Archival Elements

Newsletter of the Science, Technology, and Health Care Roundtable of the Society of American Archivists
Summer 2004

Contents

Message from the Co-Chairs

Jean Deken
Stanford Linear Accelerator Center
Joe Anderson
American Institute of Physics

We invite those attending the SAA meeting in Boston to come to the Science, Technology, and Health Care (STHC) Roundtable meeting on Thursday, 5 August 2004, 5:30-7:00 p.m. The STHC Roundtable provides a forum for archivists with similar interests or holdings in the natural, physical and social sciences, technology, and health care, presenting an opportunity to exchange information, solve problems, and share successes. We especially welcome STHC archivists from the Boston area, as well as archivists who do not have a primary focus in these fields but may have questions to ask or collection news to share. We will be brainstorming proposed sessions for 2005, and want to hear your ideas! We also encourage members to attend some of the STHC-sponsored sessions <http://www.archivists.org/saagroups/sthc/announcements.html>

Roundtable Agenda

1. Welcome and introductions
2. Council Representative - Megan Sniffin-Marinoff
3. Program Committee Representative

4. Program
Dr. Charles Weiner, Professor Emeritus in the Science, Technology, and Society Program at MIT, will talk about the need to document community grass roots organizations that develop in response to environmental, health or other issues, and how archivists can proactively ensure that such efforts are documented by oral histories projects and programs that actively seek such records.

Dr. Weiner was educated at Case Institute of Technology. He was Director of the Center for History of Physics at the American Institute of Physics from 1965 to 1974, when he joined the MIT faculty. His research and writing focus on the political, social and ethical dimensions of contemporary science and the response of scientists to public controversies arising from their work. He is currently completing a book on the history of social responsibility in science from the atomic bomb to contemporary genetic engineering.

Also, Liz Andrews and Nora Murphy of the MIT Institute Archives and Special Collections will talk about the strengths of their collections and about their user communities.

5. Business

-Review agenda
-Introduction of the Steering Committee members
-Report on 2003-2004 activities
-*Archival Elements* Newsletter (Ewa Basinska)
-Election of officers--new co-chair
-Brainstorming program ideas for SAA 2005
-Roundtable Round Robin: "Hot Topics" from Membership
-Other new business

6. 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 don't hesitate to get in touch with either of us:

Jean Deken
Stanford Linear Accelerator Center
2575 Sand Hill Road, MS82
Menlo Park, CA 94025
T: 650/926-3091
F: 650/926-5371
E: jmdeken@slac.stanford.edu

R. Joseph Anderson
American Institute of Physics
Center for the History of Physics
T: 301/209-3183
F: 301/209-0882
E: rja@aip.org

Around and About Archives

SLAC 1962-2002: 40th Anniversary of Stanford Linear Accelerator

Jean Deken
Stanford Linear Accelerator Center

The Stanford Linear Accelerator Center marked its 40th anniversary the week of October 1, 2002 with celebrations for 1300 present and former staff and invited guests from around the world. Speakers at the celebration, conducted in a tent on the SLAC green, included Raymond Orbach, Director, US Department Of Energy Office of Science; John Marburger, Director, US Office of Science and Technology Policy, Executive Office of the President; Jonathan Dorfan, Director of SLAC; W.K.H. Panofsky and Burton Richter, SLAC Directors Emeriti; John Hennessy, President, Stanford University;

Robert Birgeneau, President, University of Toronto; and Haim Harari, Chair, Davidson Institute of Science Education and Past President, Weizmann Institute of Science. When Panofsky, SLAC's first Director, approached the podium to give his talk, he was greeted by a lengthy standing ovation from the overflow crowd.

The occasion was also marked with the publication of *Stanford Linear Accelerator Center Celebrating Forty Years: A Photo History*. Compiled from the SLAC Archives and History Office's photo collections and supplemented with photos and illustrations from the private collections of staff members, the 123-page limited-edition book chronicles the achievements of four decades of high-energy physics and synchrotron-radiation-related research on the SLAC site. Early black-and-white photos trace the transformation of the site from pasturelands to bustling laboratory, while later photos record developments in scientific experimental apparatus and facilities, as well as the achievements of SLAC scientists and staff – including 5 Nobel prizes awarded for work conducted there in the past 40 years.

SLAC Archivists Jean Deken and Laura O'Hara, and Photo Researcher Barbara Hoddy spent the better part of six months researching SLAC history, reviewing and processing photo collections, scanning selected photos, writing and vetting captions, and preparing copy for final design and layout. The soft-cover, full-color book has been distributed to all staff and invited 40th anniversary guests as a souvenir, and is now available on the SLAC web site at http://www.slac.stanford.edu/pubs/slacreports/slac-r-605.html . Further information on the 2002 celebration and on SLAC history is available from the celebration homepage, http://www-conf.slac.stanford.edu/40years/Default.htm, and from the SLAC Archives and History Office site http://www.slac.stanford.edu/history.

June 2004

Issues in Science & Technology Seeks Science, Technology, and Health Care Photographs

Janice F. Goldblum
National Academies Archives

STHC institutions are invited to submit photographs to the journal *Issues in Science & Technology* for its back page photo feature Archives. Issues in Science & Technology is published quarterly by the National Academies and the University of Texas at Dallas as a forum for discussion of public policy related to science, engineering, and medicine. By providing a forum for discussion and debate Issues informs public opinion and raises the quality of private and public decision-making.

The Archives feature began in 1997 and has primarily been drawn from the holdings of the National Academies Archives. Archives has featured seminal events in modern science such as the International Geophysical Year, notable anniversaries (centennials of the Rockefeller University and the Carnegie Institution of Washington), and significant persons and institutions including Edison, a group photo of intelligence testing pioneers, the Atomic Bomb Casualty Commission, and Panama Canal construction.

The Academies' limited photographic collections have been pretty thoroughly mined, and our archivists and the Issues editor ask STHC members to submit items from their collections for publication. STHC participation will benefit the roundtable as well as Issues through the feature's spotlight on collections and institutions and its dissemination of programs and projects. Please submit items and brief captions (50 - 100 words) to kfinnera@nas.edu. Submissions should include credit information and copyright information if your institution is not the copyright holder.

Issues in Science and Technology and its editor Kevin Finneran (kfinnera@nas.edu) welcome submissions from STHC institutions that highlight science and science policy and scientists and policymakers. Offbeat or entertaining items are welcome. Issues pays usage fees and for photo-reproduction, although digital images are preferred.

The most recent Archives feature available online is at <http://www.issues.org/issues/20.2/archives.html>. Back issues are at <http://www.nap.edu/cgi-bin/ist_bi.cgi> where the "Archives" feature is the last item listed in each issue.

July 2004

History News Service Alert for History of Science and Technology

Joyce Appleby
Professor Emerita of History
University of California - Los Angeles
James M. Banner
Independent Scholar, Washington, DC

As you may know, the History News Service is an informal syndicate of professional historians who write op-ed essays that contextualize current events in historical terms. Those pieces that HNS distributes to over 300 daily and other newspapers and news syndicates in North America cover many subjects of topical interest. Yet one of the large, general areas in which HNS receives almost no submissions from historians is that of science, technology, and medicine. Newspaper articles dealing with science, technology, and medicine appear on front pages almost every day, yet HNS distributes no op-eds dealing with them.

As co-directors of HNS, we are appealing to members of this listserv to consider submitting to us op-ed essays for our consideration. Full information about HNS--its aims and its procedures and useful guidelines for writing op-eds that draw their arguments from historical knowledge--can be found at http://www.h-net.org/~hns/. We very much hope that you on this list-serv will be in touch with us with any ideas you may have for op-eds essays that meet HNS criteria.

Joyce Appleby, Professor Emerita of History, University of California,
Los Angeles, 615 Westholme Avenue, Los Angeles, CA 90024.
Phone: (310) 470-8946. Fax: (310) 206-9630. E-mail: appleby@history.ucla.edu

James M. Banner, Jr., Independent Scholar, 1847 Ontario Place, NW,
Washington, DC 20009-2108. Phone and fax: (202) 462-5655. E-mail: jbanner@aya.yale.edu

June 2004 (reprinted from the STHC Listserv)

Office of NIH History Newsletter

Sarah Leavitt
Office of NIH History
National Institutes of Health

The Office of NIH History is pleased to announce our Summer 2004 newsletter. Inside this issue you will find:
New exhibit announcements
What happened to the exhibits in the Clinical Center?
Anticipating the move to the CRC
NIH History Day is coming in September!
Check out the new NIH Health Information Page
A peek at the NIH Archive, 2003-2004
Oral Histories and donations
Staff and Stetten Fellow news
New Stetten Fellows announced

You can find the newsletter on our website at:
http://history.nih.gov/about/newsletter_summer_2004.pdf

You may need to download the free Adobe Acrobat Reader to read this file:
http://www.adobe.com/products/acrobat/readstep2.html

Sarah A. Leavitt, Ph.D., Associate Historian and Curator, Office of NIH History, National Institutes of Health, Building 31, Room 5B38, MSC 2092, Bethesda, MD 20892-2092.
Phone numbers: 301-496-8856 (direct line), 301-496-6610 (office phone), 301-402-1434 (fax).
E-mail: leavitts@od.nih.gov

Visit our website at http://www.history.nih.gov

April 2004 (reprinted from the STHC Listserv)

Reynolds Associates Research Fellowships at UAB

Timothy L. Pennycuff
University of Alabama - Birmingham

The Historical Collections Unit of the Lister Hill Library of the Health Sciences, UAB, announces the Reynolds Associates Research Fellowship In the History of the Health Sciences for 2005

The Reynolds Associates, in conjunction with the Historical Collections (HC) unit of the Lister Hill Library, University of Alabama at Birmingham (UAB), are pleased to announce the availability of short-term awards of up to $1,000 to individual researchers studying one or more aspects of the history of the health sciences during the 2005 calendar year. Intended to support research using the HC unit as a historical resource, the fellowship requires the on-site use of at least one of the units' three components, which are the Alabama Museum of the Health Sciences, Reynolds Historical Library, and UAB Archives.

Alabama Museum of the Health Sciences - The Museum holds equipment, instruments, and objects representing the history and development of the health sciences. Among its holdings are the Nott pathological specimens, nineteen wax anatomical models purchased by Dr. Josiah Nott (1804-1873) and originally brought to Mobile, Alabama in October of 1860. The scope of the collection includes, but is not limited to the fields of medicine, nursing, ophthalmology, dentistry, public health, and allied health.

Reynolds Historical Library collection focused on the history of the health sciences, the Reynolds Library holds approximately 13,500 titles ranging in date from the 1450s up to the early 20th century. The scope of the collection is broad with an emphasis on the development of health care in Western Europe and the United States. Anatomy, surgery, dentistry, ophthalmology, botanical medicine, electrotherapeutics, Civil War medicine, southern medicine, and 19th century diagnosis and therapeutics are some of the areas in which the library has especially strong holdings.

UAB Archives - The Archives contains over 1,700 linear feet of processed materials relating to the medical school of the University of Alabama, the University of Alabama at Birmingham, the Alabama health science community. Other primary resource materials include personal papers, corporate records, and an extensive collection of photographs. It is the official repository for the Southern Surgical Association, Southeastern Society of Plastic and Reconstructive Surgery, and the International Organization for Mycoplasmology.

Anyone, regardless of his or her academic status, who wishes to use HC for historical research may apply. Fellowships are awarded to individual applicants, not to institutions, as awarded funds are meant to help offset the costs associated with visiting and utilizing HC and not for institutional overhead (e.g. clerical costs, supplies, or other attendant project expenses).

Applicants should submit an outline of the proposed project and an abstract (not to exceed 250 words) stating its general scope and purpose; a budget listing travel and other attendant expenses; the length of the anticipated visit; a brief curriculum vitae; and two letters of recommendation (preferably from individuals familiar with the nature of the applicants research and scholarly interests). All materials must be submitted by December 31, 2004 to receive consideration. Awards will be announced by February 28, 2005. Successful applicants will be expected to deposit a copy of the finished manuscript, thesis, dissertation, or published work with Historical Collections. For further information on the Historical Collections unit at Lister Hill Library, UAB, please visit its web site at http://www.uab.edu/historical/.

Send applications to:
Katie Oomens, UAB Lister Hill Library, LHL 301, 1530 3rd Ave S, Birmingham, AL 35294-0013.

June 2004 (reprinted from the STHC Listserv)

Processing Grants for Physics, Astronomy, and Geophysics Collections

Joe Anderson
American Institute of Physics

The Center for History of Physics, American Institute of Physics, is pleased to announce its 2004 Grants to Archives program. The deadline for applications is August 1, 2004. The grants are intended to make accessible records, papers, and other primary sources that document the history of modern physics, astronomy, geophysics, and allied fields. Grants may be up to $5,000 each and can be used to cover direct expenses connected with preserving, inventorying, arranging, describing, or cataloging appropriate collections. Expenses may include staff salaries/benefits and archival storage materials but not overhead or equipment.

The AIP History Center's mission is to help preserve and make known the history of modern physics, astronomy, and allied fields, and the grant program is intended to help support significant work to make original sources accessible to researchers. Preference will accordingly be given to medium size or larger projects for which the grant will be matched by the parent organization or by other funding sources. For grant guidelines check the Center's Web site at http://www.aip.org/history/grntgde.htm or call 301 209-3165. Inquiries are welcome, and sample proposals are available on request. A list of previous grant recipients is on our Web site.

Deadline for receipt of applications is August 1, 2004.

April 2004

Conferences, Meetings, and Workshops

SAA Boston, August 2004

The Science, Technology, and Health Care Roundtable will be meeting on Thursday, August 5, 2004 from 5:30 p.m. - 7:00 p.m. For the agenda see "Message from the Co-Chairs". Note that this is a change from our regular time slot.

For the full SAA program, please see the following:
http://www.archivists.org/conference/boston2004/boston2004prog.asp

Tour: Exploring the Micro-Universe
Wednesday, August 4, 2004, 2:00 p.m. - 5:00 p.m.

Come and join us in "Exploring the Micro-Universe" tour. The tour will take visitors to the Whitehead Institute (located at the edge of the MIT campus), a leading research and educational institution in biomedical sciences. While the Whitehead Institute is affiliated with the Massachusetts Institute of Technology in its teaching activities, it is fully independent in its research programs, governance, and finance. Its research programs range from cancer and infectious disease research, structural biology, genetics, and developmental biology research, to transgenic science. Research efforts at the former Center for Genome Research, the largest federally funded center for genome mapping and sequencing in the United States, contributed one third of the human genome sequence announced in June 2000. In spring 2003, Whitehead, MIT, and Harvard entered into an unparalleled partnership, promoting the natural outgrowth of the Genome Center into the Broad Institute. The Broad is poised to become a world leader in the development of genetics-based medicine. After a

brief overview of the Whitehead Institute's history, visitors, guided by the Whitehead Institute fellows, will have a chance to see the research facilities and to visit the newly formed Broad Institute.

The tour will end at the Institute Archives and Special Collections of the Massachusetts Institute of Technology with an exhibit of selected archival and manuscript materials from the holdings.

RSVP by July 19, 2004 to Ewa M. Basinska, Institute Archives and Special Collections, MIT, Room 14N-118, Cambridge, MA 02139, 617-258-5533. Please include Whitehead Tour in the subject line of your e-mail message.

The STHC Roundtable co-sponsored one session at the SAA 2002 annual meeting:
http://www.archivists.org/saagroups/sthc/announcements.html

13. Facilitating Description: Developing Standard Series
3:45 - 5:15 pm, Thursday, August 5, 2004
Lisa A. Mix, Chair and Commentator
University of California San Francisco

Waverly Lowell
Environmental Design Archives, University of California Berkeley
"Paradigm Found: Working with Standard Series Descriptions"

Julie Demeter
The Bancroft Library, University of California Berkeley
"The Strength Is in the Structure: Standard Series for Engineering and Science Faculty Collections"

John P. Rees
National Library of Medicine, History of Medicine Division
"Tag'em and Bag'em: Standard Series for Biomedical Research Collections"

Developing standard series description help solve a variety of challenges faced by the modern archivist. Effective resource allocation, streamlining processing, assisting appraisal, and translating technical language to various researcher audiences are but a few. One archivist will discuss the successful application of the standard series paradigm and how it can be applied across the archival enterprise. Two archivists will then explore their experiences developing common series description for engineering, science faculty, and biomedical scientist papers.

Stephen E. Novak Augustus C. Long Health Sciences Library Columbia University New York, NY	Tim L. Pennycuff Lister Hill Library of the Health Sciences University of Alabama, Birmingham Birmingham, AL	Rose Roberto - *Web Liaison* Natural History Museum, London Earth Sciences Library London, England United Kingdom
Yvonne Wilson Life Cycle Management Division National Archives and Records Administration College Park, MD	John Zwicky American Academy of Pediatrics American Society for Clinical Pathology Chicago, IL	

Rare Books and Special Collections at the Francis A. Countway Library of Medicine: Challenges of Acquisition and Access

Donna Webber
Manuscript Curator
Countway Library of Medicine
Harvard University

From a paper given at New England Archivists Meeting, March 2004, by Donna Webber

Rare Books and Special Collections department (RBSC) in the Francis A. Countway Library of Medicine at Harvard Medical School houses a wide range of material in the history of medicine. Although the department faces many of the same challenges as other collecting repositories to acquire materials and provide access to users, there are some unique problems caused by institutional needs and the subject of the collection.

The holdings of Rare Books and Special Collections are impressive: a quarter of a million rare books, including the largest collection of medical incunabula held by a medical library in the United States; over 900 manuscript collections totaling 10,000 cubic feet; 2,500 cubic feet of archival records from the Harvard Medical School, Harvard School of Dental Medicine, and Harvard School of Public Health; 30,000 photographs and prints; and 15,000 items in the Warren Anatomical Museum. The subject of this paper is the manuscript collection, and the challenges of acquiring manuscripts and making them accessible for research.

The manuscript collection is strong in New England medical history in the eighteenth and nineteenth centuries, but the focus of the collection begins to change in the twentieth, reflecting the growth of the Medical School. As Harvard began to develop at the turn of the twentieth century into a modern educational and research institution, and as the school, its faculty, and its activities expanded to employ thousands engaged in teaching and cutting-edge medical research, it was inevitable that the focus of manuscript collecting narrowed to the Harvard Medical School community: a world of teaching and research inhabited by pre-clinical faculty and researchers on the campus, and the research and clinical staff of eighteen affiliated hospitals and research centers.

The collections of Harvard faculty contain correspondence, memoranda, reports, photographs, slides, film, audio, video, and other electronic media. Syllabi, lectures, notes, exams, and correspondence with students, faculty, and administrators describe teaching activities. There are some research data, but research programs and projects are mainly documented through correspondence, reports, speeches, and reprints. Administrative correspondence, memoranda, and reports record the operational activities of the units in which people work. There are some patient records, but most large runs of patient records at RBSC can usually be found in the records of defunct hospitals. Correspondence, minutes, and reports reflect professional and consulting activities. Sometimes there are personal papers about family and friends. Overall, the collections document the development of medical education and research in New England, and Boston in particular, and the influence of Harvard faculty on the larger medical community. But the potential for research use is far beyond what the record creators may have imagined. Collections can be used for family histories; for studies of changes in medical care and treatment, the attitude of the public toward the medical profession and the interest in alternative

medicine, the roles of minorities and women in medicine, and the development of managed care; for research on social change in the United States - in short, to study an unlimited number of topics.

Although Rare Books and Special Collections has narrowed modern collecting to Harvard, an embarrassment of riches creates many challenges for acquisitions. For most significant faculty before World War II there are at least small collections, and for many there are large ones. But in the postwar era, government research money led to a large increase in the number of faculty, and the photocopier has resulted in much larger collections. As in any other repository, a collecting policy, an appraisal policy, and an active and thoughtful program of solicitation are necessary to help identify what to collect. But with a faculty numbering over 10,000, Rare Books cannot collect comprehensively. The staff must choose which areas will be documented and which will not.

Most of the department's modern collections are acquired as gifts from faculty and staff, although older non-Harvard manuscripts may be purchased from dealers. The staff tries to identify the leaders among the tenured faculty and work with them to bring their collections to Rare Books now or in the future. Through mailings, presentations to groups, and individual meetings, faculty members are encouraged to donate papers in the subject areas considered a priority for documentation.

Faculty members respond to our interest with varying degrees of enthusiasm. Many are thrilled at the department's interest in their lives, or the lives of their mentors, teachers, and colleagues. Others are somewhat bemused, certain that whatever they have accomplished is adequately documented in the professional literature. Eventually, many of the faculty members directly solicited enter into negotiation.

As the staff looks to the future, Rare Books and Special Collections faces the challenge of documenting medicine in an environment where the volume of paper continues to grow while its research value appears to diminish. As the heart of holdings – correspondence, reports, and notes about administrative activities, research, and teaching – disappears into hard drives, servers, or floppy discs, the staff is working to contribute to the development of online recordkeeping systems on campus so that records created today survive to be collected and used in the future.

But as the staff keeps one eye on the future, the other is firmly concentrated on the large backlog still needing attention. Many steps must be taken before Rare Books and Special Collections manuscript collections can be made accessible for research use. Although eighteenth and nineteenth century collections are mostly processed, they are described to an item level in thousands of catalog cards available only in the reading room. There are no finding aids for these collections; some have bibliographic records of varying quality in RLIN and HOLLIS, the Harvard online catalog. Currently the staff is engaged in a long-term project to upgrade bibliographic records to reflect current standards; it will be many years before there are finding aids for all the collections that need them.

For the twentieth century collections, a combination of staff, interns, and project staff are slowly beginning to work their way through 8,000 to 9,000 cubic feet of papers. The goal is to have bibliographic records in RLIN and HOLLIS for all collections, and encoded finding aids for those that merit them. But even relying on a flexible approach to levels of processing, it will take many years to make the collections physically and electronically available.

Providing access to collections that contain restricted material is another challenge in Rare Books and Special Collections. Although some repositories allow researchers to use unprocessed collections, Rare Books does not because of institutional restrictions, concern for privacy, and federal restrictions to patient information.

Like many private institutions, Harvard University has established access policies to collections containing university records. These are 50 years for all administrative records, and 80 years for records containing personal information. Identifying this kind of information in a manuscript collection is time-consuming. All of the medical staff in the hospitals are also Harvard faculty; any of them may have copies of university records among their papers, and finding them takes time. Once a collection is processed and the restricted information identified, it is listed in the finding aid, and researchers may apply for access.

Patient records and information create an equally difficult challenge. It is relatively easy to identify and restrict a patient record, that is, a record where the card, in an older collection, or a folder in a more modern collection, has a patient's name on the label, and is often part of an alphabetical sequence of records. But information about patients may be found in places other than patient records, including teaching folders, where physicians used current cases as examples for students. Patient information may have been used or referred in writing a professional article and may be buried in folders containing drafts of those articles. Patient information may be found in a folder about a conference, or in folders about clinical research. Patient information is frequently located in correspondence between physicians, as part of general correspondence files. Such information is pervasive and time-consuming to find, but must be identified to protect the privacy of patients.

Until HIPAA, the Health Insurance Portability and Accountability Act, Rare Books and Special Collections department applied Harvard access restrictions of 80 years to patient information. Having to follow Harvard University restrictions and patient information restrictions created the temptation to focus on processing older collections, or those that were least likely to have Harvard or patient information. While this made processing easier, it frustrated researchers and reference staff eager to use more current collections.

Harvard counsel has interpreted HIPAA to mean that researchers can have access to collections containing patient information as long as they follow the HIPAA described Institutional Review Board [IRB] process. Researchers fill out IRB forms; the IRB reviews the application to verify researchers' needs for collections containing patient information. Once approved, researchers can use the collection while promising not to release any private information about patients they may see. Rare Books and Special Collections no longer has to close without appeal the parts of collections containing patient information that is less than 80 years old. There is one group of exceptions: collections for which gift agreements were acquired before HIPAA are administered under the 80-year restriction policy.

The flexibility possible under HIPAA allows Rare Books and Special Collections to open processed collections containing patient records more quickly, although the amount of work for processors is the same. As historians of science and medicine examine issues of the post-World War II era, their need for more modern collections, and the department's increased ability to provide them, make for much more successful reference service than in the past.

Although the presence of private health information in our collections adds an additional obstacle to efforts to make manuscript collections accessible, what this overview demonstrates is that Rare Books and Special Collections manages problems similar to those at any collecting repository, especially institutional repositories. There is a large unprocessed backlog. Electronic records are creating challenges for documenting contemporary and future activities. Privacy may be a larger issue to Rare Books and Special Collections than to a non-medical collection, but balancing staff resources, the needs of users, and the rights of third party privacy in collections are issues common to all archivists.

May 2004

Engineering and Science Research Laboratories at MIT

Elizabeth Andrews
Institute Archives and Special Collections
Massachussets Institute of Technology

At MIT, as was the case at many other educational institutions with strong science and engineering programs, research laboratories flourished on campus after World War II ended in 1945. MIT was one of the institutions that benefited from an infusion of government money that led to new areas of research or allowed to continue threads of inquiry begun during intensive wartime projects.

Administrators and staff at MIT were attuned to the potential of special research laboratories because the campus was host to the large radar research and development program (Radiation Laboratory, Division 14 of NDRC [National Defense Research Committee]) from 1940 to 1945. The special mix of people and the successful working environment of the Radiation Laboratory have frequently been noted through the years.(1) Karl Compton, MIT president in 1945, sought to capture the best of the Radiation Laboratory by working out a plan with the government to close the Laboratory, but to do that as a conversion to a facility with the same collegiality and inter-disciplinary inspiration for a broader range of unclassified peace time projects. On January 1, 1946, the Radiation Laboratory name changed temporarily to the Basic Research Division and then on July 1st of the same year, MIT took custody and renamed it the Research Laboratory for Electronics. Future MIT presidents Julius Stratton (term 1946-1949) and Jerome Wiesner (term 1952-1961) served as directors.

The Institute Archives and Special Collections staff recently had a chance to go back to the formative years of government sponsored projects when we received a large amount of additional materials created by the Servomechanisms Laboratory and its successor, the Electronic Systems Laboratory, and were able to integrate these with the records already in our custody.(2) These two laboratories have roots dating back to 1940, while their activities extended to1978.

The Servomechanisms Laboratory's beginning years, 1940-1945, coincided with World War II. Its focus was basic research and application of feedback control to automate navy and army gun control systems, and the development of servo-controls for advanced radar systems. At MIT Harold Hazen of the electrical engineering department and doctoral advisor to Gordon Brown, was working on control mechanisms.(3) In response to a request from the U.S. Navy for specialized training in fire control for several of its naval officers assigned to MIT, two elective courses (6.605 and 6.606) titled "Theory of Servo Mechanisms" and "Applications of Servo Mechanisms" were offered in the fall of 1939. Gordon Brown taught the courses and served as the first director the Servomechanisms Laboratory when it formed in 1940.

Memos, technical reports, and writings comprise the bulk of Servomechanisms Laboratory documents, and materials documenting post-war projects constitute a major part of the collection. A small set of records represent one of the major post-war projects directed by Jay Forrester. This project, originally called the Aircraft Stability and Control Analyzer Project (ASCA), was in development for the U.S. Navy to produce an operational flight simulator. As the focus shifted from the simulator to development and production of one of the first high-speed digital computers, the project was renamed "Whirlwind". This research project broke off from the Servomechanisms Laboratory to become the MIT Digital Computer Laboratory. Additional records on Project Whirlwind can be found in MIT's Digital Computer Laboratory collection (AC 362). A complete set of Whirlwind engineering memos and reports, individually listed and catalogued, is held by the MIT Libraries. Oral histories with some of the principals of servomechanisms research can be found at the Charles Babbage Institute Archives, at the University of Minnesota. In addition, American Institute of Physics holds some Whirlwind reports.

Researchers interested in nuclear reactors will also find information in the MIT Servomechanisms Laboratory records. Servomechanisms staff contributed to the design and construction of controls for the reactor rods for the Brookhaven National Laboratory nuclear reactor. The most relevant documents include engineering memos, reports, including drawings dating from 1947 to1949.

The development of numerical controls systems from 1949 to 1959 at the Servomechanisms Laboratory had a profound impact on industry as the introduction of automated controls revolutionized the machine tool industry. Project documentation about numerical control research and its applications comprise the greatest amount and richest documentation in the collection, consisting of 30 manuscript boxes of reports, computation books, engineering reports and memos, and 5 flat boxes of technical drawings.

The later phase (mid-1950s) of numerical control research was documented by a project run by the Servomechanisms Laboratory's Computer Application Group, led by Douglas T. Ross. The group worked on the problem of automatic programming, developing the Automatically Programmed Tool Language (APT).(4)

Similar material can be found in the Electronic Systems Laboratory's records (AC 528), the bulk of which consist of progress memos and reports about technical aspects of projects. Computer aided design projects are an important topic in this collection (AC 528). Another set of documents that may be of particular interest to those in the information field are records relating to Project Intrex (Information Transfer Experiments). The goal of the research was to develop indexing, searching, and retrieval of bibliographic data - project collaborators included libraries and the newspaper industry.

What is especially gratifying to collections and reference staff of the Archives is that the laboratory records are complemented by a larger number of additional collections, primarily faculty papers that are already a part of the holdings of the MIT Archives. They include the papers of Servomechanisms and ESL directors Gordon Brown and Francis Reintjes.

Related collections include:
- Gordon S. Brown papers, MC 24 (includes 1985 oral history)
- Oral history of Gordon Brown with Julius Stratton and Victor Weisskopf, 1982, in Walter Rosenblith papers, MC 55
- Computers at MIT Oral History Collection, 1976-1977, MC 131 (Robert R. Everett, Jay W. Forrester, Harold Hazen)
- Jay Forrester papers, MC 439 (includes 1975 oral history)
- Harold Hazen papers, MC 106
- George Newton papers, MC 239
- J. Francis Reintjes papers, MC 489
- John E.Ward papers, MC 567
- MIT Digital Computer Laboratory records, AC 362
- MIT Electronic Systems Laboratory records, AC 528
- MIT Office of Sponsored Research, grant and contract records, AC 241.

MIT's continuing commitment to research centers can be followed in administrative records at the MIT Archives, in the records of the Office of the President, and in the Office of the Provost. For instance, fifteen years after serving as the first director of the Research Laboratory for Electronics, Julius Stratton, by then MIT's president, made funding for research

centers one of the key goals of MIT's Second Century fundraising campaign, launched in the spring of 1960.

The number of research centers and laboratories has continued to grow in the last sixty years(5) and government sponsorship has raised within MIT the issue of classified research a number of times.(6) In 1951 Lincoln Laboratory (which has its own Archives) was spun off as an affiliated but off-campus entity to carry out federally funded classified electronics research. The Distant Early Warning System and ballistic missile defense were two of its early projects. During the late 1960s protests against defense-related research on the main campus prompted the appointment of the Review Panel on Special Laboratories, which studied the role of the Instrumentation Laboratory and led to the divestiture of the laboratory from MIT in 1973 to an independent Draper Laboratory. The Archives holds the records of the Review Panel (AC 54). Those records have often been studied by researchers interested in campus issues. The most recent revisiting of issues involving classified research have been prompted by 9/11 events and can be followed in the MIT newspaper.(7)

The interdisciplinary model, which the government funded heavily on campus, was in turn presented to the government as a model for a federal agency by former MIT president Julius Stratton who served as chairman of the presidential Commission on Marine Science, Engineering, and Research from 1967 to 1969. In their final report, Our Nation and the Sea, the commission members recommended that a national agency (NOAA) be formed to meet the multiple scientific interests in the ocean environment. NOAA administrative structure was to be based on an interdisciplinary model originated at MIT.

Interestingly, it was the final demise of the old Radiation Laboratory's "Building 20"(8), a temporary building put up in 1943--one of several wooden structures to house the Radiation Laboratory-- that prompted the transfer of the last of the Servomechanisms and Electronic Systems Laboratory records. Building 20 was finally torn down in 1998 to make way for the Stata Center, a campus building designed by architect Frank Gehry.(9) In preparation for their planned move into the Stata Center in spring 2004, staff at the Laboratory for Information and Decision Systems (LIDS), a successor lab to Electronic Systems Laboratory, alerted Archives staff to the stash of early documents and drawings in LIDS storage rooms.

The records of the Servomechanisms Laboratory and the Electronics Systems Laboratory described here document the early years and evolution of large, government-sponsored projects on college campuses. One can see how scientists and engineers worked in the post-war years to solve multi-faceted, interdisciplinary scientific and technological problems. Staff members of the Institute Archives and Special Collections are currently working on strategies to document similar research efforts and developments from the more recent times.

1. IEEE History Center has captured personal histories of a cross section of staff and has made them available at: http://www.ieee.org/organizations/history_center/oral_histories/oh_rad_lab_menu.html

2. Servomechanisms Laboratory (AC 151) and Electronic Systems Laboratory (AC 528) records now total approximately 50 cubic feet.

3. Wilde, Karl. A Century of Electrical Engineer at MIT, 1882-1982, p. 212.

4. A detailed discussion of the technology of numerical control and its application and adoption by industry can be found in Numerical Control, by J. Francis Reintjes. New York: Oxford University Press, 1991.

5. For current list of MIT departments, labs, and centers (including many in the social sciences, architecture, humanities, and management disciplines see: http://web.mit.edu/research/name/index.html

6. Leslie, Stuart W. The Cold War and American Science: The Military-Industrial-Academic Complex at MIT and Stanford. New York: Columbia University Press, 1993.

7. MIT Panel Urges Off-Campus Sites for Classified Research, June 12, 2002 http://web.mit.edu/newsoffice/2002/classified-0612.html

8. The Stata Center research building is a potential tourist stop on the list for SAA attendees in Boston. If you take a quick trip to the Cambridge side of the river by "T" to Kendall Square/MIT and walk a block up Main Street, you can view the Stata Center (aka building 32 on the MIT campus map) across the street from the Whitehead Institute.

9. For an interesting juxtaposition of the old versus the new: http://libraries.mit.edu/archives/mithistory/building20/index.html http://www.eecs.mit.edu/stata-link.html

Search for Migrating Scientists: A Journey in the Archives

Gabor Pallo
Institute for Philosophical Research
Hungarian Academy of Sciences

In the 20th century, political and economic conditions forced many people to leave their own countries and start new lives somewhere else. For scholars, migration provided an opportunity to live and work in a different intellectual environment. Hungarian scientists migrated to several countries, including Germany, Israel, Britain, and the USA, where they participated in highly important scientific projects, including efforts to build a nuclear bomb and construct early computers. Many of them, including Philipp Lenard, Albert Szent-Györgyi, George de Hevesy, George Bekesy, Eugene Wigner, Dennis Gabor, and George Olah won the Nobel Prize.

As a historian of Hungarian science, I became interested in the life and work of migrating scientists, intrigued by the fact that relatively many of them became highly successful after they left Hungary. I would like to find an answer to the question why the scientific conditions in some countries proved to be more favorable and intellectually stimulating than the conditions they encountered in Hungary.

Following lives and professional activities of the members of that special group, I experienced pleasures and frustrations of conducting archival research in several countries outside Hungary. In this article, I will try to share some of those experiences in order to show that the results of historical research may depend not only on the ideas of the researcher, but also on the feasibility of the project. In my case, that means availability and access to the historical documents. The pleasures of conducting research in different archives are many – visiting beautiful cities, working on lively academic campuses, dining and talking with many interesting people. Frustrations come from the differences in rules, conditions, procedures, and customs in archival repositories in various countries. The rules for granting permission to use historical collections and study restricted documents can be entirely different in archival repositories in Stockholm, Jerusalem, or New York.

For instance, conducting research on the life and work of George de Hevesy (1885-1966), who received the Nobel Prize in 1943 for his work on radioactive tracers, takes a researcher to Budapest, Copenhagen, Berlin, Freiburg, and Stockholm. In Stockholm, the Nobel Archives of the Royal Academy of Science provides easy access to archival materials created more than fifty years ago. The records created later are closed. In addition, according to the strict rules of the Nobel Prize system, only the final decisions and nominations are officially recorded, while the discussions leading to those decisions are not documented. This is why the choice of a Nobel Prize winner may often seem to be so mysterious. Since the rules of the Nobel Archives are clearly spelled out, a researcher knows what to expect when he or she decides to work there.

While following the steps of George de Hevesy had been relatively simple, conducting research on Leo Szilard proved to be much more complicated. Leo Szilard (1898-1964), a physicist, was born in Budapest. After graduating from high school there, he completed his university studies in Germany. His important papers on information theory were published in Berlin. In 1933 he went to England, where he patented an idea for developing a nuclear chain reaction. Several years later, Szilard immigrated to the United States. In 1939 he persuaded Albert Einstein, his old friend from Germany, to sign a letter to President Franklin D. Roosevelt calling the President's attention to the political importance of nuclear energy. This letter proved to be the first crucial step leading to a top-secret, highest-priority program, later known as the Manhattan Project, to build an atomic bomb. Even before the first bomb was deployed in Japan, Szilard became an avid advocate against its use. Later on, he worked towards imposing limits on nuclear arms.

It is not surprising that only a few records documenting Szilard's life can be found in the Hungarian archives. Some materials from his student years are held by the Archives of the Technical University of Budapest, and there is a commemorative plaque on his family house in Budapest. He was too young when he left Hungary to leave many traces around. Szilard liked to keep his most important documents in one suitcase, so he could take everything with him if forced to flee at a moment's notice. Yet, I found some interesting archival materials in the Bodleian Library in Oxford. Information about migrating scientists can be found among the records of the Academy Assistance Council that assisted many scholars fleeing from Nazi Germany. The records of the Emergency Committee for Aid of Displaced Scientists, at

the New York Public Library, provide documentation of similar efforts undertaken in America. A difference in levels of description, quality of existing finding aids, and overall access to archival materials made my research in the manuscript room of the New York Public Library much more difficult than in Oxford.

A collection of Szilard's papers is deposited in the library of the University of California - San Diego, in La Jolla. During my visit there, more than twenty years ago, a huge part of the collection was hardly processed. As a result, I failed to get access to correspondence between Szilard and Einstein that, I suspected, might have included drafts of the letter to President Roosevelt. The relevant materials were removed from the collection. To my great dismay, instead of the records I eagerly wanted to study I found only blue slips of paper marking their original location. This experience left me quite perplexed, because at the same time archival materials describing Szilard's role in the Manhattan Project held by the National Archives in Washington, DC, were easily accessible, even to those who, like myself, came from the Soviet camp.

I experienced similar frustrations while researching Imre Lakatos (1922-1974), a mathematician and philosopher of science. Born in Hungary in 1924, Lakatos left for Britain in 1956. After several years in Cambridge, where he worked with Richard B. Braithwaite, Lakatos succeeded Karl Popper at the London School of Economics. Before that, however, Lakatos had a remarkable career in Hungary. He joined the Communist Party during World War II, soon becoming one of its activists. As a fervent believer in the communist theory and a skillful politician, he became responsible for screening out "non-reliable" faculty members from the universities. In 1949, after losing the confidence of party leaders, Lakatos was sent to the Soviet Union to study physics in Moscow. Several months later, recalled from Moscow, he was sentenced and imprisoned in a communist labor camp in a small Hungarian village, Recsk. After his release in 1952, Lakatos was employed at the Institute of Mathematics of the Hungarian Academy of Sciences as a researcher. He did not resume any overt political activity. And yet, he worked as an informer for the secret police, denouncing even his closest friends. Shortly before the 1956 Hungarian revolution, he gradually became more active and critical of the communist regime. Fearing political retaliation, Lakatos emigrated to England in 1956.

By the 1980s, Lakatos' name had been almost forgotten in Hungary. Only a small circle of philosophers of science knew about his work, but even they were too young to have any memory or knowledge of his Hungarian past. When I started doing research on him in the early 1990s, after the collapse of the communist system, Lakatos had been dead for almost twenty years (he died in 1974). Through oral history interviews with his old acquaintances living in Budapest, I pieced together the basic facts, learned about his activities in more detail, and started understanding why many people are still become uneasy when they hear his name.

I failed, however, to confirm what I had learned from such interviews by examining archival documents. Whenever I hoped to find any written records about Lakatos in archival repositories in Hungary, I either found removal slips, or I was told that the materials are not open to the public. Such a situation was not uncommon in Hungary at that time of transition, when many people were afraid to reveal their past activities. However, to my great surprise, when in 1993 I visited the manuscript section of the library at the London School of Economics, I did not get access to Lakatos's papers either. The finding aid, helpful but incomplete, listed names of selected correspondents, some of them marked with asterisks. The marked items, which I suspected might have been relevant to my research, were closed. I was unable to see those files, even though I received permission from library officials to study Lakatos's papers. Several years later, the whole collection became open. Jancis Long was allowed to use it when she was writing Lakatos's biography (Jancis Long, "Lakatos in Hungary", *Philosophy of the Social Sciences*, 28,1998, 245-311).

The archives of the British ministry of home affairs proved to be even more secretive. Lakatos applied for British citizenship twice, and both times his application was turned down. My inquiries about the reasons behind those refusals – I suspected that they might shed a new light on his political activities – met with no response. It was perplexing. At the time of my inquiry, Lakatos had been already dead for twenty years. Since he left no relatives, it was very unlikely that anybody would object to any facts of his life being published. I also failed to succeed to get an answer to my further inquiry regarding why my request was left unanswered and what conditions have to be fulfilled in order to receive such information. To this day I do not understand why British authorities denied Lakatos the right to become a British subject in spite of his status as a renowned professor of philosophy at the London School of Economics. Is it possible that even in the early 1970s the Home Office considered his political contacts too dangerous? I have no idea. Archival research may be impeded for a variety of reasons in different countries.

My research on Albert Szent-Györgyi (1893-1986), a Nobel Prize winner in biochemistry, provides yet another example of impediments I encountered during archival work. Szent-Györgyi was born and educated in Hungary. After World War I, he worked in different European countries for brief periods until 1927 when, as a Rockefeller fellow, he joined the laboratory of Frederick G. Hopkins in Cambridge, England. In 1930, he was appointed head of the medical chemistry department of a newly-created Hungarian university in Szeged. Soon thereafter, he became actively involved in a political fight against Nazism in Hungary. In 1947, seeing no real future for his scientific research within the Soviet-style socialist

system (even though he was much appreciated at that time by the authorities), Szent-Györgyi emigrated to the United States.

The Rockefeller Foundation generously supported the development of the Szeged University, and its records stored at the Rockefeller Archive Center in North Tarrytown, NY, provide a thorough documentation of this support. The records include extensive files of correspondence between the officers of the Foundation and Szent-Györgyi, who chaired the committee appointed by the university to allocate funds among different academic departments. The Rockefeller Center is a paradise for a scholar working on migrating scientists – set in beautiful surroundings, it offers excellent service, easy access to its rich, well-organized resources, and high-quality finding aids describing the archival collections. In addition, it provides research grants enabling scholars to pursue their work at the Center. The materials related to Szent-Györgyi pertain to his return to Hungary in 1930, to his activities during the next seventeen years, and to his subsequent emigration and difficult settlement in the United States.

I was less fortunate with the archives of another American foundation, the Josiah Macy Jr. Foundation, in New York, in 1999. Because support from this foundation was acknowledged in some of Szent-Györgyi important publications written in Hungary, I became interested in its policies. I also wanted to examine Szent-Györgyi's application papers and learn why he, a faculty member of an unknown university in a small rural town in Hungary, was selected to receive a grant. After corresponding with the Foundation, I visited its offices and received a thin envelope with several photocopied pages containing some basic facts. I was unable to get access to the archival materials and did not have a chance to meet the director to explain again why it was so important for me to be able to examine their archives. She might have liked to hear about the wise decision made by his predecessors to support research efforts that led to a Nobel Prize. I am still baffled why the Foundation has remained so secretive about sixty-year old records documenting activities that took place in the 1930s.

I suspect that crucial correspondence regarding Szent-Györgyi's professional activities may still remain in private hands. His most famous work, on the isolation of vitamin C, was done in collaboration with Joseph Sviberly, a graduate student of Charles G. King, a professor in Pittsburgh, PA. Sviberly corresponded with his professor and reported on the results of his research with Szent-Györgyi. Because of that, or for some other reasons, King published the results of his work on vitamin C shortly before Szent-Györgyi. After a fierce priority debate, the Nobel Prize Committee chose Szent-Györgyi as the Nobel Prize winner. Nevertheless, some members of the scientific community were, and maybe still are, of the opinion that the Nobel Prize Committee had made a mistake. Unfortunately, the location of the correspondence between King and Sviberly, to the best of my knowledge, remains unknown. If it is held in private hands somewhere in America, there is hardly a chance for a Hungarian researcher to be able to see it.

It is unfortunate that the University of Szeged has no archival repository where one could expect to find materials documenting its early years, including records of the financial assistance from the Rockefeller Foundation, of Szent-Györgyi's organizational activities, and of the expenditures his laboratory made using Rockefeller and Macy funds. Taking into account the fact that Szent-Györgyi's Nobel Prize has been the only one awarded to a scholar living and working in Hungary at the time the award was granted, this lack of interest in preserving institutional records is even more troubling.

To summarize, I would like to stress the importance of conducting historical research about migrating scientists, which can encourage and inform a better understanding of cross-political and cross-cultural currents in society as a whole. It is also, as I describe in this paper, a source of unexpected and not always welcome adventures for a historian undertaking such a study. Funding presents yet another important issue. It would be very helpful to find out who might be interested in supporting this kind of multinational and multicultural studies. Travel, local accommodations, photocopies, and other related expenses make this type of research much more expensive than the "safe" work conducted in one's own country. While differences in archival policies and procedures among archival repositories worldwide may be unavoidable, the final results of a given historical study may be to a large extent determined by the archival rules of relevant repositories.

In conclusion, I would like to argue in favor of increased digitization of records relevant to the history of science. Placing archival materials on the Internet would provide a common database for all interested researchers and eliminate the need to hunt for specific financial and historical resources. This would equalize the opportunities of all researchers and make their work less dependent on circumstances beyond their control.

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