Hebrew University of Jerusalem, his actions on behalf of Eastern European Jewish academics and students in Berlin, his reactions to German anti-Semitism, and his views on Jewish assimilationism.
- b. Family correspondence, including the terminal illness and subsequent death of his mother, his relationship with his first and second wives, his relationship with his two sons, and the financial concerns of his two families.

I would like to end my paper with a couple of tidbits from the most recent volume published by the Einstein Papers Project, Volume 9.

In December 1919, Einstein's second wife, Elsa, wrote to one of his closest friends, the physicist Paul Ehrenfest, about the impact of her husband's overnight rise to fame on their lives in Berlin: "It's raining petitions for autographs; reporters and interviewers are wearing out the carpets in our abode; ... in the meantime, photographers enter the apartment, one of their ilk was recently commanded to our apartment by telegram from New York! 'One wants to escape where there is no exit,' that's what he loves saying nowadays."

A week after his mother's death in February 1920, Einstein wrote to a close friend in Switzerland, Heinrich Zangger: "My mother died a week ago today in terrible agony. We are all completely exhausted merely from experiencing this with her; you can feel it in your bones what blood ties mean! The morphine gave much relief ... Generally, it's like standing in front of a brick wall over here [i.e., Germany], because one can't picture the future at all."

And on his growing interest in Jewish nationalism after World War I, he stated to a fellow physicist, Paul Epstein in October 1919: "... the Zionist cause is very dear to my heart ... You can certainly count on my support [in the matter of the Hebrew University] ... the development of the Jewish colony is gratifying and ... I am glad there will be a spot of earth on which our tribal comrades will not be foreigners."

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# Documenting the Physical Universe: Preserving the Records of SLAC from 1962 to 2005

**Jean Marie Deken**  
Stanford Linear Accelerator  
Stanford University

*Note from Editor: The following text is based on a paper presented at the 69th Annual Meeting of the Society of American Archivists, held in New Orleans, August 14 – 20, 2005.*

## Introduction

In a recent book by Iwan Rhys Morus (1), he posits that the status of physics with the public, government, and industry as “the ultimate authority in Nature” was firmly established in the nineteenth century through a combination of factors, including the discovery by physicists of the law of energy conservation, and the ability of physicists both to provide the public with fascinating demonstrations of physical principles, and to provide industry and government with useful applications of those principles.

Physics continued to rule the cultural and scientific landscape in the twentieth century, predominately because of the successful efforts of the Manhattan Project to develop an atomic weapon – the use of which brought about the successful conclusion of World War II. (2) The dominance of physics on the twentieth-century American scene, it is safe to say, was also very strongly coupled with the dominance of the figure of Albert Einstein, who – although he did not officially participate in the Manhattan Project – was one of the scientists who was responsible for its initiation. (3)

Einstein’s dramatic entry upon public awareness in 1905 (chronicled in another paper in this session) was a result of the publication of his three seminal papers on the photoelectric effect, the size of molecules, Brownian motion, and the theory of relativity. His continuing importance throughout the twentieth century has been invoked in 2005, the centennial of his 1905 *annus mirabilis* (miracle year) by physicists world-wide who are concerned about the current standing of physics with government, industry, and the public. The World Year of Physics 2005

...is a United Nations endorsed, international celebration of physics. Events throughout the year will highlight the vitality of physics and its importance in the coming millennium, and will commemorate the pioneering contributions of Albert Einstein in 1905. Through the efforts of a worldwide collaboration of scientific societies, the World Year of Physics brings the excitement of physics to the public and will inspire a new generation of scientists. (4)

The new generation of scientists – twenty-first-century physicists – which the physics community hopes to recruit and inspire with the activities of the World Year of Physics 2005 may have a tendency to be discouraged by the overwhelming stature of Einstein, and by the seeming insurmountability of his achievements. It is my position that the corrective to this feeling, in the study of Einstein’s legacy in particular, and in the study of physics more generally, is through an in-depth acquaintance with the day-to-day workings of physics—a history which is collected and preserved in archives.

Physics archives are a corrective to what James Bjorken, a theoretical physicist and one of the architects of the twentieth-century Standard Model of physics calls the current “folk history” phenomenon in particle physics. He writes of

...an increasingly unrealistic viewpoint of the present generation of particle physicists regarding its past. The rich history ...is increasingly distilled into a brief folk history. This was originally designed for the nonspecialist, but by now is used to teach new generations of students as well. In the folk history, the Standard Model was created

as a relatively logical and straightforward process, while in reality it was a tortured one, with many false leads. It is hard for this generation of particle physicists to visualize the rich environment of confusion, and the variety of abandoned alternatives, from which the Standard Model ideology emerged. And it is difficult to now appreciate how hard it was to go from one step to the next...(5)

SLAC occupies 430 acres of the Stanford University campus near the intersection of Sand Hill Road and US Highway 280 in northern California. In fiscal year 2002, its budget was \$209 million: it employed a staff of 1,467 (full-time equivalents); and hosted 3,000 users from a variety of institutions, including universities (147), industry (46), government laboratories (30), and foreign countries (162).(6) We are proud to serve the large international user community at SLAC, whose time on site can range from days to weeks to years.

### **History of SLAC Archives and History Office**

The SLAC Archives and History Office began its life in February 1986 as the “SLAC History Project.” Bill Kirk, Assistant to the Director, and Louise Addis, Associate Head Librarian, began the project with a records survey in administrative groups throughout the laboratory. Identification of important records was followed by creation of an inventory database (SLACHIST) for some 500 separate records collections, and by the inauguration of a physical archive of important records no longer needed for current business. The records survey was followed up with an oral history program to gather information not fully documented in the available records.(7) A long-time SLAC employee, Marie LaBelle, with deep contacts within the SLAC community and wide knowledge of past projects at the site, was convinced to join the Project as Acting Archivist.(8)

Impetus for the SLAC project can be traced to several converging sources. The 1980s were marked by high interest in the history of particle physics both generally in the United States, and more locally at Stanford University. Early in the decade, the American Institute of Physics (AIP), working on contract with the US Department of Energy (DOE), completed a study of the records management and archives programs at several DOE contract laboratories. A final report and several guides for the selection and preservation of permanent records at physics laboratories resulted from this study.(9) Following the completion of their DOE project, AIP then initiated a much larger research project, called the “Study of Multi-Institutional Collaborations.” To assist in organizing the new project it tapped – among others – Stanford Curator of University Archives Roxanne Nilan, known to the American Institute of Physics for her interest in the history of science and for her work on the AIP’s Committee for the History of Physics.(10)

Joan Warnow of the AIP had been actively encouraging Bill Kirk and Louise Addis, as well as two successive SLAC Directors – Wolfgang K. H. Panofsky (1962-1984) and Burton Richter (1984-1999) – to take steps to preserve SLAC’s history. Warnow also began encouraging Nilan to take an active interest in the history of SLAC, and to do what she could to support Kirk and Addis in their efforts. Locally at SLAC, awareness was growing among senior management that the laboratory was beginning an important transition period as the founding generation began to reach retirement age. Further motivation for the SLAC History Project was provided in 1982, when Peter Galison, Stanford University professor of philosophy and of physics (now at Harvard University), began conducting research on problems in the history of physics at Stanford, including the history of physics at SLAC.(11)

SLAC’s History Project officially became the “SLAC Archives and History Office” (AHO) in the Fall of 1989, when Roxanne Nilan joined SLAC for a year’s sabbatical to establish the new office to “evaluate, gather and make available” SLAC historical materials.(12) Nilan also continued to work as SLAC’s and Stanford’s representative on the AIP multi-institutional collaboration study. She was succeeded as head of the Archives and History Office by Robin Chandler, who served as SLAC Archivist from 1990 to 1995.(13) Throughout this period, Nilan, Chandler, Addis and Kirk made significant contributions to the American Institute of Physics’ first, high-energy physics phase of their multi-institutional collaborations research by conducting oral histories, collecting data for a sociological census study, and supporting Peter Galison’s related research on the history of

the discovery of the J/Psi particle at SLAC in 1974.(14) During this period a number of publications – including a volume entitled Big Science – focused on the evolution of SLAC over time.(15)

The period 1993 to 1995 saw some growth in the SLAC Archives program, although staff support fluctuated. The program began a second growth spurt in mid 1996, when I was employed as permanent full-time archivist and, later that same year, when I hired a permanent halftime archives assistant. Work on a dedicated 2400-cubic-foot capacity state-of-the-art archival storage area was completed in 1996, and an Archives Program Review Committee comprised of internal and external stakeholders was established in 1999 to advise SLAC management on the goals, policies, and activities of the Archives program. (16) In 2000, a processing grant was awarded by the American Institute of Physics to support the arrangement of the papers of Burton Richter, SLAC Director and Nobel Laureate. By the end of calendar year 2002, the Archives and History Office had collected and at least partially processed over 1600 cubic feet of SLAC historical records, and had accumulated a processing backlog of roughly equivalent proportions.

### **Challenges and Opportunities**

Challenges facing the SLAC Archives and History Office are both physical and intellectual. “Getting the goods,” that is, getting materials deposited in the archives, fits both categories. Our large community of international users is a fluid population with varying sources of support, affiliations, and connections to SLAC. As such, they pose a unique challenge for the archival program. Many of them create records that belong to them personally or to their home institutions, but some of them create records that are appropriate for inclusion in the archives at SLAC. In sorting out what belongs where, we emphasize the importance of preserving significant records in the appropriate repository – whether at SLAC or at another institution. We work with records liaisons, individual researchers, collaboration committees, administrative associates, and sometimes the Site Engineering and Maintenance Department to locate records; identify, appraise and collect abandoned records; and explain to all relevant parties what records should be retained and when they should be retired.

Another physical challenge is the size and nature of our processing backlog. Although the laboratory has been around for 40 years, the Archives and History Office has been in operation less than half that time, and has some serious catching up to do. Some of the backlog materials have been at least viewed by current staff, but many of them are and will remain “mystery boxes” until time and resources can be found to complete the most basic level of processing on them. A special backlog processing project, funded by the SLAC Research Division, will assist us in solving some of the mysteries.

One of the biggest physical challenges facing our operation is the lack of storage space on site at SLAC. We have nearly reached capacity for our archival storage area, and in the past year have had to move all remotely stored backlog materials to an offsite location as the need for laboratory, shop and office space on site has grown.

The most significant intellectual challenge we face is the one posed by electronic records. SLAC has been at the leading edge of some developments in computing in physics, and has been an early adopter in others. We have a large backlog of experimental data tapes, as well as volumes of new materials that have been born digital. Like other archives around the world, we are struggling to find the most appropriate methods to identify electronic records of continuing value and to preserve them so that they are useful – and useable – in the long term. While the computer scientists working with a current, long-running high-energy physics experiment at SLAC, the B-factory called “BaBar,” (17) wrestle with what is arguably the largest database in the world (as of Friday, November 5, at 00:01:13 2004, over 895 TB had been stored in 847,149 files), the archives must plan to deal with an equally intimidating constellation of BaBar collaboration electronic technical notes, newsletters, email messages, design drawings, and specifications.

A small pilot project undertaken in the electronic records area has been the documentation of SLAC’s early web site: the first web site in the United States. Working with the SLAC “Web Wizards” who developed and

maintained the site, and with special support from the Research Division, the Archives and History Office has been able to document the development of the first pages and the first site at SLAC. We have collected both paper and electronic records of the site, and were able to mount an online exhibition on our early web in time for its 10th anniversary on 13 December 2001.(18) These particular pages – this online exhibition – are the features of our web site that receive 90-95% of the monthly traffic.

## Conclusions

Ongoing experiments at SLAC present the Archives and History Office with an opportunity to develop a plan for electronic archiving that collects records as they are created, but they also present a challenge, given that there are currently no storage media standards nor any well-developed tools for electronic archiving. While keeping a keen eye on electronic records archiving developments abroad and in the US, we are beginning work on developing a protocol to archive the BaBar experiment's electronic records by developing a digital equivalent of collecting and accessioning boxes of documents as they are created.

Tightening government budgets for scientific research impact all levels of laboratory operations, including archival efforts. In the US there have been encouraging signs that support for high-energy physics research is on the upswing, but those signs have not yet translated into improved budget totals. For this reason, flexibility in meeting the needs of the SLAC community and the requirements of our government oversight agencies, will continue to be an important job requirement in the Archives and History Office.

However, despite recent funding challenges, the level of resources provided by SLAC to the archival efforts is at an all-time high, and over the past few years the Archives and History Office has matured into a program that is serving the needs of the SLAC community as well as preserving the history of the important scientific work performed at SLAC.

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2. See Herken, Gregg. *Brotherhood of the Bomb: The Tangled Lives and Loyalties of Robert Oppenheimer, Ernest Lawrence, and Edward Teller*. New York: Henry Holt, 2002. or Kevles, Daniel J. *The Physicists: The History of a Scientific Community in Modern America*. Cambridge: Harvard University Press, 1995 among many other histories of physics research in the US not cited here.
3. Einstein's signature on his and Leo Szilard's 1939 letter to President Franklin Delano Roosevelt, warning that the Germans could create an atomic weapon, is generally credited as being the impetus behind the Manhattan Project to develop a nuclear weapon for use by the US in World War II. See: Herken p. 24-25, 32-33 and Kevles, p. 324 ff.
4. <http://www.physics2005.org/> (14 August 2005).

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8. Per email communication, L. Addis to J. Deken, 4 April 2003.
9. *Guidelines for Records Appraisal at Major Research Facilities: Selection of Permanent Records of DOE Laboratory Management and Policy and Physics Research*. Joan Warnow and the AIP Advisory Committee on the Documentation of Postwar Science. New York: AIP, 1982, revised 1984; Warnow, Joan et al. *A Study of Preservation of Documents at Department of Energy Laboratories*. New York: American Institute of Physics, 1982 ; Wolff, Jane. *Files Maintenance and Records Disposition: A Handbook for Secretaries at Department of Energy Contract Laboratories*. (DOE Report No. C00-5075.A000-16) New York: American Institute of Physics, 1982, Revised 1985.
10. Nilan was co-founder, along with Henry Lowood, of the Stanford University Libraries' "Stanford and the Silicon Valley Project," a special archival program documenting the rise of microelectronics and personal computing in Northern California as well as the evolution of academic science and technology on the campus.
11. Meanwhile, Fermi National Accelerator Laboratory (Fermilab) in Illinois was sponsoring a series of international symposia on the history of particle physics. The first two, "The Birth of Particle Physics" (1980) and "Pions to Quarks" (1985), had been held at Fermilab; the third was co-sponsored by SLAC and Fermilab, and held at SLAC on June 24-27, 1992. Participants in the third symposium, "The Rise of the Standard Model: Particle physics in the 1960's and 1970's" included five SLAC staff members.
12. R. Nilan, undated essay, SLAC Accession 2002-026, box 1; Chandler, Robin." Future of the Archival Program at SLAC." [Unpublished report] March 1995; Stanford Historical Society *Sandstone & Tile*, Summer 1990 p. 12.
13. Roxanne Nilan was with the AHO from 1989–1991 (full-time 1989-1990). Robin Chandler was on the AHO staff from 1990-1995 (full-time, 1990-1993).
14. Chandler op. cit. (1995) and Chandler, Robin "SLAC and the History of the J/Psi Discovery," SLAC, *The Interaction Point*, April 1991.
15. Galison, Peter and Bruce Hevly (editors). *Big Science: the growth of large - scale research*. Stanford, CA: Stanford University Press, 1992.
16. The program review committee meets biennially, and its reports are available online at <http://www.slac.stanford.edu/history/progrev/charge.html>.
17. From the collaboration web site: "BaBar is a High Energy Physics experiment... The goal of the experiment is to study the violation of charge and parity (CP) symmetry in the decays of B mesons. This violation manifests itself as different behavior between particles and anti-particles and is the first step to explain the absence of anti-particles in everyday life." <http://www-public.slac.stanford.edu/babar/> (26 July 2006).
18. SLAC Special Collection, World Wide Web, SLAC Accession 2000-072. Exhibit is online at: <http://www.slac.stanford.edu/history/earlyweb/index.shtml>.

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## Changing the Face of Medicine: One Historian's Experience as a Curator

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In the spring of 2001 during a meeting of the American Association for the History of Medicine, Elizabeth Fee, Chief of the History of Medicine Division of the National Library of Medicine (NLM), invited me to become the Visiting Curator for a new exhibition they intended to present on the history of women physicians. It was the first full-scale exhibition ever devoted to that subject by the NLM. After more than two years' preparation, the exhibition, "Changing the Face of Medicine: Celebrating America's Women Physicians," opened in April 2003 and continued on display at the NLM for more than two years. A permanent web site displaying much of the original exhibition as well biographies and pertinent sources can be accessed at <http://www.nlm.nih.gov/changingthefaceofmedicine/>.(1) Recently I had published a history of women in American medicine, *Restoring the Balance: Women Physicians and the Profession of Medicine, 1850-1995*. After years of archival research and secondary source reading, I had arrived at a narrative structure and a set of unifying thematic ideas centered around the various ways women physicians relied on the concept of balance as a touchstone for their sense of purpose and identity. Although I possessed no curatorial experience whatever, I (mistakenly) thought I could foresee the narrative strategy our exhibition would employ.(2) *Archival Elements* has asked me to write about my experiences.(3)

The following discussion thus attempts to describe how historical narratives are shaped by the imperatives of museum presentation. There are two layers to my discussion, first an experiential tale about collaboration, and second, some thoughts about the effects of collaboration on historical narrative. Naturally, the visual imperative of any exhibition will also shape its narrative. A good picture is indeed worth a thousand words. Enormous issues are at stake in the choice and acquisition of artifacts and images, in the choice of display technologies and in web-site design, and in hiring the most appropriate firms to undertake these specialized tasks. But one cannot address the crucial matter of display without having agreed on at least a tentative narrative framework. A viable, core narrative is essential to convey complex and frequently politically charged historical material across a field of diverse images and artifacts. For us, it was the glue that held the exhibition together.

But the determination of that core narrative is a shared enterprise in such a setting. I learned that the differences between writing a book and curating an exhibition are vast, and the most challenging difference revolve around the question of narrative control. I found myself in a setting which privileged collaboration over pride of authorship, a setting which gave equal weight to the visual *and* the textual, which gladly incorporated contemporary events into its purview, and which actively sought participation by its subjects in framing the exhibition's conceptual limits. The NLM's very decision to spend its time and money on the history of women physicians reflected a fundamental fact of its own political demography—many of its senior officials and advisory board members, past and present, are themselves women physicians of great distinction, such as Bernadine Healy, Ruth Kirschstein, Vivian Pinn, Tenley Albright, and Antonia Novello, to name a few. True, women have not yet reached a level of leadership in medicine commensurate with their proportion in the profession (just under 27 percent of practicing physicians and 47 percent of medical graduates today are women),(4) but women doctors today often hold important positions in medical research and academia. Moreover, the lesson of feminism—that women must organize for their voice to be heard—was taken up in earnest by medical women from the 1970s onward. Today there are many organizations of women physicians, beginning with the venerable American Medical Women's Association and extending to nearly every ethnic and specialty group.(5) The NLM itself was committed to being as representative as possible; its role as a public institution required it, rightly, in my opinion, to support all its constituencies. Besides, the struggle by women of all classes, races, and ethnicities to gain admission into the medical profession was a core theme of our exhibition.

My collaborators at the NLM's History of Medicine Division, including my co-curator, Manon Parry, and everyone else who worked on the exhibition team, were extraordinarily talented and dedicated professionals. They understood how to work with a large, politically diverse set of stakeholders, each with a robustly personal investment in how the exhibition would be conceptualized. Thus, they realized long before I did that we were not the only ones who would shape the narrative vision of this project. Once the NLM's internal exhibition steering committee decided to seek advice from women doctors themselves about contemporaries who should

be considered for inclusion, the director of the NLM formed an Advisory Board representing women physicians from the many organizations now dedicated to ethnic or racial “minority” physicians as well as scholars in the field. In turn, once such organizations learned of our plans, they were fully committed to participating. Ultimately, the NLM convened an Advisory Board not only to help us identify appropriate individual as subjects, but to express their opinions about its thematic range and even its title. As a result, our “subjects” transformed themselves from passive objects of study to active subjects of a shared historical investigation.

At the first meeting our Advisory Board, for example, we discussed the exhibition’s chronological boundaries, what themes we would privilege, and what criteria we would use for inclusion. Where a single historian-curator might decide all these issues on the basis of conceptual, aesthetic, and evidentiary factors, narrative-by-committee is responsive to the diverse experiences and value hierarchies of the committee’s members. In our case, however, this occasioned almost no disagreement. Whereas my book afforded relatively little space to the stories of contemporary women physicians, and whereas most historians do not focus on contemporary events, the entire committee, including this author, agreed that our exhibition should devote considerable resources to contemporary issues and individuals. Changes in the role of women physicians had occurred with increasing velocity in the past two decades; we wanted to attract an audience of schoolgirls, college students, and young physicians; it was imperative not to end our story without bringing it into range with their own and their immediate predecessor generations’ experiences. Moreover, one of the exciting features of recent American medical history is the increasing visibility of minority medical students, residents, and practitioners. These are, however, very recent trends and were barely represented in previously published work. Our need to be inclusive was a stroke of luck for the exhibition, as was the role of the Advisory Board. Its members sent us many nominations for inclusion in the exhibition. With the help of groups such as the National Medical Association, the Association of Black Women Physicians, the National Hispanic Medical Association, the Association of American Indian Physicians, and others, we became knowledgeable about many more minority women doctors than we could possibly have found on our own.

We also took stock—collectively—of the tone we wanted to set. Did we wish to be uncritical celebrants, or battle-weary pessimists? We reminded ourselves of the exhibition’s main purpose: to educate the current and rising generations of women about the achievements of past generations and the opportunities that lie ahead for women *because* of those past achievements. We wanted to educate and encourage, but never to make progress look easy or inevitable. Hence the first clause in our title, “*Changing the Face of Medicine*” alluded to the deep transformation that was required to bring a fair share of women into medicine; our last clause “*Celebrating America’s Women Physicians*” hinted at the success stories which would people the exhibition. Once we had chosen representativeness, contemporaneity, and a balance between social critique, historical interpretation, and a touch of feminism, we addressed the fundamentals. Would we limit ourselves to the United States? Yes, it was decided, our expertise and the available resources and time all pointed to focusing on the United States, although we insisted that the introduction and list of suggested readings provide pointers to the centuries-long history of women physicians, surgeons, midwives, and healers in the western world. (We all felt too ignorant of the rich traditions of non-Western medicine to venture into its domains; it deserved an exhibit of its own. That was also true for the history of nursing, which should not be blended into the history of medicine when its own history and archival resources are so rich and distinctive.)

What would be our starting point? Not until the first quarter of the nineteenth century did women call themselves “doctors” and practice general medicine in the United States. We were aware that a handful of women, such as Dr. Harriot Hunt of Boston, practiced medicine (although, usually not surgery) successfully and independently for many years as apprentice-trained physicians without medical degrees. But Hunt challenged our classifications in a more profound way. She was an avowedly eclectic practitioner; she entirely disavowed the “heroic” remedies in favor of botanical, hydropathic, and domestic therapeutics. Yet she desperately wanted to receive what she considered a scientific education in medicine. In fact, after practicing for many years, she applied for admission to Harvard Medical School. But, once she had been turned down for the third time (in 1847) solely on the basis of her sex, she gave up the dream of a “regular” medical degree and embraced the

more encompassing cause of women's rights as a way to achieve for her successors what she had been unable to achieve herself.(6) Hunt's career truly presented us with a classificatory dilemma. We arrived at a compromise. Dr. Hunt's achievement would be noted in our prologue, but the formal body of the exhibit would begin with Elizabeth Blackwell, the first woman medical graduate in the Anglo American world.

That left us with the really hard questions: what themes to privilege; who, of the many nominees, to include; the ratio of text to graphics and artifacts; in short, the narrative strategies and priorities which lie at the heart of any exposition. For the purposes of this brief discussion, I will focus on only one aspect of these issues—the relationship of women physicians throughout their history to the development and clinical use of medical sciences. The early studies of women in American medicine, helpful as they were, construed their feminine subjects as students and clinicians, not as scientists. The primary concern of a work such as Mary Roth Walsh's *Doctors Wanted: No Women Need Apply* (1976), written during the heyday of feminist medical activism, was the struggle by pioneer women physicians to overcome the barriers preventing them from acquiring a medical education. Most of the first generation of women medical graduates took as their mission expanding educational opportunities for women seeking a medical degree, gaining admission into all-male medical societies, and improving health care for women and children. Their successors' struggles to acquire the specialized and increasingly science-minded training offered at the better medical schools, in internships and residencies, and on the faculties of medical schools were not described fully by the first histories of women in medicine. Women physicians, however, were as devoted to new developments in medical science (e.g., laboratory analysis of blood and urine, x-rays, microscopy, and so forth) as their male colleagues. They did not reject scientific research, nor believe that laboratory medicine was incompatible with good clinical practice. Rather, their efforts to keep up were routinely thwarted by their exclusion from the better residencies and laboratory fellowships.

Happily, our exhibition did include a large sampling of women medical researchers, ranging from early scientific stars such as Florence Sabin and the Nobelist Gerti Cori to contemporaries noted for work in areas such as chromosomal transformations in leukemia, the relationship of the central nervous system to the immune system, or the epidemiology of heart disease and diabetes (Drs. Janet Rowley Davidson, Esther M. Sternberg, and Katherine M. Detre, respectively).(7) We learned about many of the contemporary women, interestingly, from our Advisory Board.

Future researchers working in the archives will place such developments in a more complex, or at least different, context. The struggles for admission to prestigious programs, to elite professional societies, for fairness in the award of grants, prizes, honors, salaries, and rank, are certainly important. The question of balancing work with private (read, *family*) life—for example through adequate day care—is an equally crucial measure of women's place in medicine. But, in reference to my discussion here, I urge today's archivists to also document the laboratories of this important generation of women physicians, to underscore their emergence as scientists as well as clinicians and educators. I owe that piece of narrative re-framing to our large group of Advisors and to the work of my collaborators at the NLM.

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1. After its initial run, my NLM co-curator, Manon Parry, reconfigured it as a more compact traveling exhibition, which became part of the American Library Association's traveling exhibit series. It is now completing the first year of an estimated five-year tour.
2. Ellen S. More, *Restoring the Balance: Women Physicians and the Profession of Medicine, 1850-1995* (Cambridge, MA: Harvard University Press), 1999; 2001.
3. Ellen S. More, "Re-Writing Medical History: New Perspectives on the History of Women and American Medicine," paper presented at Countway Library, Harvard Medical School, Boston, MA, April 20, 2006.
4. More, *Restoring the Balance*, pp. 97, 98, 221, 225; Diane Magrane, Jonathan Lang, and Hershel Alexander, *Women in U.S.*

*Academic Medicine: Statistics and Medical Benchmarking, 2004-2005* (Washington, DC: AAMC, 2005), Table 1, p. 11; *Physician Characteristics and Distribution in the US, 2006*, “Physicians by Gender,” accessed on February 14, 2006 at AMA Women Physicians Congress, <http://www.ama-assn.org/ama/pub/category/12912.html>.

5. Even the rather staid American Medical Association now has a Congress of Women Physicians and the first-ever woman Editor in-Chief of the *Journal of the American Medical Association*, Dr. Catherine DeAngelis.

6. Mary Roth Walsh, *Doctors Wanted: No Women Need Apply*: Sexual Barriers in the Medical Profession, 1835-1975 (New Haven, CT: Yale University Press, 1976), pp. 22-34. For a richer account, see Regina Morantz-Sanchez, *Sympathy and Science: Women Physicians in American Medicine* (New York: Oxford University Press, 1985).

7. See “Changing the Face of Medicine: Celebrating America’s Women Physicians,” at <http://www.nlm.nih.gov/changingthefaceofmedicine/>

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## **Documenting Cancer Medicine and Science at The University of Texas M.D. Anderson Cancer Center**

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In early twentieth century Texas, patients diagnosed with cancer faced a grim reality—the study of neoplasia, or cancer, was considered a “dirty” science, and surgery and rudimentary radiation therapy offered patients only a small hope for survival and even less for cure. Wealthy patients went to New York, Baltimore, Minnesota, or Europe seeking treatment, but the majority of people in largely rural Texas had limited access to specialized medical care. Maury Maverick, fiery New Deal congressman from San Antonio, had had a key role in creating the National Cancer Institute in 1937, but state legislators moved slowly in twice passing legislation calling for a cancer hospital, and moved not at all to appropriate funds. Texas badly needed a cancer hospital.

Finally in 1941 the Texas Legislature in Austin passed House Bill 268 creating a state cancer hospital affiliated with The University of Texas (UT), and giving the UT Board of Regents sole responsibility for the hospital’s “location, control, and management.” The Senate slashed the original House appropriation of \$1,750,000 to \$500,000 before passing the bill. Governor W. Lee “Pappy” O’Daniel signed HB 268 on June 30, 1941, officially establishing the Texas State Cancer Hospital and the Division of Cancer Research for “the diagnosis, teaching, study, prevention, and treatment of neoplasia and allied diseases.”(1)

Meanwhile in Houston, trustees of the Monroe D. Anderson Foundation were making plans to establish a “great medical center” in Houston, and soon after the appropriation was announced they began meeting with UT officials about their plans. Anderson trustees offered to match the \$500,000 state appropriation, provide a temporary location for the hospital and research division on a large estate close to downtown, as well as a permanent location in the new Texas Medical Center, if the UT Board of Regents named the cancer hospital after the late Monroe D. Anderson. Anderson had been one of the founders of the international cotton brokerage firm Anderson, Clayton and Company, and when he died in 1939 the charitable foundation he created by trust indenture three years earlier became the primary beneficiary of his considerable estate. In August of 1942, the UT Board of Regents formally accepted the offer and the next month changed the name to the M. D. Anderson Hospital for Cancer Research of the University of Texas. By the end of the year four research scientists and a business manager (on loan from UT Medical Branch at Galveston) began work in the old mansion and in a carriage house converted into laboratories at “The Oaks”—what became known as the Baker Estate. In 1944 the hospital was formally dedicated and physicians began to see patients.(2) By the time the

hospital and research division moved to its home in the Texas Medical Center in 1954, its scientists had built the first cobalt-60 unit for radiotherapy and M. D. Anderson was already gaining national attention.

Over the years the hospital's name changed several more times. In 1955, it became The University of Texas M. D. Anderson Hospital and Tumor Institute, to emphasize the research component of the institution. In 1972, an umbrella UT System Cancer Center was created, with its flagship the M. D. Anderson Hospital and Tumor Institute at Houston and the Science Park research center in Smithville (Bastrop County). Finally in 1988, the various units united as a single entity, The University of Texas M. D. Anderson Cancer Center. It is commonly known as "M. D. Anderson" or "the Anderson."

From humble beginnings in makeshift laboratories and wards in temporary buildings in wartime Houston, M. D. Anderson has developed into one of the premier cancer centers in the United States and in the world. A hybrid of a research university and a clinical center for the care of cancer patients, it has ranked among the top two cancer hospitals in *U.S. News & World Report's* "America's Best Hospitals" survey since it began in 1990 and ranked number one four times in the last six years.(3) Over the years, its mission has remained largely unchanged—to eradicate cancer in the world through exceptional programs in patient care, research, education, and prevention. Since 1944, M. D. Anderson has cared for more than 700,000 individuals, offering a wide range of cancer treatment using an integrated, multidisciplinary approach, pioneered at M. D. Anderson, and representing one of the foundations of its early development and growth. The National Cancer Institute (NCI) named M. D. Anderson one of the first three Comprehensive Cancer Centers in 1972, and today it receives more peer-reviewed research grants from the NCI than any other academic institution in the United States. More than 11,000 patients, for whom available standard therapy is inadequate, participated in clinical research trials in 2005. At the same time, M.D. Anderson has developed an outstanding reputation in basic science research that has had an impact far beyond cancer medicine.

In May of 2004, the National Historical Publications and Records Commission (NHPRC) awarded a two-year grant to the Historical Resources Center (HRC), the archives and special collections unit of the Research Medical Library at M. D. Anderson, to arrange, describe, and expedite access to over fifty years of the President's Office Records and other collections.(4) This article describes the grant project and how we developed procedures and "best practices" for processing valuable administrative health care records subject to the "Privacy Rule" of the Health Insurance Portability and Accountability Act of 1996 (HIPAA). The Privacy Rule establishes the conditions under which protected health information (PHI) may be used or disclosed by covered entities for research purposes. Hopefully some of the lessons we learned along the way may be useful to other archivists dealing with privacy issues in the records of health care institutions.

The President's Office Records, 1941-1996, are incredibly rich sources for both the details of the internal workings and external relationships and networks of M. D. Anderson, as well as for tracing the general evolution of the ideas and practices of cancer medicine and science. The material documents an institutional culture defined early on by multidisciplinary teamwork in patient care and research programs, a "treat to cure" philosophy, and a commitment to offering patients a broad spectrum of medical, emotional, social and economic services. The records also shed light on a host of important medical and scientific developments during a period of great social and political change, including: the evolution of oncology as a medical discipline; the emergence and evolution of surgery, radiotherapy, diagnostic radiology, chemotherapy, and immunotherapy as sub-disciplines; the rise of nursing oncology and oncology social work; the impact of genetics and molecular biology on medical research; the bitter controversy between the merits of basic versus clinical research and the emergence of translational "bench to bed" research; the ongoing political turf wars between the National Cancer Institute, the National Institutes of Health, the Food and Drug Administration, and the major cancer centers; and the development of organized patient rights and animal rights movements.

Processing the President's Office Records has been a painstaking process due in part to the size and complexity of the collection. This large record group, divided into five subgroups, encompasses the official records of Dr.

Ernst W. Bertner (acting, part-time director, 1942-1946); Dr. R. Lee Clark, director and surgeon-in-chief, 1946-1968, president, 1968-1978, and president emeritus, 1978-1981; and Dr. Charles A. LeMaistre, president, 1978-1996. Each subgroup has a different file structure, and even with a file index in one hand and preliminary folder-title inventories in the other, it took a while to decipher the logic behind the overlapping systems and how they related to each other. When the original file indexes surfaced, they confirmed that the vast majority of the records had been maintained in their original order, adding to the research value of the material. Maintaining the original filing system allowed grant staff to concentrate on the item level, page-by-page review for privacy—a time-consuming process since the President’s Office Records encompass more than 8600 microfiche and 50 linear feet of primarily textual material.(5)

At the same time, because the records had been preserved on microfiche, there were limits on changing their physical arrangement. When Dr. Clark became director in 1946, his tiny staff simply incorporated the small amount of Dr. Ernst Bertner’s records into the Clark files and ultimately microfilmed them as a single folder. So the Bertner and Clark records are unavoidably intermingled. Likewise, some of Dr. LeMaistre and Dr. Clark’s records overlap in a few places, because for a time they shared the same office staff, as Clark was an active president emeritus with clearly defined responsibilities, especially in the international cancer arena. Records stored in the same file were automatically microfilmed as a unit, and unless a file consisted of multiple fiche—with a clear division of Clark and LeMaistre correspondence—they could not be separated.

Processing was further complicated by privacy and confidentiality issues. The records contain a small amount of “incidental disclosures” of protected health information (PHI), safeguarded by the Health Insurance Portability and Accountability Act of 1996 (HIPAA). The records also contain small amounts of private, personal information, as defined by state and federal privacy laws. In order for these records to be easily accessible for research, PHI and other confidential, personal information (PI) had to be removed or redacted from the records. This was especially challenging with so much of the records preserved on microfiche.

Our first priority was protecting patient privacy. Since the grant application had been prepared more than a year before the award, at much the same period as HIPAA became fully implemented, grant archivist Michelle Mears and I (project manager) spent several weeks researching and reviewing the Privacy Rule of HIPAA, the scant literature then available on archives and HIPAA, and the policies of other medical archives. The National Institutes of Health has an extensive website providing educational materials regarding the HIPAA Privacy Rule and its impact on research. (<http://privacyruleandresearch.nih.gov/> - see especially the *Institutional Review Boards, Privacy Boards, and HIPAA Privacy Rule Booklet for Research*.) In addition, the guide *Standards for Privacy of Individually Identifiable Health Information* (2004) outlines the conditions under which PHI may be used or disclosed by health care providers for research purposes.(6) In general, without authorization from the patient or the patient’s representative, eighteen specific types of data, or “identifiers,” which could be used to identify an individual or an individual’s relatives, employers, or household members, must be removed from records before they can be made available for research. These identifiers include:(7)

#### Names

All geographic subdivisions smaller than State

All elements of date (except year) directly related to individual (i.e. birth date)

Telephone numbers

Fax numbers

Email addresses

Social Security numbers

Medical record numbers

Health plan beneficiary numbers

Account numbers

Certificate/license numbers

Vehicle identifiers and serial numbers, including license plate numbers  
Device identifiers and serial numbers  
Web universal resource locators (URLs)  
Internet protocol (IP) address numbers  
Biometric identifiers, such as finger and voice prints  
Full-face photographic images and any comparable images  
Any other unique identifying number, characteristic or code, unless otherwise permitted by the Rule

In addition to identifying and redacting PHI in the records, we had to identify and protect certain kinds of personal information (PI). As an academic institution, we had to ensure that we protected student information under the Family Educational Rights and Privacy Act of 1974 (FERPA). Other important considerations included protecting confidential, non-public information such as proprietary information related to research, intellectual property and scientific discoveries; attorney work product and attorney-client communications; and business and litigation information “not deemed a matter of public record.” As part of The University of Texas System, M. D. Anderson is subject to UT’s policy on Intellectual Property, whereby any “invention, discovery, technology, creation, [or] development” that derives from persons working for the university is considered to be the property of the university. We also were advised about the confidentiality agreements made with pharmaceutical companies, where *all* information regarding the relationship was designated confidential, even if the information is not marked “Confidential.” We also studied the Texas Public Information Act, talked with other UT archivists, and especially the archivists at the Texas State Archives, who let us see their procedural manual, before drafting a list of types of private information that *may* be confidential and require redaction.

We then met with Legal Counsel and HIPAA Compliance officials to review our draft policies and procedures regarding the review process and redaction of PHI and PI in archival records. Meetings with Legal Counsel were always enlightening. Not surprisingly, HIPAA Compliance initially followed an extremely rigid interpretation of the Privacy Rule. Historical research was to be denied altogether, and all photographs of patients would have to undergo a bio-statistical analysis to determine the probability of identifying said patient. Fortunately I had a good working relationship with Legal Counsel, and the attorney we met with to discuss privacy issues had actually done historical research herself, so she had a better understanding of how researchers do archival research. We discovered that while a thorough understanding of the laws and regulations on privacy is essential for processing health care records, as well as public records, we could have fast forwarded this process by consulting Legal Counsel before the grant began. We had planned on adopting Texas State Archives procedures on redaction, but quickly learned that like the state archivists, we had no authority to determine what material is exempt from open records disclosure. We could only identify and redact material that we determined *may* be confidential; only the Attorney General is authorized to rule on what constitutes confidential information.

Instead, our procedures had to adhere to M. D. Anderson’s own “Confidentiality Policy,” which upholds the confidentiality of health information, and protects the privacy of patients, employees, *and the institution* (emphasis added). We realized that our internal policies are even more stringent than HIPAA or the Public Information Act, but at least we were able to finalize a working list of types of PI to be redacted from the President’s Office records.

When grant staff became fully engaged in reviewing the President’s Office Records, we found that much of the contextual information regarding patients and patient care could remain intact after all of the 18 identifiers that could uniquely identify the patient were removed from the document. In this collection, we encountered and redacted patient names, patient record numbers, laboratory and pathological specimen numbers, social security numbers, home addresses and phone numbers, financial account information, birth dates and places, health-plan beneficiary numbers, and names of patients’ family members, employers, and household members.

Conversely, in records containing information on M. D. Anderson employees, individual names were left

intact. M. D. Anderson is part of the UT System, and therefore a good portion of information about employees is *not* considered confidential, such as name, sex, ethnicity, salary, title, and dates of employment. Here we redacted information considered private under M. D. Anderson's Confidentiality Policy, such as home addresses and phone numbers, birth dates and places, social security numbers, driver's license and medical license numbers, financial account numbers, marital status and the names of family members, race, references to physical defects and other physical and/or mental health problems, nationality, emergency contact information, and student records.

In the event that a researcher feels he needs to see the complete document, rather than a redacted copy, he/she may submit a written request to the archivist, who will forward it to Legal Counsel, who has ten days to reply. While the Privacy Rule of HIPAA supersedes even state laws regarding privacy of health information, researchers may still request information exempt from open records laws through the state Attorney General's Office, which has 90 days to reply.

Grant staff have almost completed the review of the microfiche records, and not surprisingly we found that over one percent of the Clark records contained protected health information and over two percent of the records contained confidential personal information. Although only a small percentage of the total volume, these records represent a significant amount of material that have to be redacted before the collection could be made available for research. For example, approximately three percent of the Clark records, over 8,600 individual pages, have to have some information removed. This is an enormous investment of staff time, and when this project is completed we will be rethinking our procedures in an attempt to streamline the process. Even if researchers are encouraged to apply to the Institutional Review Board for access to material with PHI, we will still have to carefully review material for other privacy issues. As a public institution, we cannot close our collections for 75 to 100 years, as some private health care organizations have done.

Perhaps a more important issue is that a portion of the President's Office Records are held by another archival repository, a non-covered entity, which does not have to comply with the Privacy Rule. Putting aside issues of ownership and copyright, are patients' privacy sufficiently safeguarded by non-covered entities? While few of us are opposed to the release of medical records from the 1800s, where would we draw the line on 20th century medical records? As a covered entity, are we going overboard in adhering to HIPAA regulations? Do we have a choice?

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## References

1. The First Twenty Years of The University of Texas M. D. Anderson Hospital and Tumor Institute (Houston, Texas: Department of Publications, The University of Texas M. D. Anderson Hospital and Tumor Institute, 1964).
2. The First Twenty Years, p. 19.
3. U.S. News & World Report, "Best Hospitals, 2005," <http://www.usnews.com/usnews/health/best-hospitals/tophosp.htm>
4. The grant of \$186,000, with M. D. Anderson providing matching funds and in-kind support, is the largest NHPRC grant awarded to Texas since 1976, and would not have been possible without the enthusiastic support of the library's executive director Kathryn Hoffman; Dr. Stephen Tomasovic, Executive Vice President for Academic Affairs; and Texas State Archivist Chris LaPlante, and without the constructive criticism received from the NHPRC staff and reviewers, the Texas Historical Records Advisory Board, and fellow UT archivist Gerrienne Schaad. A large portion of the matching funds was provided by the University Cancer Foundation at M. D. Anderson.
5. Only the original master copy of the microfiche had been preserved over the decades. As part of the NHPRC grant, all of the microfiche is being duplicated, and only the reference copy have individual pages covered up or physically removed. Redacted documents are printed from microfiche, confidential information is removed, and a new sanitized version is printed. These pages are



kept in binders available for researchers. Each piece of fiche, and each redacted document, has a unique identifying number.

6. U.S. Department of Health and Human Services. *Standards for Privacy of Individually Identifiable Health Information*, Washington, D.C.: U.S. Department of Health and Human Services, 2004. <http://www.hhs.gov/ocr/hipaa/finalmaster.html>

7. U.S. Department of Health and Human Services. *Protecting Personal Health Information in Research: Understanding the HIPAA Privacy Rule*, Washington, D.C.: U.S. Department of Health and Human Services, 2004, p. 10.

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## Notes About Authors

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Ellen More, Ph.D., is the head of the Office of Medical History and Archives of the Lamar Soutter Library and a professor of psychiatry at the University of Massachusetts Medical School, Worcester. She and her co-editors, Elizabeth Fee and Manon Parry, have just completed work on a volume tentatively titled *Health Politics, Gender Performance, and Power: American Women Physicians Confront the Masculine Culture of Medicine*, the result of a symposium held at the National Library of Medicine in 2005.

Ze'ev Rosenkranz is one of the historical editors with the Einstein Papers Project at the California Institute of Technology. His work is focused on the non-scientific part of the documents included in *The Collected Papers of Albert Einstein* published by Princeton University Press. He is also working on his Ph.D. dissertation concentrated on the history of Einstein's involvement in Zionism. Before he joined the Einstein Papers Project, Ze'ev served as Bern Dibner Curator of the Albert Einstein Archives at the Hebrew University of Jerusalem for fourteen years.

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