As Wilfrid Sellars might have said: Steelers schmeelers! Penguins schmenguins! Rivers and bridges schmivers and schmidges! What real Pittsburghers like to do is history and philosophy of science. As its first permanent Andrew Mellon professor of philosophy, Adolf Grünbaum brought philosophy of science to Pittsburgh in his own person, and through irresistible recruiting skills (Yale called him the Pittsburgh Pirate) he initiated a migration of distinguished exact philosophers, logicians, and historians of science to the north side of Panther Hollow. Having assumed the professorship in 1960, he brought in Nick Rescher, soon to become the first associate director of the Center for Philosophy of Science of which Grünbaum was the founding director. The department of history and philosophy of science was established in 1971 largely through Grünbaum’s efforts. Larry Laudan, recruited from the University of London, became its founding chairman. Wilfrid Sellars, Nuel Belnap, and Allan Ross Anderson were among the arrivals of the early 1960s, along with historian Ted McGuire, the second founding member of the history and philosophy of science department. Given its logical empiricist roots it was fitting that Grünbaum’s Yale Doktorvater, Carl Hempel, and Hans Reichenbach’s Ph.D., Wesley Salmon, eventually joined the Pittsburgh philosophy department.

Nowadays members of the departments of philosophy and history and philosophy of science and their students work in collaboration with other University of Pittsburgh and Carnegie Mellon University faculty in the sciences and humanities on topics including the philosophy and history of physics, psychology and psychiatry, neuroscience, evolution theory, mathematics, logic and philosophy of language, induction, probability, and decision theory, on issues in scientific explanation and theory testing, bio- and medical ethics, the rhetoric of science, and historical areas including ancient Greek and 17th-century philosophy and science.

On the other side of Panther Hollow, the Carnegie Mellon University department of philosophy was formed in 1985 by Clark Glymour (Philosophy of Science), Wilfried Sieg (Logic and the Philosophy of Math), Teddy Seidenfeld (Rational Choice and the Foundations of Statistics), and Dan Hausman (Philosophy of Economics/Science). Over the last 20 plus years, all except Hausman have remained, and the department has quadrupled the size of its faculty, whose members now conduct foundational, interdisciplinary research in Logic & the Foundations of Mathematics, Philosophical Logic, Linguistics/Philosophy of Language, Philosophy of Science/Methodology/Formal Epistemology, Decision Theory/Game Theory/Rational Choice, Ethics and Political Philosophy, Philosophy of Mind, History of Ideas, Educational Computing and Educational Research. A distinctive feature of the Carnegie Mellon program has been its production of formal techniques, e.g., data analysis which have been of use to working scientists.

Interdisciplinary graduate programs produce one to three Doctorates and four to eight Masters students each year. The department’s Ph.D.s have been placed in tenure track positions in departments of Philosophy, Computer Science, Statistics, Mathematics, and even Medicine.

The Center for Philosophy of Science offers visiting fellows a stipend of $1,200-$1,400 per month. Visiting Fellows scurry in and out of their offices on the 8th floor of the Cathedral of Learning, joined by faculty who wander in to chat about their work.
Notes from the Inside

The 2008 election — our first attempt at online balloting — has proven a success. It was successful not just because our gifted nominating committee of Susan Lindee (Chair), Ted Porter, Janet Browne, Dan Kevles, and Karen Rader produced a brilliant slate of candidates; the election also worked because so many of our members voted, some 357 of you, representing a near doubling of a typical year’s participation. While I am pleased that over 17% of you voted, I hope that I can encourage more of our members to participate next year. Some historical societies report voting rates of around 10% so our increase is good news indeed. My goal is to heighten everyone’s sense that the HSS is there for them and that their participation not only strengthens the Society, it helps their careers and, I hope, adds some interest to their lives. In addition to thanking the nominating committee for their work, I would also like to thank my talented son, Mason, who set up the system pro bono. (Full disclosure: my HSS salary feeds, clothes, and shelters him, so he did benefit, which he acknowledges.)

— Jay Malone, HSS Executive Director

Election Results

We thank all those who stood for election and wish to congratulate those who will be serving the Society.

Council
Pamela Henson (Smithsonian Institution/American University)
Hans-Jörg Rheinberger (Max Planck Institute for the History of Science/Technical University, Berlin)
Jessica Riskin (Stanford University)
Judy Johns Schloegel (Independent Scholar)
Karen Reeds (Independent Scholar)

Nominating Committee At Large
Norton Wise (University of California, Los Angeles)
Pamela Smith (Columbia University)
Katharine Anderson (York University)

Nominating Committee from Council
David Kaiser (Massachusetts Institute of Technology)
Thomas Söderqvist (University of Copenhagen)

EDITORIAL POLICIES, ADVERTISING AND SUBMISSIONS

The History of Science Society Newsletter is published in January, April, July, and October, and sent to all individual members of the Society; those who reside outside of North America pay an additional $5 annually to cover a portion of mailing charges. The Newsletter is available to nonmembers and institutions for $25 a year.

The Newsletter is edited and desktop published in the Executive Office. The format and editorial policies are determined by the Executive Director in consultation with the Committee on Publications and the Society Editor. All advertising copy must be submitted in electronic form. Advertisements are accepted on a space-available basis only, and the Society reserves the right not to print a submission. The rates are as follows: Full page (7 x 9.25”), $625; Horizontal or Vertical Half page (7 x 4.6”), $375; Quarter page (3.5 x 4.6”), $225. The deadline for insertion orders is six weeks prior to the month of publication and should be sent to the attention of the HSS Executive Office. The deadline for news, announcements, and job/fellowship/prize listings is firm: Six weeks prior to the month of publication. Long items (feature stories) should be submitted eight weeks prior to the month of publication. Please send all material to the attention of the managing editor, Michal Meyer: michal@hssonline.org.

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Occasionally history becomes mainstream in a big way, as when the Columbia Accident Investigation Board penned an entire chapter on history, declaring that the organizational causes of the accident were rooted in the Space Shuttle program’s history and culture, and that “history is not just a backdrop or a scene-setter. History is cause.”

The Life and Times of a Public Historian

Steven J. Dick has spent his professional career as a public historian, most recently as Chief Historian for NASA, a place where the study of history has real-world consequences in policy development and planning.

For almost 30 years now, I have worked as a public historian, first at the U.S. Naval Observatory in Washington, DC, and for the last five years as NASA Chief Historian. Quite aside from the omnipresent political environment in Washington (my office at the Naval Observatory was 100 yards from the official residence of the Vice President, and NASA Headquarters is three blocks from the U.S. Capitol), the job has been alternately challenging and routine, rewarding and frustrating, almost never boring and at times overwhelming.

In the tight history of science job market of the 1970s, I was hired as an astronomer at the Naval Observatory on the basis of my B.S. in astrophysics. During the time of Halley’s comet, I spent three years on a mountaintop in New Zealand making astronomical observations under beautiful dark sky conditions—a highlight of my career. My primary job was scientific, but all the while my history of science training (History and Philosophy of Science, Indiana Ph.D., 1972) was percolating in the background. I began work on the history of the Naval Observatory, one of the oldest scientific institutions in the U.S. government, publishing articles as I went along. I seized the moment on my return to Washington in 1987, when I was appointed the official historian for the Naval Observatory. For a few idyllic years I was able to do history full time, until other duties were thrust upon me. In the end, writing a full-scale history in the midst of these other duties took some 15 years. But working with astronomers gave me a ground-truth appreciation of their ways of thinking, and being present at the institution I was researching gave me invaluable historical insights, not to mention proximity to documents and oral history subjects. The result of this research, *Sky and Ocean Joined: The U. S. Naval Observatory, 1830-2000* (Cambridge University Press, 2003), I believe shows the value of being close to one’s subject while maintaining the historian’s foundational principles of objectivity and independence.

There was one more advantage to being at the Observatory: working mostly on my own time, I was able to make use of the Observatory’s unparalleled astronomy library to produce my volumes on *The Biological Universe: The Twentieth Century Extraterrestrial Life Debate and the Limits of Science* (CUP, 1996) and *Life on Other Worlds* (CUP, 1998). Finally, working
(continued from previous page)
at a scientific institution allowed me to become active in the
historical branches of scientific societies, the Historical As-
tronometry Division of the American Astronomical Society, and
the History of Astronomy Commission of the International
Astronomical Union. The interactions with both scientific and
historical colleagues, in effect spanning the "two cultures," have
proved rewarding. The moral of the story is to be creative
in making use of whatever opportunities come your way.

The Naval Observatory experience prepared me for NASA, but the dif-
erences have been legion. The Observatory had less than 200 employees. By
contrast NASA HQ itself has more than 1,000 employees, more than 20,000 civ-
il servants at its 10 Centers nationwide, and untold numbers of contractors. It
also has a world-class history program, established a few months after NASA's
founding in October, 1958. The History Office currently has seven full-time
employees at Headquarters, and most of the 10 Centers (including Kennedy
Space Center in Florida, Johnson Space Center in Houston, and the Jet Propul-
sion Laboratory in California) have an historian or archivist, or both. All the
Agency historians and archivists keep in touch to discuss common interests, and once a year we gather at
one of the Centers to discuss common issues and problems.

So what does the NASA Chief Historian do? Three duties consume most of my time: book projects, conferences, and
internal and external inquiries. Currently, the Office is sponsoring some 44 book projects, ranging from NASA’s international
relations to its planetary protection, life sciences, and aeronau-
tics programs, as well as a broad array of books on the history of
the space and earth sciences, and other specific NASA pro-
grams. The History Office oversees these books, usually written
by qualified historians, from the procurement process, through
research and writing, peer review, and production. They nor-

mally appear in the NASA History series, or in the New Series
in NASA History published by the Johns Hopkins University
Press. Occasionally, the Chief Historian has time to actually
research and write history, ranging from historical essays (http://
www.nasa.gov/mission_pages/exploration/whyweexplore/), to
anniversary publications (America in Space: NASA’s First Fifty
Years, 2007), and more standard scholarly history, including
(with Jim Strick) The Living Universe: NASA and the Develop-
ment of Astrobiology (Rutgers University Press, 2004).

Over the last few years the History Office has sponsored
or supported conferences on topics related to the history of
spaceflight, all of which have been published in proceedings that
are also accessible online (see http://history.nasa.gov/series95.
html). They range from how much risk should be undertaken
in the name of forward-looking exploration (Risk and Explora-
tion: Earth, Sea and the Stars (2005)), held in the aftermath of
the Columbia Space Shuttle disaster, to perennial issues in
spaceflight history, including motivations for spaceflight, hu-
man versus robotic exploration, issues of access to space, and
historiographical problems such as the relation of space history
to other fields of history (Critical Issues in the History of Space-
flight (2006), modeled on Marshall Clagett's Critical Problems
in the History of Science). In addition, Remembering the Space Age (forthcoming
in 2008) was undertaken last year for the 50th anniversary of the Space Age, and
attempts to place space exploration in the context of world history. Contributions
from a cross-section of scholars, including Pulitzer-Prize winner Walter
McDougal, make it clear that the legacy of the Space Age is far from assured as a
long-term factor in history. Finally, for NASA's 50th anniversary, this October
we are holding a conference, "NASA's First 50 Years: An Historical Perspec-
tive." Such anniversaries invariably raise the question of celebratory history versus
objective history. We try to keep the two separate, leaving the celebratory part to
public affairs. On the other hand, it is my experience that objective history can
often be the best kind of public affairs.

While press releases are ephemeral, history is forever.

Internal and external inquiries are an additional never-end-
ing source of work. While most of the official records of NASA,
as other government agencies, are housed in the National
Archives, the History Division at Headquarters maintains 2,000
 cubic feet of records. Internal inquiries come from a variety of
sources, and help fulfill our goal of providing NASA senior lead-
ership with historical information, analysis, and perspective vital
to planning, policy development, and decision making, includ-
ing lessons learned. Recent examples include a study of Admin-
istrator Sean O'Keefe's decision not to service the Hubble Space
Telescope, a decision subsequently overturned by the current
Administrator, Michael Griffin. Mr. Griffin also inaugurated a
study of NASA culture, a follow-up to Howard McCurdy's book
Inside NASA: High Technology and Organizational Change in the
U.S. Space Program (Johns Hopkins University Press, 1993). This
study, and follow-up studies, are being used to improve
NASA management communication and practices. Through it
all, independence and objectivity remain foundational. While
this is true for all historians, in public history these principles are
more likely to be tested by fire. Our constant mantra is that
non-objective history does no one any good.

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In addition to these activities, the NASA History Office
offers three grants to encourage scholarship in the history of
spaceflight. The fellowship in Aerospace History, administered
by the American Historical Association, covers all aspects of the
history of aerospace from the earliest human interest in flight to the present. The History of Science Society Fellowship in the History of Space Science funds a nine-month research project that is related to any aspect of the history of space or Earth science, from the earliest human interest in space to the present. And the NASA Fellowship in the History of Space Technology, offered by the Society for the History of Technology (SHOT) funds one predoctoral or postdoctoral fellow for up to one academic year to undertake a research project related to the history of space technology. Further information on these fellowships may be found at http://history.nasa.gov.

Public history also involves a good deal of travel in a variety of roles and venues. In connection with our publication of the English translation of the memoirs of the seminal Soviet/Russian space pioneer Boris Chertok (now 96), I travelled to Moscow, where I joined with the U.S. Ambassador to host Chertok at a symposium in his honor, was interviewed by the Russian media, and had the opportunity to meet numerous officials and cosmonauts at Star City, their training center outside Moscow. For a recent meeting "Imagining the Space Age" held in Germany, we examined the European experience of spaceflight and its societal impact compared to the American experience. For the 50th anniversary of Explorer 1 in January, I was among 1,500 people who dined under the newly restored giant Saturn V rocket, suspended from the ceiling in the new Davidson Space Center in Huntsville, Alabama. Occasionally history becomes mainstream in a big way, as when the Columbia Accident Investigation Board penned an entire chapter on history, declaring that the organizational causes of the accident were rooted in the Space Shuttle program's history and culture, and that "history is not just a backdrop or a scene-setter. History is cause." Public history can be much more than an academic exercise, resulting not just in knowledge, but in action. High-technology and high-reliability organizations such as NASA must attempt to learn the lessons of the past, even if they are not always clear.

In many ways this article only covers the tip of the iceberg. Readers interested in more information about the NASA history office can see our Web site at http://history.nasa.gov, which includes our annual report (http://history.nasa.gov/2007.pdf), our quarterly Newsletter (http://history.nasa.gov/nltrc.pdf), our online publications (http://history.nasa.gov/series95.html), and much more. We encourage you to visit us next time you are in Washington.

Steven J. Dick can be reached at steven.j.dick@nasa.gov

Pittsburgh (continued from page 1)

Many speakers pass through for noon talks, periodic conferences of associates of the Center, and the Annual Lecture Series in collaboration with the department of history and philosophy of science, and the University of Pittsburgh department of philosophy.

The Center also publishes volumes in the following hardcopy series: The University of Pittsburgh Series in the Philosophy of Science, The Pittsburgh Series in Philosophy and History of Science, Center for Philosophy of Science Publications in Philosophy of Science, the Pittsburgh-Konstanz Series in the Philosophy and History of Science.

In addition, the Center engages in outreach programs including popular lectures and interdisciplinary presentations on subjects like physics and music, and science and the visual arts at the Carnegie Science Museum. For information (including information about applying for a fellowship) go to http://www.pitt.edu/~pittcntr/index.htm or e-mail pitccnter@pitt.edu. The Archives of Scientific Philosophy at the University of Pittsburgh (founded in 1971) began its collection with Rudolf Carnap's papers. Its next acquisition, the papers of Hans Reichenbach include notes from his discussions with Einstein. This collection now includes the papers of Carl Hempel, Frank Plumpton Ramsey, and Wilfrid Sellars. To arrange to see its papers, phone (412) 648-8197, or e-mail asp@pitt.edu.

A laboratory for the history of experimental science designs computer models, and performs real and virtual experiments to shed light on classical scientific experiments and the dimensions of science. As of now, the laboratory's projects include replications of Galileo's pendulum experiments, the percussion balance experiment to investigate the force of impact described by Galileo in the added day section of Two New Sciences, and Galileo's inclined plane experiments. Versions of the original equipment are augmented by modern data acquisition systems. For information and links to e-book publications and videos of the experiments, go to http://www.exphps.org/index.htm or contact the laboratory's director Paolo Palmieri, Department of History and Philosophy of Science, phone (412) 624-5881, or e-mail pap7@pitt.edu.

The University of Pittsburgh Graduate Program in Communication offers a program (whose students can obtain a certificate) in the rhetoric of science. Students and faculty study the rhetorical analysis of scientific texts aimed at focusing attention on the persuasive dimensions of scientific and technologically mediated cultural artifacts, and the critical study of scientific controversies, focusing on public debates among scientists, journalists, politicians, and others involved in scientific issues. For information, go to http://www.comm.pitt.edu/index.html.

For more information on programs go to http://www.pitt.edu/~hpsdept (department of history and philosophy of science) and http://www.pitt.edu/~philosophy (University of Pittsburgh philosophy department).

by Local Arrangements Committee
Jim Bogen, Chair
**NEWS AND INQUIRIES**

**HSTM Database Access**
You may now access the History of Science, Technology, and Medicine (HSTM) database using the same password information you use to manage your membership in the HSS. No longer do you need to remember two different usernames and accounts. To reach the database, simply log on to the *Isis* home page (http://www.journals.uchicago.edu/toc/isis/current) where you will need to click on the "Log In" link at the top right of the page. You will be asked to supply your user name and password (new members were sent this information with your welcome packet). Once you have logged in, the *Isis* main page will reappear and a link to the HSTM database will appear beneath the *Isis* logo on the right side of the page. Click on that link and you are ready to start your searches. Further information on the database is available at http://www.hssonline.org/teaching/teaching_database.html.

**Wanted: Your books and journals, for faculty and students in China**
Bridge to Asia, a nonprofit group which sends 500,000 books to 1,000 universities in China per year, seeks your unwanted journals and books. Shipping address (Western U.S.): Bridge to Asia, Foreign Trade Services, Pier 23 - Embarcadero, San Francisco, CA 94111. Shipping address (Eastern U.S.): Bridge to Asia, c/o Follett Campus Resources, 2211 West Street, River Grove, IL 60171-1800. Donations are deductible For questions, call (415) 678-2990 or e-mail: nxliu@pacbell.net. http://www.bridge.org.

**In Memoriam**

**Phil Pauly,** professor of history at Rutgers University, died on 2 April 2008 at the age of 57. Trained in the history of science at Johns Hopkins University, Pauly's most recent book, *Fruits and Plains: The Horticultural Transformation of America* (Harvard University Press, 2008) is a culmination of his research and writing over the last decade showing how the history of horticulture might offer a broader framework for integrating cultural and natural history. Pauly was involved in the HSS, serving on numerous committees. He was a great supporter and mentor of younger scholars in the history of science. Donations in his memory to support graduate students and independent scholars in the history of science may be sent to the History of Science Society, PO Box 117360, 3310 Turftington Hall, University of Florida, Gainesville, FL 32611-7360.

**James B. Gerhart,** a member of the Physics Department at the University of Washington since 1956, died on 24 February 2007 at the age of 78. He was especially known for his teaching interests and his contributions to the American Association of Physics Teachers (AAPT) and the Pacific Northwest Association for College Physics (PNACP). A major part of his professional effort was devoted to fostering the PNACP. The PNACP was founded in 1965, in response to a National Science Foundation initiative that sought to establish regional associations of colleges and universities for cooperation in physics teaching and research.

**Derek Thomas Whiteside,** winner of HSS's Sarton Medal in 1977 and Emeritus Professor of the History of Mathematics and the Exact Sciences at Cambridge University, died in Wokingham, Berkshire (U.K.) on 22 April 2008. Whiteside's central work was his studies of the mathematical papers of Isaac Newton, including the eight huge volumes of Whiteside's *Mathematical Papers of Isaac Newton*, published between 1967 and 1982. The publication of the *Mathematical Papers* brought honors, including the Alexandre Koyré Medal (1968), election as the youngest Fellow of the British Academy (1975), the Euler Medal of the Soviet Union's Academy of Sciences (1985), and an honorary D.Litt. from Lancaster University (1987). Whiteside was made Reader at Cambridge in 1976 and given a personal chair in 1987.

**MEMBER NEWS**


**James Voelkel** has been named Curator of Rare Books at the Chemical Heritage Foundation’s Othmer Library.

**Carla Nappi,** Montana State University, won the 2008 Jerry Stannard Memorial Award for her essay “Bolantu’s Pharmacy: Theriac in early Modern China.”

**John Krige,** Georgia Institute of Technology, presented the seventh Cardwell Memorial Lecture in the History of Technology at the University of Manchester.

**Daniel J. Kevles,** Yale University, has been awarded a fellowship at the Cullman Center for Scholars and Writers at the New York Public Library.

**Jonathan Coopersmith** will be a Fulbright scholar at the Tokyo Institute of Technology in 2008-09.
Second Annual Southern Host Conference on the History of Science and Technology

Held in Atlanta, Georgia, 11-13 April 2008, the conference was co-hosted by the Georgia Institute of Technology and Emory University. Over 30 scholars representing more than 14 universities attended the weekend event that featured paper presentations, posters, and time for networking and discourse. Angelina Long, Marisa Benson, Aukje Kluge, and Lynne Graziano served as event organizers.

The weekend kicked off with a reception held at the Williams Paper Museum at Georgia Tech. Participants strolled through the exhibits and gathered in the atrium for wine, cheese, and hors d'oeuvres.

The remaining conference events were hosted by Emory University, in the Woodruff Library. Saturday opened early with a session on "Scientific Instruments and Tools." A poster session featuring topics related to the "History of Medicine" provided browsing material during the morning break, as the poster presenters fielded questions about their topics. "History of Disease" was a natural follow up topic for the next paper session. After a break for lunch at nearby Emory Village, the attendees enjoyed two more sessions: "Public Use/Response to Cold War Technologies" and "Bodies and Representation."

Sunday featured three more paper sessions: "Regionalism," "Ecosystems and Landscapes," and "Water Management." A luncheon followed, allowing attending scholars to make contacts, discuss material presented, and follow up on discussions sparked by earlier talks. The relatively small size of the conference, combined with fabulous food and facilities, careful coordination between Emory and Georgia Tech, and enthusiastic participants, equaled a weekend of great impact for those in attendance – and anticipation for next year's event, tentatively to be held at Virginia Commonwealth University.

-Fifty-first Midwest Junto

The group met at the University of Minnesota 4-6 April 2008. An opening reception Friday evening at the Bell Museum of Natural History permitted convivial conversation in an environment of natural dioramas and displays of the objects of natural history. Sessions commenced Saturday morning and continued until after noon on Sunday, with a delightful banquet on Saturday night at the Bakken Museum featuring the annual Pierson Memorial Lecture, delivered this year by Robert Kohler on his "Reflections on the History of Systematics." Twenty-seven papers were presented by students and faculty from Iowa State University, University of Oklahoma, Missouri University of Science and Technology, Eastern Illinois University, Duke University, University of Wisconsin, University of Minnesota, and the Linda Hall Library. Topics ranged from medieval astronomy and mathematics to modern biology, technology, and medicine. Next year's Junto will be held at the Linda Hall Library in Kansas City.

Re: Calling Max Weber's 'Science as a Vocation'

Northwestern University's Program in Science in Human Culture hosted an interdisciplinary workshop, "Re: Calling Max Weber's 'Science as a Vocation,'" on 29-30 May, 2008. Visit: http://www.shc.northwestern.edu/workshop2008.htm. Participants included: (1 to 6: Grégoire Mallard (Princeton), Thomas Kemple (University of British Columbia), Berit Irene Vannebo (Northwestern), Charles Thorpe (University of California-San Diego), Francesca Bordelogni (Northwestern), John Carson (University of Michigan), Matthew Wisnioski (Virginia Tech), Laura Stark (Northwestern), Thomas Gieryn (Indiana), Alistair Sponsel (Princeton), Michael Lynch (Cornell), Ken Alder (Northwestern), Joy Rohde (AAAS), Tony Hazard (Northwestern), Michael Pettit (York)

NEWSBRIEF

The Avenir Foundation made a gift of three million dollars to the American Institute of Physics to endow the Spencer R. Weart Directorship of the Center for History of Physics at AIP. This is the largest gift ever given to AIP and establishes the first endowed position at the Institute.

Christiane Nockels Fabbri (Yale University) has won the Jerry Stannard Memorial Award for her essay "Treating Medieval Plague: The Wonderful Virtues of Theriac," in Early Science and Medicine, 12 (2007).

Francesca Rochberg (University of California, Berkeley) has been elected to the American Philosophical Society.

New Digital Archive: Aldo Leopold is considered to have been one of the most influential conservation thinkers of the 20th century. The Leopold Collection houses the raw materials that document not only Leopold's rise to prominence but also the history of conservation and the emergence of the field of ecology from the early 1900s until his death in 1948. Visit http://digital.library.wisc.edu/1711/dl/AldoLeopold.
Q&A: Speaking Out

Coming from very different institutional settings, Elizabeth Green Musselman and Audra J. Wolfe discuss the paths they took to podcasting the history of science.

Why did you decide to create podcasts?

EGM: That path started when I was in college. At the time, I planned to become a science journalist, because it bothered me how much people were intimidated by the sciences and consequently how little people knew about them. I had come to love the writing of people like Stephen Jay Gould and James Gleick and the wonderful, now-defunct magazine The Sciences that the New York Academy of Sciences used to publish. So the plan was to try to get a job as a science reporter for a magazine or newspaper. Then I took a history of science course with Kathy Olesko and promptly fell down the academic rabbit hole. One dissertation and a pretty esoteric book later, I haven't lost my love for popular science, and now see the history of science as an excellent tool for engaging non-scientists and scientists alike in a richly textured picture of what the sciences are really like and where they came from. About two years ago, I discovered knitting podcasts. (Knitters are unusually avid podcast fans because they like to have something to engage their ears while their hands and eyes are occupied.) I started listening to Cast On (http://www.cast-on.com), which is an especially aurally and content-rich, individually produced knitting podcast. Cast On got me completely hooked on the idea of starting my own podcast. I've long been a fan of the rich sound texture of public radio, but had no idea until I discovered podcasting how inexpensive and low-stakes it could be to start an NPR-like program of my own.

AJW: Distillations is an institutional podcast, which meant that we had a rather different set of motivations for getting into the medium. Although the Chemical Heritage Foundation has an extensive Web site, we had not yet ventured into the waters of Web 2.0, and some of our funders were encouraging us to do so. One of the things that struck us about podcasting was that — while there were plenty of science podcasts available — there were no programs dedicated to the history of science, and hardly anything on chemistry. On the Internet, half of securing an audience is being there first, so we felt that podcasting offered a tremendous opportunity. Of course, by the time we were actually up and running, Elizabeth's show had debuted, as had two new programs from the American Chemical Society ("Science Elements" and "Bytesize Science"). Fortunately, it turns out there's plenty of room for everybody, and each of these shows has carved out a separate niche.

We were also impressed by the cost-benefit ratio. For most of our outreach tools, like our magazine or teacher conferences, the cost increases as you increase the audience. The wonderful thing about podcasts was that, aside from some marginal bandwidth fees, the investment is the same whether you reach 100 listeners or 100,000, in the United States or abroad.

What resources/skills did you bring to the job?

EGM: From the beginning, we had decided that if we wanted to do a show, we wanted to do it professionally. We received a $60,000 grant from the Richard Lounsbery Foundation that enabled us to hire Mia Lobel, an experienced radio producer, on a freelance basis to handle the technical aspects of putting together a show. Mia handles all the editing and mixing, recruits contributed pieces, and helps us write our scripts. Our own staff of history of science Ph.D.s supplies the show ideas and the expertise for individual shows. Once a month our "Creative Team" meets to come up with ideas for the next four to six shows, and an expert is assigned for each show. The expert researches the show, and then I turn those show notes into a draft script. We also have an assistant producer, Tori Indivero, who pitches in about four hours a week, and we asked Robert Hicks, a former CHF staff member, to be our voice.

After six months, we've finally got this down to a routine — but the learning curve was steep because we insisted on radio-quality sound. In just over a month, we learned how to use blogging software, iTunes, and sophisticated recording equipment. It turns out that was the easy part compared with coming up with a consistent voice and a feel for radio!

AJW: Here's another way in which our podcasts and experiences are different. I began my podcast as an individual project. I decided to get just enough funding to buy professional-quality equipment (about $500), try it for a year, and then seek more significant funding if the experiment was successful and enjoyable. Now that I'm coming up on the end of that year, I've recently begun the long process of applying for an NSF grant to make my podcast more frequent, to do more on-location recording, and to hire a staff.

The main skills I brought to podcasting were, first, my nine years of teaching at a small liberal arts college. In that context, I need to make clear to colleagues and students with a wide variety of intellectual interests why the history of science matters. This has helped me to think more clearly about what topics and what styles of presentation might interest a wider audience beyond my college. Second, I have a fair amount of vocal training — not in radio, but in musical and theatrical performance. I studied voice for several years, sang in an a cappella group for several more, and have acted over the years in community theater. Before I began my own podcast, I also contributed to several other people's podcasts, so that I could develop my "radio voice" in a low-stakes way.

Elizabeth Green Musselman is an associate professor of history at Southwestern University, a liberal arts college near Austin, Texas. She produces the monthly podcast The Missing Link and otherwise writes on the history of science in colonial South Africa.

Audra J. Wolfe is Editor in Chief of Chemical Heritage Magazine. She holds a Ph.D. in the history and sociology of science from the University of Pennsylvania, where she is lecturing this fall on science and the media.
As Audra noted, the steepest learning curve comes with the technical side of audio production. I knew absolutely nothing about audio recording and editing when I started. Fortunately, there is a lot of help available online and in book form, and there is ample free, intuitive, audio-editing software available. Still, it took me months to feel even remotely adept at it.

What are the advantages of a podcast over, for example, a blog?

**EGM:** Podcasts and blogs both have closely related and important parts to play in building more grassroots civic engagement. In fact, before the iPod cornered the market on mp3 players, podcasts were originally called audio blogs. Podcasts do have one distinct advantage over blogs, though, and that is the rich, you-are-there audio experience that podcasts can provide. We all know from our experience with e-mail how difficult it is to convey tone in electronic text. Podcasts don't have that problem, and they can also offer a textured sense of place that can be particularly valuable in a history program. It's also worth re-emphasizing what Audra said earlier about podcasts' advantages over radio; podcasts are less expensive to produce than radio programs by several orders of magnitude. This means that podcasts can delve into niche markets and offer messages that Rupert Murdoch wouldn't touch with a ten-foot pole.

**AJW:** Although I would agree with most of what Elizabeth said, there are two things to keep in mind that make podcasting rather different than blogs – one of which is an advantage, the other a disadvantage. First, on the positive side. Audio is a medium that works best when you tell stories. It can be difficult to do more abstract, theoretical things over the air waves. You have to keep in mind that listeners can only hear things in one direction – forward – and they need to be pulled along by a narrative. Fortunately, history lends itself well to this format.

Audio is a medium that works best when you tell stories... You have to keep in mind that listeners can only hear things in one direction – forward – and they need to be pulled along by a narrative. Fortunately, history lends itself well to this format.

**Who are your target audiences and what do you hope to achieve with these audiences?**

**AJW:** One of the things that appealed to us about podcasts was what we learned about podcast listeners. According to the Pew Internet and American Life Project, the average podcast listener is male, in his mid-40s, and is tech-savvy. (Just think what the average would look like without the knitters!) For better or for worse, this demographic profile maps fairly closely onto the kinds of scientists and science policy makers CHF tries to reach. We saw a podcast on the history of science as a way to introduce practicing scientists to history, and hopefully to reach some other people who didn't yet realize that they were interested in science.

**EGM:** I was struck by that Pew study, too, which also projected substantial growth in podcast listening over the next decade. When I make my podcasts, I imagine a pretty diverse audience, but primarily one that is college-educated and that already reads books and watches TV programs about history or science. I wanted to offer something that people outside the field would find interesting. There are a surprising number of people out there looking for brain food. I also wanted to offer something that college faculty could give to their students or use in a classroom, just to mix things up a bit. Finally, I try to remember that a good portion of my audience – somewhere around a fifth to a quarter – is not North American. Keeping that audience in mind pushes me to bring something of a world-history emphasis to the program.

**What are some favorite podcasts you have produced?**

**EGM:** I have several episodes that I'm especially proud of for one reason or another. I really like the first episode, for example, because it has such a strong contribution from one of my undergraduate students. I also felt great about the sixth and seventh episodes, which feature a fantastic two-part guest essay on time by a Montessori teacher trainer in Canada. He's a listener who contacted me out of the blue about contributing, and did a marvelous job. It's thrilling to me to see the podcast develop something of a by-the-people/for-the-people character already.

The episode that I think reflects my own best writing and producing work is the third one on Berlin. In that episode, I somehow found the time to do the kind of rich, layered audio work that I want eventually to do in every episode. I also wrote the script in such a way that, together with the sound, it really made you feel like you were trekking around Berlin with me, visiting different

*Continued next page*
sites where the history of science and medicine come to life.

AJW: With an episode every week, it's hard to settle on just a few favorites! I guess I would have to point to some of the shows with unexpected topics, or shows where we managed to have a bit more fun than usual. Episode 14, Blockbuster Science, is definitely one of my favorites, where we got to talk about krypton and G. I. Joe. I've also very much enjoyed the shows where we've done some sort of project on air, for example, Episode 10, on color, where one of my colleagues made a batch of mauvime dye. The time show (Episode 25) has a fun piece about my grandmother's pressure cooker, and the segment on Pop Rocks on Episode 21, is a hoot. What I like about all of these shows is that they've really taken advantage of the audio medium, with atmospheric sounds that you just can't capture on the printed page.

What are some of the favorite podcasts that you have heard?

AJW: I love Radiolab, from WNYC in New York. It's technically a radio show, but since it's only available on a few NPR stations I'm going to call it a podcast. I cannot say enough wonderful things about it. Radiolab takes a single big-picture subject, like "love" or "mortality" or "sound," and then examines it through the lens of science. The producers also take an intensely creative approach to audio, with lots of layering and tempo changes. It's by far my favorite show.

EGM: Ditto: I'm a huge fan of Radiolab (http://www.wnyc.org/shows/radiolab/), too, for all the reasons that Audra mentioned. I love the goofy rapport between the two hosts on that show: it's a great demonstration of how you can mix serious content with entertaining style. I've also learned a lot about good storytelling and creating sound atmospheres from QN, a podcast produced by Sage Tyrlle in Toronto (http://quirkynomads.com). Sage is amazing: she does the podcast as a hobby, but manages to produce wonderful, radio-quality dramas and other set pieces. Historians of science should also check out the Canadian Broadcasting Company's series "How to Think about Science," which is available in podcast form (http://www.cbc.ca/podcasting/). This is an ongoing series of lengthy, intelligent interviews with leading figures in science studies. Great stuff, and delightful to see our field making it onto the mainstream radio waves.

What kind of feedback have you received so far?

EGM: As Audra mentioned earlier, podcasters are generally disappointed by how little feedback they receive. And she's right that this happens because people often listen to podcasts away from the computers that they would use to leave feedback. What feedback I have received has generally been positive. I've gotten some great encouragement from colleagues in the field. I've also received some positive messages from listeners who are not in academia. The main theme in their comments is that they love getting the intellectual stimulation. Some listeners have even offered me helpful, constructive feedback, though - as with course evaluations - some of those comments fall into the "you can't please everyone" category.

AJW: Ditto. With one exception (you really can't please everybody), the people who take the trouble to write in are extremely enthusiastic about the show. From our Web hosting statistics, I know that at least a few teachers and faculty members are using the show in their classrooms - by and large in chemistry classrooms rather than history of science or science studies classrooms. Soon after we launched the show we learned that the NSF had selected Distillations for a new online resources for teachers, which we found enormously gratifying.

What advice would you give prospective podcasters?

AJW: Just because we did a "big" podcast doesn't mean that you have to. Many great podcasts are just a producer and a microphone. The most important thing is to think it through. How often will your show appear? How far ahead can you bank episodes? What blogging software will you use to support it? Do you care who listens, and if so, how will you find out? Inconsistency is the bugbear of many a podcast - it's worth the effort to figure this stuff out before you get started.

EGM: Audra's advice is excellent, and consistent with what a lot of experienced podcasters say. I'd add that while many podcasts are a half-hour long (like mine), I have also seen listeners say that they would prefer to have more short podcasts available - 10-15 minutes in length. When you think about where people are likely to listen to podcasts - during a lunch break at their computer, during their commute to work, while getting some exercise or cleaning up the house - you can readily see the advantage of having a podcast that appears in more digestible chunks. And finally, I'd encourage you to join us! Don't think that just because there are a couple of science studies podcasts out there now, that the market is saturated. The world of podcasting is a wide open and very exciting field right now. Come play.

Both The Missing Link and Distillations are available through iTunes and other podcast directories. You can download shows from their Web sites: http://missinglinkpodcast.com and http://distillations.chemheritage.org, or go to the Web version of this article at http://www.hssonline.org/publications/newsletter.html.
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We begin with profiles of Ken Alder and Michael Bess, two of the seven 2008 Guggenheim Memorial Foundation Fellows whose projects are connected to the history of science. The remaining winners will be profiled in the upcoming issues.

Ken Alder is Professor of History and Milton H. Wilson Professor of the Humanities at Northwestern University where he directs the Science in Human Culture Program. Alder is working on a book project titled “The Forensic Self: Personal Identification from the Renaissance to the Genome.”

My goal for the fellowship period is to write a history of the forensic sciences that examines how the techniques of personal identification have defined our self-understanding, not just as individual citizens before the law, but as members of “racial” groups and as individuals located within historical genealogies. During the past decade new techniques of genetic typing – increasingly used by our legal system to identify individuals – have also been read for clues as to the person’s “race” and lineage, as well as his or her propensity for suspect behavior. As governments compile vast databases of biometric data and private firms make genetic tests commercially available, there is concern that probabilistic correlations will be translated into facile judgments about moral fitness and racial kinship.

This project documents the long history of these concerns. I have organized my project into five components, each taking up a forensic technique focused on a particular feature of the body. A first chapter on handwriting analysis during the Renaissance will be followed by successive chapters on anthropometry in the nineteenth century, fingerprinting in the early twentieth, serological typing in the mid-twentieth, and contemporary genetic testing. My method will be both comparative and synthetic: juxtaposing the use of identification in the Anglo-American and French-Continental legal systems, and traversing the discontinuities of the early modern and modern eras. I will ask: How have the sciences of bodily identification shaped our sense of who we are?

The project takes its title from John Locke, who coined the term, “the forensic self,” for the second edition of his Essay Concerning Human Understanding. In the first edition, Locke had set out to show how the human mind comes to know the world through the senses. Locke, however, quickly found himself explaining how the mind, from its start as tabula rasa, could ever arrive at a sense of its own coherence. In his controversial new Chapter 27 Locke suggested that the continuity of the self reflected the individual’s accountability to external forces, to the criminal law in the first instance, and on the Day of Final Judgement in the last. As the subject of reward and punishment, the forensic self is an inescapably moral being.

This book examines the forensic techniques which make us accountable, without presupposing that Locke’s individualistic account is the sole way one might define the self – or should. My preliminary hypothesis is that the practices of forensic identification have sustained long-term continuities in the self-understanding of the answerable citizen, even as other dimensions of people’s sense of identity have shifted dramatically across the centuries. In The Forensic Self I seek to understand how in measuring ourselves as individuals we fit ourselves to the social body – and to its histories.

Michael Bess is Chancellor’s Professor of History at Vanderbilt University. He is a specialist in twentieth-century Europe, with a particular interest in the social and cultural impacts of technological change. His project is titled “Icarus 2.0: A Historian’s Perspective on Human Biological Enhancement.”

This book project explores the ethical and social implications of new technologies for human biological enhancement. These technologies, designed to reconfigure or boost our physical and mental capabilities, are developing rapidly in three distinct but interconnected domains: pharmaceuticals, bioelectronics, and genetics. Over recent decades, as innovations in these fields have accumulated, they have begun reaching into our lives with increasing force, raising profound questions about what it means to be human.

One significant feature of this topic is how much it all sounds like science fiction. Yet precisely because we associate human enhancement with the often bizarre worlds depicted in novels and movies, we tend to underestimate the evidence of radical change that is steadily accumulating all around us. Each new breakthrough in genetics, robotics, prosthetics, neuroscience, nanotechnology, psychopharmacology, brain-machine interfaces, and similar fields, appears as an isolated “futuristic” event taking place in an otherwise unaltered landscape. What we miss here is the cumulative importance of all these developments taken together. I argue that four fundamental themes have dominated the debates over human enhancement. The first is that of
Preliminary Program

Thursday, 1:00-5:00 p.m.
HSS Council Meeting
(* session organizer)

Thursday, 5:30-7:00 p.m.
Co-Plenary Roundtable: Climate Change Science, Environmental Challenges, and Cultural Anxiety (T1)
*James R. Fleming, Colby College
Marilyn Gaull, Boston University, "Romantic Climates: A sunny pleasure-dome with caves of ice?"
Vladimir Jankovic, University of Manchester, "Climatological Citizenship: The Many Lives of a Modern Fetish"
Matthias Dörries, Université Louis Pasteur, "The Nuclear Winter and Global Climatic Change"
Spencer R. Weant, Center for the History of Physics, AIP, "Educational Toys: The Evolution and Persistence of Simple Models of Climate Change"
Roger D. Launius, Smithsonian National Air and Space Museum, "Venus-Earth-Mars: Comparative Climatology and the Search for Life in the Solar System"

Co-Plenary Workshop: Informational Session About Job Creation in HTSM Through UTeach Natural Sciences (T2)
*Abigail Lustig, University of Texas at Austin
Mary Walker, University of Texas at Austin
Brett Bennett, University of Texas at Austin
Alberto Martinez, University of Texas at Austin
Bruce Hunt, University of Texas at Austin

Co-Plenary COE Workshop: Instruments, Internet, and Innovation in the History of Science Classroom (T3)
*Jessica Wang, University of British Columbia
Richard Kremer, Dartmouth College, "Reading Artifacts: On Teaching with Historic Instruments"
David Pantalony, Canada Science and Technology Museum, "Teaching with Artifacts: The Museum Context"
Peter Ramberg, Truman State University, "Internet-Based Teaching Tools for History of Science Classes"

Thursday, 7:30-8:30 p.m.
Welcome Orientation for First-time Attendees
Joint Opening Reception with PSA

Thursday, 8-10 p.m.
Chemical History Interest Dinner: The Carlton Restaurant, 500 Grant Street, Pittsburgh, PA, http://thecarltonrestaurant.com/ $40 per person; special $20 rate for student. For details and to register, go to http://www.chemheritage.org.

Friday, 7:30 - 8:45 a.m.
Women's Caucus Business Meeting

Friday, 9:00 - 11:45 a.m.
Mathematical Languages (F1)
*Amir Alexander, UCLA, "Perspective in Ptolemy's Almagest and Planetary Hypotheses"
Joan Richards, Brown University, "The Logic of Women: Words and Reason in the World of Sophia Le Morgan"
Jacqueline Wernimont, Brown University, "Modes of Meaning in Seventeenth-Century Mathematics"
Matthew Jones, Columbia University, "Unnatural and Monstrous: Creating "Child Suicide" in the Nineteenth Century"
Chair: Amir Alexander, UCLA

Scientific Nationalism and Modern East Asia (F2)
John Tresch, University of Pennsylvania, "Fantastic Instruments: Berlio, Meyeres, and the Foucault Connection"
Robert Brain, University of British Columbia, "From Acoustic Image to Sacred Vibrations: Experimental Phonetics and the Invention of Free Verse Poetry in Fin de Siècle France"
Julia Kursell, Max Planck Institute, "Tracing Beauty: A Pianist's Collection of Fingerprints in Experimental Psychology around 1900"
*Mara Mills, University of Pennsylvania, "Signal and Noise: The History of the Audigram"
*Chair: John DiMoia, National University of Singapore
Commentator: Jessica Wang, University of British Columbia

The Hard Part: Paleontology and the Evolutionary Synthesis (F3)
*Miranda Paton, Cornell University, "The Complexities of Consistency: Sewall Wright, George Gaylord Simpson and Modeling Evolution"
David Sepkoski, University of North Carolina-Wilmington, "The 'Species Concept' and the Growth of Paleobiology"
Warren D. Allmon, Paleontological Research Institute/Museum of the Earth, "Of Babies and Bathwater: Osborn, Gould, the Synthesis and Paleontology"
Patricia Princehouse, Case Western Reserve University, "German Paleontologists vs. Intelligent Designists"
William B. Provine, Cornell University, "Random Drift and the Evolutionary Synthesis"
Chair: William B. Provine, Cornell University

Isolation or Co-operation? Discipline Formation and Multidisciplinarity in Philosophy of Science in America 1918-1968 (F4)
Heather Douglas, University of Tennessee, "The Philosophy of Science Association as an Interdisciplinary Society"
Gary Hardcastle, Bloomsburg University, "A Coalition Dominated by the Unorthodox: The Beginning of the Philosophy of Science Association"
Joel Isaac, University of London, "The Eucenomic Moment: Philosophy of Science, Scientific Philosophy, and Philosophical Science in Intervar America"
*Alan Richardson, University of British Columbia, "Edgar A. Singer, Jr. and American Experimentalism: From Philosophy of Science to Social Science, 1930-1955"
Chair: Alan Richardson, University of British Columbia

The Role of Scientific Expertise in Activist Movements (F5)
*Lisa Rumi, York University, "Sex and Death in the Rational World of Scientist Activists: The Activism of Union of Concerned Scientists from 1980 to 1986"
Paul Rubinsohn, University of Texas, "An Elaborate Way of Committing National Suicide": Carl Sagan, Popularization, and Nuclear Winter"
Megan Barnhart, University of Minnesota, "Turning Ordinary Housewives into Opinion Makers: The Scientists' Movement, the NCAI, and the Nascent Public"
Amy Hay, University of Texas - Pan American, "The Quilching Conscience": Scientists Protest Agent Orange"
Chair: Kelly Moore, University of Cincinnati

Standardization in 20th Century Medicine (F6)
*Jonathan Simon, Université Lyon 1, "Standardization and the History of the Medical Sciences"
Christian Bonah, Université Louis Pasteur, Strasbourg, "From Arrow Poison to IV Drugs: African Plant Seeds, C.F. Boehringer & Co and the Question of Standard Drugs, 1900-1930"
Tricia Close-Koenig, Université Louis Pasteur Strasbourg, "Classifying Cancers, Standardizing Practice"
Volker Hess, Charité, Berlin, "Standardizing Values - the Value of Standardization. Implementation of Rhenotheraphy as Model of Modern Drug Regulation in France and Germany, 1894-1900"
Chair: Nicolas Rasmussen, University of New South Wales
From Dissertation to Book: A Roundtable on First-Time Scholarly Book Publication (F10)
*Jacqueline Wernimont, Brown University
Karen Darling, The University of Chicago Press
Doreen Valentine, Rutgers University Press
Marguerite Avery, The MIT Press

Friday, 12:00 - 3:10 p.m.

Managerial Science in Post-War America (F14)
Judy Klein, Mary Baldwin College, "The Cold War Modeling Nexus of Economics, Operations Research, and Control Engineering at the Carnegie Institute of Technology"
Isaac Record, Institute for the History and Philosophy of Science and Technology, "The Role of Technological Advance in the History of Scientific Practice"
Benjamin Wang, Cornell University, "Literally Above Politics?: NASA, the Deep Space Network, the Congressional Black Caucus, and Apartheid South Africa"
Kevin Walsh, University of California, San Diego, "Bringing the Future Closer: The Emergence of the U.S. Academic Supercomputer Centers 1980-1990"

Women and Patriarchal Science (F15)
Vincent Guillain, Collège de France, "Five Ways of Being a Scientific Phallocrat: Auguste Comte's Biological Arguments for the Subjection of Women"
Michael Meyer, University of Florida, "Circulating Physical Geography: The Different Roles of Science"
Brant Vogel, "Gentle-women at London: Gender and the Rise of the Weather Instrument"
Staffan Wennerholm, Uppsala University, "Invisible Work in the Scientific Family: The Case of Early Twentieth-century Swedish Geology"

Science and Pedagogy (F16)
Nicholas Spicher, Johns Hopkins University, "The Method of Mirania: The Teaching of Natural Philosophy in 18th-century Philadelphia"
James Elwick, York University, "A certain compulsion upon the authorities': 19th-century Competitive Written Examinations, Objectivity, and Educational Reform"
Philip Loring, Harvard University, "From Johnny to Chomsky"
Christopher Phillips, Harvard University, "Disciplining the Mind: Mathematics as the Cold War Subject"

19th Century Science and Technological Aims (F17)
Efstathios Arapostathis, University of Leeds, "Purity vs. Property? The Patenting Context of Constructing Pure and Applied Electricity 1880-1920"
Bruce Herfy, University of Washington, "Making Aim at Physics: The Ballistic Pendulum, Physics Concepts and Rifle Marksmanship"
H. M. Jain, Bangladesh University of Engineering and Technology, "Indian Rocket War: A World Class Technology by Local Artisans"
Paul Lucier, "Mining Science and Mining Law on the Comstock Lode"

The Christian Confrontation with Science (F18)
Matt Gunterman, Yale University, "The Germ in the Chalice: A Case When Science Met the Sacred"
Samantha Muka, Florida State University, "Sacralized Health and Social Reform: Protestant and Catholic Reactions to Syphilis in America, 1900-1914"
Adam Shapiro, University of British Columbia, "Race and Creationism in Europe"
Janneke van der Heide, University of Amsterdam, "Darwinism as a Secular Religion: The Netherlands, 1859-1909"
**Preliminary Program**

**Instruments and Images in the 19th/20th Century (F19)**

David Jones, Massachusetts Institute of Technology, "Representation and Intervention: Visualizing the Pathogenesis of Myocardial Infarction, 1970-1990"

Meegan Kennedy, Florida State University, "Shadowing and the Microscope: The Limits of Revelation"

Omar Nasim, Max Planck Institute for the History of Science(MPI for History of Art, "Observation and the Hand: Observing Books and Nebular Research"

Kelley Wilder, De Montfort University, "Observation and the Photographic Method in the Laboratory of the Becquerels"

**The Project of Genetics (F20)**

Melinda Gormley, Oregon State University, "German Emigre Geneticists in America, 1930s & 1940s"

Aaron Mauck, Harvard University, "Pricing Thrifty Genes: Chronic Disease and the Thrifty Gene Controversy, 1962-1989"

Samuel Schindler, University of Leeds, "Photo #51, the CV theory, and the Discovery of the DNA Structure"

Ulrich Krohs, University of Hamburg, "The Roots of Organismic Thinking in Systems Biology"

**Colonial Natural History in the Modern Era (F21)**

Thomas Anderson, Binghamton University, "Globalizing the Strange: The Science of 19th Century Madagascar"


Elizabeth Green Musselman, Southwestern University, "Breaking Through: Meteors and Universal Knowledge in Colonial South Africa"

 Lukas Rieppel, Harvard University, "The Ancient Land of Shaba: Value and Exploration in Early 20th-century Africa"

**Medieval Science (F22)**

Temitope Charlton, Harvard University, "The Power of Places: Ethnogeography in Thirteenth Century Dominican and Franciscan Missions Accounts"

Abdul Nassser Kaadan, Aleppo University, "The Achievements of Albucasis in Neurosurgery"

Elly Truitt, Bryn Mawr College, "Neonancy, Celestial Division, and the Introduction of Arabic Science into England, c. 1050-1125"

Michael Fournier, Dalhousie University, "Boethius and the Consolatio quadrivii"

**Friday, 3:30 – 5:30 p.m.**

**The Uglies of Nature: Observation and Aesthetics in the Oceans (F23)**

*Katharine Anderson, York University, "The Scientist and the Reef: Coral and the Nature of Ocean Life"*

Anne Secord, Independent Scholar, "Nature’s Rejectionista: Seaweeds and the Scientific Observer"

Gary Kroll, SUNY Plattsburgh, "Cultivating a Sense of Wonder: William Beebe, Rachel Carson and 20th Century Oceanic Natural History"

Commentator: Jonathan Smith, University of Michigan, Dearborn

**Intellectual Histories of 20th-century Biology: Discipline Building, Politics, and Philosophy (F24)**

*Jason Byron, University of Pittsburgh, "Holism in Early Sexology: Biological and Philosophical Contexts"*

Thomas Cunningham, University of Pittsburgh, "John Burdon Sanderson Haldane’s Intellectual Heritage"

Matthew Dunn, Indiana University, "Dobzhansky’s Evolutionary Genetics: Natural Populations or Mirroring Morgan?"

Commentator: Betty Smocovits, University of Florida

**The Eye Through Time (F25)**

*Orit Halpern, New School for Social Research, “The Tragic Final Years of Paul Ehrenfest”*

Jimena Canales, Harvard University, "An Eye for an Eye: On Cinematographic Morality"

Despina Kakoudaki, American University, "Deep Frame: Picturing the Body in Early Cinema"

Josh Ellenbogen, University of Pittsburgh, "Impressed Images"

Chair: Orit Halpern, New School for Social Research

**To Market: A New Look at the Medical Marketplace (F26)**

Kara Swanson, Harvard University, "The Professional Donor: Gifts, Gain and the Medical Marketplace in the United States"

Deborah Levine, Washington University, "Marketing Measurement: Anthropometric Technologies in the American Marketplace"

*Suzanne Fischer, University of Minnesota, “Apologia for Quackery: Medical Entrepreneurship and the Problem of Efficacy"

Chair and Commentator: Elizabeth Toon, University of Manchester

**Scientific Objects in Motion (F27)**

Avner Ben-Zaken, Harvard Society of Fellows, "Object in Motion: Networks, Trust and Science in the Eastern Mediterranean"

*Daniel Margoccy, Harvard University, “Encyclopedias and the Long-distance Exchange of Specimens”*

Vernier Koen, University of Leuven, "Circulating the Golden Flower"

Chair: Avner Ben-Zaken, Harvard Society of Fellows

**Compelling Cosmogonies: World-building in Early Modern Natural Philosophy (F28)**

Dane Daniel, Ohio State University, "Complementary Cosmogonies: Pantheos and the Creations on God the Father and God the Son"

*Allison Kavey, CUNY John Jay College, “‘The Mistress of Her Own Operation: The Relationship between the Divine and the Natural and the Potential for Practitioners in Agrippa’s Cosmography”*

Sheila Rabin, St Peter’s College, "The Astronomical Cosmos of Johannes Kepler"

Chair: Allison Kavey, CUNY John Jay College

Commentator: Lawrence Principce, The Johns Hopkins University

**Divergent Struggles in the Evolution of Relativity (F29)**

*Alberto Martinez, University of Texas at Austin, “From Ampère’s Kinematics to Einstein’s Relativity”*

Scott Walter, Université Nancy 2, France, "Cambridge Dynamics and German Relativity, 1909-1915"

Daniel Kennefick, University of Arkansas, "Not Only Because of Theory: Eddington and his Theory-Testing Bias in the 1919 Eclipse Expedition"

Maria Jesús Santsmases, Consejo Superior de Investigaciones Científicas, Madrid, "Heredity in the Clinic: Early Cytogenetics from London to Madrid, 1956-1966"

Chair: Richard Staley, University of Wisconsin, Madison

**Animal Biographies (F30)**

Janet Browne, Harvard University, "Seeing the Gorilla"

Fabio de Slo, Naples Zoological Station, "Anton Dohrn, Western Science and the Octopus. The Unkept Promises of a Laboratory Animal"

*Tania Munz, Max Planck Institute for the History of Science, “Bees of the Hive”*

Chair & Commentator: Gregg Mitman, University of Wisconsin, Madison

**Imperial Legacies of Early Modern Science (F31)**

Steven James Harris, Harvard University, "Trading Zone or Battleground? Power, Knowledge, and Nature in 17th-century New France"

Antonio Barrera-Osorio, Cologny University, "Local Experts, Imperial Agents, and Experience as Common Ground: The Sixteenth-Century Science of the Atlantic World"
Friday, 6:00 - 7:30 p.m.
HSS and PSA Reception

Friday, 9:30 - 11:00 p.m.
Graduate Student Party

Saturday, 9:00 - 11:45 a.m.

How Well Do “Facts” Travel? (S1)
Naomi Oreskes, University of California, San Diego, “You Can Argue with the Facts: A Political History of Climate Change”
Simona Valeriani, London School of Economics, “Scientific Facts and Building Artifacts”
Alison Wyile, University of Washington, “Archaeological Facts in Transit”
Rachel Ankeny, University of Adelaide, “Cases as ‘Fact Carriers’ in Contemporary Medicine”
*Chair: Spencer Weart, American Institute of Physics

Science and Religion in Early Modern Europe (S4)
Peter Harrison, Harris Manchester College, Oxford, “God and Early Modern Natural Philosophy”
Mark Waddell, Michigan State University, “Kircher’s Singing Cats, or, Sycophatism as Catholicism”

John Henry, University of Edinburgh, “Isaac Newton: Biblicalist or Deist?”
*Margaret J. Osler, University of Calgary, “What Does Religion Have to Do with the Scientific Revolution”
*Chair: Margaret J. Osler, University of Calgary

Negotiating the Human: Paleoenthropology Images, Objects, and Audiences (S5)
Richard Delisle, University of Chicago, “Humanity’s Uncertain Boundaries Until the 1940’s: A Late Consensus on Slow Zoological and Paleontological Surveys”
Matthew Goodrum, Virginia Tech, “Defending Australopithecines as a Human Ancestor: Raymond Dart, the Osteodontokeratic, and Tool-use as a Criterion for Establishing the Phylogenetic Status of Hominids”
*Jesse Richmond, University of California, San Diego, “Le Gros Clark vs. Zuckerman: Renouncing Ancestry and Expertise in Post-war Paleoanthropology”

Marianne Sommer, Swiss Federal Institute of Technology Zurich, “A Knight’s Quest for Bringing Lost Worlds Home: Charles Knight and the American Imagination”

Science, Politics, and Culture: New Perspective on Science and Medicine in Modern East Asia and Beyond (S6)
Soyoung Suh, University of California at Los Angeles, “When Did Chinese Medicine Become Korean?: ‘Local Botanics’ in the Korean Tradition of Medicine”
Chia-Hua Lee, University of Tokyo, “Beyond the Changing of Symbols: The Transmission of the Calculus to China and Japan in the Nineteenth Century”
Grace Shen, York University, “A Cladical Reception: Li Siguang, Quaternary Geology and Politics of Scientific Persuasion”
*Chair: Joseph Dauben, City University of New York

*Commentator: Yi-hao Xu, Borough of Manhattan Community College of the City University of New York

Studies in the Internalization of Mathematics: Goals, Strategies, and the Outcomes in 19th and 20th Centuries (S7)
Sponsored by the International Commission for the History of Mathematics
Karen Parshall, University of Virginia, “The Internationalization of Mathematics in a World of Nations: 1800-1960”
Joe Dauben, City University of New York, “Western Mathematics in the Middle Kingdom: Elite versus Grass Roots Strategies”
David Zitarelli, Temple University, “Mathematics at World’s Fairs: Chicago 1893 and St. Louis 1904”
*Patti Hunter, Westmont College, “Gender roles in Africa: A Case Study in Science Patronage and International Statistics Education in the Cold War”
*Chair: Deborah Kent, Hillsdale College

Communicating Knowledge: Changing Ideas of Risk, Uncertainty, and the Public in 20th C. American Science (S8)
*Michael Egan, McMaster University, “Variacular Knowledge and Expertise: The Scientists’ Institute for Public Information and the Science of the Environmental Crisis”
Kelly Moore, University of Cincinnati, “Fighting Fat: The USDA, the Cold War, and Standards of Bodily ‘Finites’”
*Chair: Jody Roberts, Chemical Heritage Foundation

Crisis? What Crisis? Causes and Contexts of the Crisis in Psychology in Early 20th-century Europe (S9)
Annette Mülberger, Universitat Autonoma de Barcelona, “Kostljáf’s Book on the Crisis of Psychology and its Reception in Spain”

Human Sciences and Empire (S3)
Cornelia Lambert, University of Oklahoma, “Empiricism and Empire: Robert Owen’s Scotland in the Romantic Age”
Kathleen Sheppard, University of Oklahoma, “Serving the Empire: Nineteenth-Century Women Archaeologists in the Field”
Theresa Ventura, Columbia University, “From Tropical Agriculture to Ethnobotany: Trajectories of American Agricultural Science in the Philippines, 1898-1945”
*Christine Manganaro, University of Minnesota, “Racing Cross in Hawai’i: Harry L. Shapiro and the Chinese-Hawaiian Project, 1926-1936”
*Chair and Commentator: John Jackson, University of Colorado-Boulder

*Matthew Underwood, Harvard University, “Government by Questionnaire: Epistemic Technique as Political Technology in the Early Modern English Atlantic World”
Chair & Commentator: Larry Stewart, University of Saskatchewan

Spaces and Places in the History of American Social Science (F32)
Christopher Green, York University, “The Mind in the Urban Jungle: Chicago’s Psychology in the 1890s”
Alexandra Rutherford, York University, “Putting Behavior in its Place: The Sites and Spaces of Behavior Modification, 1950s-1970s”
*Chair & Commentator: James Capshew, Indiana University

Physics, History, and Beyond: Seeing the World through Spencer Weart’s Eyes (S2)
Mary Jo Nye, Oregon State University, “Scientists in Power: Pioneering the Modern History of Physics”
Ellen Bales, University of California, Berkeley, “Nuclear Images, Nuclear Imaginaries, Nuclear Fears: Cultural History Beyond ‘The Public’”
Alexei Kojenikov, University of British Columbia, “More is Different, or ‘the transition from quantity to quality’”
Deborah Goin, Barnard College, Columbia University, “The Social Discovery of Global Warming”
*Chair: David Kaiser, MIT

*Commentator: Spencer Weart, American Institute of Physics
Preliminary Program

John Carson, University of Michigan, "Crisis of 'Crisis' in Turn of the Century French Psychology
Ludmila Hymans, Max Planck Institute for the History of Science, "Between History and Methodology: Yerkes's Crisis in Context"
"Uliana Feest, Technische Universität, Berlin, "Edmund Husserl and the Crisis of Philosophy"
Commentator: Francesca Bordogna, Northwestern University

Genetics & Biomedicine (S10)
Nathanial Comfort, The Johns Hopkins University, "Why is Victor McKusick considered the 'Father of Medical Genetics'?"
"Angela Creager, Princeton University, "Artificial Radiotoposes and Cancer: Experimental Therapies, Diagnostic Methods, and Risk in the Atomic Age"
Soraya de Chadarevian, UCL, "Genetics and Public Health in the 1960s"
Maria Jesus Santosmases, Departamento de Ciencia, Tecnología y Sociedad, Instituto de Filosofía, CSIC, Madrid, "Heredity in the Clinic: Early Cytogenetics from London to Madrid, 1956-1966"

Saturday, 12:00 - 12:30 p.m.
Forum for the History of Human Sciences Business Meeting

Saturday, 12:30 - 1:15 p.m.
Forum for the History of Human Sciences Distinguished Lecture (S11)
Henrika Kuklick

Saturday, 1:30 – 3:10 p.m.
Managing Risk: Assuaging Doubt (S12)
Grischa Meclay, Harvard University, "Risky Drinking: Conceptions of Risk in Debates about Prohibition, 1900-1920"
Ioanna Semadeferi, University of Houston, "Regulating ALARA – as Low as Reasonably Achievable? Health-Physics Practice and Profession"
Adam Lawrence, University of California, Los Angeles, "An Ecological Study of Predation between Aircraft, U-Boats, and Ships: Evolutionary Theory, Developmental Genetics, and the Second World War"
Don Leggett, University of Kent, "Our 'doubts' in fact appear to me as sacred": William Proude, Test Tanks and Victorian Doubt"

Dimensions of a Scientific Career (S13)
Paul Halpern, University of the Sciences in Philadelphia, "Architectures of Communication: Cybernetics, Temporality, and Perception in Post-War American Design"
Kristina Espmark, Umed University, Sweden, "When Science is Paradise: Research and Boundaries in Astrid Cleve von Euler's Scientific Career"
Brigitte Van Tiggelen, Université catholique de Louvain; Annette Lyknes, Norwegian University of Science and Technology, "Women of Science and Wife of a Scientist: Ida Noddack-Tacke"
Edward Jurkowitz, Illinois Institute of Technology, "Planck's Unification of Physics with/in German Liberal Culture"

Mechanism and Life in the 18th Century (S14)
Gerard Mergels, VUB Free University Brussels, "Why Did Nobody Ever Discover Photosynthesis?"
Minwoo Seo, Seoul National University, "Meditating Models and Machines: John Seneaton and the Interactions between Natural Philosophy and Engineering in 18th-Century Britain"
Lynnette Regoubi, University of Wisconsin, Madison, "Man as Machine, Man as Plant: Analogies of the Body in La Mettrie's L'homme plante"

Collectors and Museums (S15)
Taika Dahlborn, University of Turku, Finland, "Specimen, nöe Example: Zoological Objects of Inquiry since 1655"
Amy Margaris, Oberlin College, "Artic Exploration & Ethnological Collecting in Historical and Contemporary Perspective"
Conor Burns, York University, "Between Science and History: Archaeological Conceptions of the Past in 19th-century America"
Sarah Mitchell, University of Southampton, "Science or Spectacle: The Tale of a False Dictionaries"

Medicine and Alterity in Asia and the Mediterranean (S16)
Mazi Allen, Saint Mary's College of California, "Attitude musulman maghrébin devant la folie et le phénomène de l'égarement en milieu psychiatrique: Our Extended Critique of Psychiatry in the West"
Pratik Chakrabarti, University of Kent at Canterbury, "Living versus Dead: The Making of the Simple Anti-rabic Vaccine"
Sanem Guvenc-Saligari, State University of New York at Binghamton, "From Public Health to Eugenics: The 1957 Typhus Epidemic in Istanbul"
Eun Jeong Ma, Cornell University, "What is 'Colonial' about Colonial Medicine and Science?"

Harvey and the 17th-century Science of Life (S17)
Peter Distelzweig, University of Pittsburgh, "De Artificialis Mechanica Musculorum: The Mechanical Problems in William Harvey's De motu corporis animatis"
Benjamin Goldberg, University of Pittsburgh, "De Generatione Animalium and the New Science"
Randy Kidd, St. John's College, "Language of the Heart: The Mingling of Metaphor and Literal References to the Heart and Blood in the Writings of Harvey and his Contemporaries"
Joel Klein, Indiana University, "Thomas Willis's Experimental Chemical Anatomy"

Science and the American Public (S18)
David Hecht, Bowdoin College, "Scientific Americans: Nuclear Physics and Nationalism after Hiroshima"
James Hurlbut, Harvard University, "Confusing Deliberation: What 'cloning' Means for Democracy"
Daniel Thurs, University of Portland, "Martian Madness: Orson Welles' War of the Worlds and the Construction of Mass Panic as a Response to Advances in Science and Technology"
Matt Tribble, University of Texas at Austin, "'A Far-Out Device': Confronting the Thrilling, People-Killing Neutron Bomb in Carter-Era America"

In Darwin's Day (S19)
Ingo Brigandt, University of Alberta, "Continuity in Scientific Concept Use: Homology in the 19th Century before and after Darwin"
Sondra Cooney, Kent State University, "Did the Land Rise or the Seas Recede? Robert Chambers's Ancient Sea-Margins: Its Contribution to 19th Century Scientific Controversy"
Donald Forsdike, Queen's University, Canada, "William Bateson's Unacknowledged Debt to Charles Darwin's Research Associate George Romanes"

Philosophical Perspectives on Experiments and Model (S20)
Hasok Chang, University College, London, "Electrolysis before the Modern Ionic Theory: Undetermined Closure and Pluralism"
Paolo Palmieri, University of Pittsburgh, "Comparative Study of Experimentation in the Physical Sciences"
Karen Zwier, University of Pittsburgh, "John Dalton: From Puzzles to Chemistry by Way of Meteorology"
Hylarie Kochiras, University of North Carolina at Chapel Hill, "Gravity & Newton's Substance Counting Problem"

Ancient Science (S21)
Elizabeth Burns, University of Toronto, "Perspective in Ptolemy's Almagest and Planetary Hypotheses"
Saturday, 3:30 – 5:30 p.m.

The Order of Language: Forms of Print and Early Modern Natural Knowledge (S22)
Carla Nappi, Montana State University, “The Order of Things: Translating Chinese and Arabic Nature in Early Modernity”
*Matthew Eddy, Durham University, “The Grammar of Anthropology”
Chair: Adrian Johns, University of Chicago

Desiderata, Erata, Queries: List-making and the Organization of Natural Knowledge, Material Goods, and the Community in Early Modern Science (S23)
Vera Keller, Princeton University, “The Desiderata List: Collecting the Future in the Early Modern Past”
Valentina Pugliano, Oxford University, “Letters and Lists for Practical Botanists”
*Elizabeth Yale, Harvard University, “Apothecaries Think Natural Knowledge in Sixteenth-century Venice”
Chair and Commentator: Alix Cooper, Stony Brook University

To Explain and Protect: A Century of Scientific Research on Children (S29)
Sponsored by the Forum for the History of Human Science
Kathleen Jones, “Unnatural and Monstrous: Creating ‘Child Suicide’ in the Nineteenth Century”
*Ellen Herman, University of Oregon, “At Risk: Why Childhood Matters for History of Science”
Chair and Commentator: Hamilton Craven, Iowa State

Thinking with Machines (S28)
Alan Gabbay, Barnard College, Columbia University, “Hamlet and Other Machines”
Sophie Roux, Université Grenoble II, “Why Machines?”
*Maarten van Dyck, Ghent University, “Mechanical Foundations for Collision”
Chair: Domenico Bertoloni Meli, Indiana University
Commentator: Peter Machamer, University of Pittsburgh

Nuclear Bombs, Radiation, and Risk: The United States Nuclear Weapons Program, 1945-1966 (S27)
*B. Jerry Jesse, Montana State University, Bozeman, “Toward the Ecological Body: Nuclear Fallout, Bodies and Environment at the Nevada Test Site”
David A. Burke, Auburn University, “Southern Devils: Atomic Testing In Mississippi, 1944-1946”
Laura J. Barkewicz, University of California, San Diego, “Selective Illumination: Using the Scientific Uncertainty of the Bravo Medical Program to Establish ‘Changed Circumstances’”
Chair and Commentator: Jacob Darwin Hamblin, Clemson University

Science and Spectacle in 18th-century Europe (S29)
Mi Gyung Kim, North Carolina State University, “The Balloon Spectator”
*Michael Lynn, Agnes Scott College, “Controlling Spectacle and the Policing of Aeronautics in Europe at the End of the Eighteenth Century”
Commentator: Jan Golinski, University of New Hampshire

The Spread of the History of Science: Appropriations, Nationalisms, and Globalizations since Basalà (S30)
Kenji Ito, Sokendai, The Graduate University for Advanced Studies, “Pedagogical Structure and Failure of Knowledge Transmission: Marginalization of the History of Science in Japan”
Gabriela Soto Laveaga, University of California, Santa Barbara, “Populist Science: Politics and National Projects in Mexico, 1970-1976”
Chair: Abena Osseo-Asare, University of California, Berkeley
Commentator: Buhm Soon Park, Korea Advanced Institute of Science and Technology

Nervous Nellies: Neuroscience in the 20th Century (S31)
Otniel Dror, The Hebrew University of Jerusalem, “Cultures of Adrenaline”
Vivien Hamilton, University of Toronto, “Physics in Use: Models of Electricity in 19th-century Electrotherapy Textbooks”

Saturday, 6:00 - 6:30 p.m.
Cash Bar Reception

Saturday, 6:30 - 7:30 p.m.
History of Science Society Distinguished Lecture
Steven Shapin, Harvard University

Saturday 7:30 - 8:00 p.m.
Announcement of 2008 Awards and Prize Winners

Saturday, 8:00 - 10:00 p.m.
Society Dinner
PRELIMINARY PROGRAM

Sunday, 8:00 - 9:00 a.m.
History of Science Society Business Meeting

Sunday 9:00 – 11:45 a.m.

Animals, Biologists and Their Common Habitat (Su1)
Raf De Bont, University of Leuven, “So Full of Romance, so Unspoiled, Rough, Rugged and Primitive’. The Bird Observatory in Reussen and the Culture of the Outpost”
Georgina Montgomery, Montana State University, “Performing Science on ‘Performance’ Animals: Robert Mearns Yerkes and the Study of Primate Behavior”
Martina Schliender, University of Gießen, “Between Alps, Operating Room, Stable and Laboratory: A Toponymy of Sheep in Modern Trauma Surgery (1960-)”
Chair: Raf De Bont, University of Leuven

Heredity After Darwin: The Search for a Synthesis (Su2)
*Marsha Richmond, Wayne State University, “Bateson’s Pre-Mendelian Study of Heredity and Heredity”
Nils Roll-Hansen, University of Oslo, “Johannsen’s Genotype Theory and his Critique of Darwinism”
Sander Gilloff, Indiana University, “Morphology Strikes Back: Richard Semon and a Counter-Revolt Against Genetics and Experimentalism”

New Directions in the Study of the Life and Work of Werner Heisenberg (Su3)
*Suman Seth, Cornell University, “Heisenberg’s Observables and Sommerfeld’s ‘Lawful Regularities’: Re-thinking the Methodological Origins of Matrix Mechanics”
David Cassidy, Hebrew University, “Revisiting Heisenberg, Uncertainty, and Quantum History”
Kristian Camilleri, University of Melbourne, “Heisenberg and Quantum Mechanics in Cultural Context: The Search For a New Weltanschauung”
Cathryn Carson, UC Berkeley, “Was Heisenberg Really Unphilosophical? Reflections from Practice and Theory”
Chair: Cathryn Carson, UC Berkeley

Vertical Geographies of Science (Su4)
*Michael Reidy, Montana State University, “From the Quarries to the Peaks: John Tyndall’s Vertical Physics”
Jeremy Vetter, Dickinson College, “Rocky Mountain High Science: Teaching, Research, and Nature at Field Stations”
Catherine Nisbett, University of Chicago, “Managing Vertical Distance: The Harvard College Observatory’s Boyden Expeditions”
Chair: Michael Robinson, University of Hartford

Early Modern Science and Medicine (Su5)
Victoria Meyer, University of Virginia, “Giving the Pox: A Case of Medicine and Polemic in Enlightenment France”
Eric Palmer, Allegheny College, “The Best of all Panglosses”
James Evans, University of Puget Sound, “Students as Weapons: The Lyon Thesis on Le Sage’s Theory of Gravitation (1770)”
Julie Grissom, University of Oklahoma, “Homo vermiculosus: Nicolas Andry and 18th-century Parasitology”
David Teira, Universidad Nacional de Educación a Distancia (Madrid), “The ‘Theology of Large Numbers: A Conjecture’”

Control and Scientific Boundaries (Su6)
Cynthia Bennet, Iowa State University, “Bridging the Gap: Science Service, Scientists, and the Press”
Robert Schombs, Cornell University, “Burning Questions: Justus Liebig on Spontaneous Human Combustion”
Christina Matta, University of Wisconsin, Madison, “Finding a Stable Species: Physiology and Specificity in Ferdinand Cohn’s Bacterial Taxonomy”
David Schmit, College of St. Catherine, “Memetic Science in the mid-19th Century”

Organizing/Publicizing Science (Su7)
Melinda Baldwin, Princeton University, “Nature’s Contributors and the Changing of the Scientific Guard, 1859-1900”
Alex Csizsár, Harvard University, “Centralizing the Scientific Machine: Bibliographical Controversies at the End of the Nineteenth Century”
Ari Barel, Ben-Gurion University of the Negev, “Turning Ordinary Housewives into ‘Opinion Makers’: The Scientists’ Movement, the NCAI, and the Nascent Public”

Session Chairs Needed
If you are not on the program, please volunteer to chair a session. Sessions where no chair or commentator are listed can benefit from your expertise and willingness to be involved.

Field Trip to Muddy Creek
Friday, 1-5 p.m. Discover the early oil and gas industry around Pittsburgh and visit the fields between Pittsburgh and Muddy Creek (guided by geologist Kathy Flaherty). DVDs on the early oil industry in Pennsylvania will be shown during the bus ride (including “Born in Freedom: The Story of Colonel Drake,” made in 1954 and starring Vincent Price as Colonel Drake.) See registration form for costs. (If we do not receive sufficient bookings by the close of business on 14 October, HSS-supplied transportation will be cancelled and your payment refunded.)

Field Trip to Hunt Institute
Friday, 10 a.m. - 12:30 p.m. The Hunt Institute specializes in the history of botany and all aspects of plant science. The institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files. During the field trip curators will display and discuss items from their historical collections for conference attendees. Also included is a gallery exhibit on renowned botanical artist Pancrace Bessa (1772-1835). See registration form for costs. (If we do not receive sufficient bookings by the close of business on 14 October, HSS-supplied transportation will be cancelled and your payment refunded.)

WiFi in Pittsburgh
The city of Pittsburgh offers two hours of free wifi access per day. Coverage is spotty in the conference hotel but you can pick up a signal in various places, including some of the meeting rooms. You may also purchase wifi access for $7.99/day or 14.99/month.
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To help us assign session rooms, please indicate which sessions you plan to attend, e.g. F3, Sa2, Su8, etc. (See preliminary program for session codes.)


date:

EVENTS

TOUR OF THE HUNT INSTITUTE (Friday, 7 November, 10:00 a.m. - 12:30 p.m. Maximum: 38 participants) $10

FIELD TRIP TO MENDY CREEK (Friday, 7 November, 1:00-5:00 p.m. Maximum: 38 participants) $15

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To help us assign session rooms, please indicate which sessions you plan to attend, e.g. F3, Sa2, Su8, etc. (See preliminary program for session codes.)

Conference Registration Form and payment by check, money order, or credit card must be postmarked by 1 October 2008 to take advantage of early registration rates.

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technological determinism. Some scholars have claimed that the immense social and economic forces propelling human enhancement are ultimately irresistible, while others have maintained that vigorous governmental intervention can still avert a "post-human" future. I lay out a third position, basing my argument on an analogy drawn from the history of the environmental movement since the 1960s (the subject of my second book, The Light-Green Society).

A second major issue has to do with the commodification of humans. I suggest that enhancement technologies pose a serious moral risk, precisely because they tempt us to think of persons as entities that can be "improved." As soon as one takes this step, one is (whether intentionally or not) breaking down human personhood into a series of quantifiable traits like body shape, resistance to disease, intelligence, emotions, and sociability. The danger here lies in reducing individuals to the status of products, artifacts, or commodities: we risk losing touch with that ineffable quality of intrinsic value that we all share, no matter what our traits may be.

A third recurring theme centers on the question of democratic access. If we cannot provide even rudimentary equality in access to basic education and health care today, why should we believe that our society will have any greater success in doing so with enhancement technologies half a century from now? This tendency toward "bio-stratification" will constitute one of the most serious challenges posed by the advent of enhancement technologies.

Finally, if human enhancement becomes widespread, one of the outcomes may be an incremental fragmentation of humanity, based on varying biologies, dissimilar machine components, and sharply contrasting abilities. These technologies are not mere superficial markers of social difference, like clothes, jewelry, or tattoos. They hold the potential to alter the fundamental constitution of individuals, ranging across their entire profile of physical and mental capabilities. It is not implausible, therefore, to envision a dystopian evolutionary process through which our species gradually splits into discrete sub-cultures and lineages having increasingly little in common with each other.

Andrea Rusnock, Osiris's New Editor

Andrea Rusnock will officially take over the Osiris editorship on 1 January 2009. She succeeds Kathryn Olesko, who will have served as editor for 10 years. Rusnock's five-year term will cover volumes 28 to 32, and she plans to build on Olesko's efforts to connect history of science with the broader history community. "I want to identify topics that will encourage dialogue among diverse historians." The goal Rusnock envisions is to broaden and enrich history of science as well as other scholarly fields. "We want to reach out to others as part of a collaborative effort."

Rusnock received her Ph.D. from Princeton University. She focused on the history of biology, medicine, and the Enlightenment. She had a postdoc at the Wellcome Institute for the History of Medicine in London to edit the papers of James Jurin, an 18th-century physician and secretary to the Royal Society. She then joined the STS program at Rensselaer Polytechnic Institute, where she worked with sociologists, anthropologists, philosophers, and political scientists. Currently, she is a member of the history department at the University of Rhode Island and teaches history of science, history of medicine, and European history.

"Like all editors, I bring my own experiences and scholarly interests to the position. I want to reach out to environmental history and to our sister societies in history of medicine and history of technology." Recently she attended a conference on disease and global environmental history that underscored the important links among environmental history, history of medicine, and history of science. At the University of Rhode Island, she co-taught an honors course with two entomologists on emerging diseases. "These experiences suggest interesting sites where we could engage in fruitful dialogue." Rusnock continued that "it is also worth thinking about the relationship of science to economic development and political economy more broadly, an area historians of medicine have worked on extensively." Rusnock would also like to expand the geographical scope of Osiris by considering the global circulation of knowledge and goods.

The annual publication calendar imposes its own constraints on editors. Olesko's final issue, volume 27 commissioned in 2008, will be published in 2012. The first year of the four-year publication cycle involves commissioning, beginning with a call for proposals in January or February; the next year typically includes a conference for contributors; in the third year papers are submitted for review; and in the fourth year, they are edited and the volume is published. Guest editors play a vital role in soliciting and selecting contributions. As Rusnock puts it, "I might set the course, but many other hands are needed to sail the ship."

Apart from healthy numbers and on-time distribution, Rusnock would also like to hand on to the next editor a versatile and engaging publication. "I want to see Osiris used in the classroom for upper-level undergraduate courses and graduate courses. Since journals typically aren't reviewed in other journals, one of the challenges is to make professors and instructors aware of this great resource; Osiris is a paperback, it's affordable, and full of innovative scholarship in exciting areas."
Lone Star Group Marks 20th Anniversary at UT – Austin

On 28 March, the University of Texas at Austin hosted the 20th anniversary meeting of the Lone Star History of Science Group. When Al Van Helden, Robert Palter, Loyd Swenson, Fred Kronz, Bruce Hunt, and the late Sylvia McGrath founded the group in 1988 at an Austin restaurant, they little imagined it would still be going strong so many years later. They were just looking for a way for people around Texas who were interested in the history of science, technology, and medicine to come together each spring to hear a talk, share a meal, and get to know each other a little better. The group has succeeded very well, perhaps because it has remained resolutely informal — its founding document, scribbled on the back of a book advertisement, states that “there shall be no bylaws, officers, or dues,” and the group has always stuck closely to those principles.

For its anniversary meeting, the Lone Star Group was happy to welcome back Professor Van Helden, now of the University of Utrecht. A former president of the History of Science Society who formerly taught at Rice University in Houston, Al gave a fascinating talk about early telescopic astronomy and the need to supplement written sources with an examination of actual lenses and other artifacts if we are fully to understand what Galileo and his successors accomplished. Al’s talk was followed by a lively discussion, and the group capped the occasion by sharing a cake decorated to resemble one of Galileo’s early drawings of the moon.

History of Science at the University of Texas

The Lone Star meeting was just one of a string of events that made 2007–08 a banner year for the history of science at UT–Austin. Graduate student Angela Smith took the lead in launching a History of Science Colloquium that welcomed visiting speakers Pamela Smith (Columbia University), Rajesh Kochhar (of India), Scott Knowles (Drexel University), and Paula Findlen (Stanford University), plus several speakers from within UT. In April UT also hosted MEPHISTOS, a national graduate student conference in science and technology studies, featuring a keynote address by David Oshinsky of the UT History Department, whose book Polio: An American Story won the Pulitzer Prize in 2006.

The UT History Department has recently formalized its graduate program in the history of science. Over the years many UT students have worked on topics in the history of science; for example, Greg Cushman, now an assistant professor at the University of Kansas, wrote a prize-winning dissertation in 2004 on “The Lords of Guano: Science and the Management of Peru’s Marine Environment, 1800–1973.” It is only in the last two years, however, that the department has reorganized its system of major fields to allow students to pursue the history of science as a formal field rather than simply an area of concentration within a geographically-defined field. Two students (Angela Smith and Frank Benn) are currently pursuing major fields in the history of science, while about nine others, though their formal fields are elsewhere, are writing dissertations on topics in the history of science, technology, or medicine.

The UT History Department recently designated the history of science as a priority area for future development. Bruce Hunt (modern physics and technology) has taught in the department since 1985; more recent additions to the faculty include Jorge Canizares-Esguerra (science in colonial Latin America), Roger Hart (Chinese science and mathematics), Abigail Lustig (life sciences and evolutionary biology), and Alberto Martinez (modern physics and mathematics). Several other members of the department also have an interest in the field, as do Linda Henderson in Art History, Elizabeth Hedrick in English, and Sahotra Sarkar and Jim Hankinson in Philosophy. (Fred Kronz, formerly of Philosophy, now directs the NSF program in science, technology, and society) William Aspray, well known for his work in the history of computing, will join the UT School of Information this fall.

Much of the recent growth in the history of science at UT has been stimulated by UTeach, a program the College of Natural Sciences launched several years ago to improve the training of secondary school science and mathematics teachers. It has proven very successful and, with foundation support, is now being replicated at other universities around the country. From the first, the UTeach curriculum has included a course on “Perspectives on Science and Mathematics” designed to expose prospective science teachers to the history of the subject. Both Abigail Lustig and Al Martinez were first brought to UT to teach the “Perspectives” course, and at the November HSS meeting in Pittsburgh they will help lead a special session about how efforts to spread the UTeach model may open new and rewarding jobs for historians of science.

The next meeting of the Lone Star Group is set for spring 2009 at Rice University in Houston. For more information, contact Professor Cyrus Mody at cyrus.mody@rice.edu.
Second HSS / NASA Fellowship Awarded in the History of Space Science


Under the HSS/NASA Fellowship for the history of science and mission operations on remote planets with two complementary lines of research questions: first, how did this model of consensus-based work develop on the mission, and second, what other arrangements of humans and machines have characterized past unmanned NASA missions? I will begin my research at NASA Ames Research Center’s archive studying the development and early days of the Mars Rover mission. Further research will involve visits to NASA archival centers and oral history interviews with members of NASA robotic exploration missions such as Mariner, Viking, Voyager, and Galileo.

As a historian and sociologist of science, my work on contemporary space exploration continues my research interest in the visual cultures of science and the history of astronomy more generally. In addition to doctoral work at Cornell’s Science & Technology Studies Department, I hold an M.Phil in the History and Philosophy of Science from Cambridge University and a B.A. in Science Studies from UBC. My publications include studies of how the London Underground Map affects representation of and interaction with urban space, ongoing research in Human-Computer Interaction, and topics in seventeenth-century visual astronomy, such as Hevelius and Riccioli’s competing lunar maps and the use of images in Hevelius and Hooke’s debate over telescopic sights.

— by Janet Vertesi

First HSS / NASA Fellowship in the History of Space Science

The aim of my research project was to study the origin and development of planetary research in the European Space Agency (ESA). The fellowship was essentially used to support archival research at ESA’s Headquarters in Paris. The ESA archivist, Nathalie Tinjod, and the staff of the Directorate of Science provided me with support during my research work in Paris. Moreover, I enjoyed the important intellectual support from the ESA Coordinator of Solar System missions, Marcello Coradini.

I collected three kinds of unpublished documents which would become the documentary basis of my historical research. First, are the official documents related to the activity of ESA’s committees and working groups (minutes of meetings, information documents, recommendations, etc.). Second, are the unpublished documents related to the activity of the ESA Directorate of Science (correspondence, memos, monthly reports, minutes of meetings, etc.). Finally, there are the scientific and technical reports related to mission selection (mission proposals, assessment studies, feasibility studies, etc.).

My focus has been in the decision-making process which led to the selection of the various missions of interest within the framework of the fellowship project. This process is characterized by a bottom-to-top approach. The European space science community at large is the only source of ideas and concepts of missions. These are then discussed by expert groups and advisory committees, with the Agency providing support for assessment and feasibility studies. Due to the limited financial resources, only one or two missions are approved in each decision-making run, and the final decision is the outcome of a highly competitive process involving many levels of interest: the various national and/or disciplinary sectors of the scientific community; the ESA technical staff; the space industry in the various member states; the national space policies; the relations with NASA and other space agencies; etc.

In particular, I collected documents related to the selection processes leading to the adoption in the ESA Scientific Programme of the missions Huygens (1982-1997), Mars Express (1990-1997), Venus Express (2001-2002), and Rosetta (1985-1993). Moreover, I made six recorded interviews with people who had key roles in the implementation of ESA planetary missions: Agustin Chicarro, project scientist of the Mars Express mission; Roger Bonnet, former Director of the ESA Scientific Programme; Marcello Fulchignoni, PI in the Huygens mission; Daniel Gautier, IDS in the Huygens mission; Marcello Coradini, coordinator of ESA solar system missions; and David Southwood, present Director of ESA Scientific Programme and former SSAC chairman.

I am now studying these documents, and draft papers on the history of the Cassini-Huygens and Mars Express missions have already been prepared. A new archival research phase is planned for the late summer.

— by Arturo Russo
History of Science in Portugal: Where Do We Stand Today?

As often happens in peripheral countries like Portugal, the combination of international networking and the efforts of a foreigner, in this case Aldo Mielzi of Italy, led to the creation of the Portuguese Group of History of Science (Grupo Português de História das Ciências). Formed in the early 1930s, during the dictatorial regime of Oliveira Salazar, the group was responsible for the organization of the Third International Congress for the History of Science (1934), in which George Sarton, then president of the Académie Internationale d'Histoire des Sciences, delivered the inaugural speech. They launched a journal, *Petra Nemias,* which lasted from 1937 to 1951, the year in which the group dissolved. Eclectic in composition, the group included mostly university professors and academicians, physicians, and mathematicians, whose approach was typical of scientist-historians. Many held positions at the University of Coimbra, the oldest institution for higher education in Portugal, and some members explicitly endorsed the politics of Salazar.

A decade after the group's disappearance, another external connection influenced the history of science in Portugal, by introducing history of science courses to undergraduate science students at the University of Coimbra. It came via the connection between mathematician-turned-historian Luís de Albuquerque, an international specialist on the history of nautical sciences, and Dutch historian of science R. Hooftkaas, who played a leading role in putting the Portuguese contributions to the emergence of modern science on the international agenda of historians of science. This attempt failed due to the lack of political and financial support, and it was only in democratic Portugal, after 1974, that history of science courses were successfully introduced to science undergraduates in some Portuguese universities. I profited from this happy turn of events, having attended in the late 1970s the introductory course on "History of Ideas in Physics," delivered at the University of Lisbon by the physicist Andréade e Silva, former Ph.D. student and long-time collaborator of Louis de Broglie and an enthusiast of history of science à la Koyré.

The task fell on those who profited from these initial courses to foster the history of science at the national level, to raise it to international standards of scholarship, and to participate actively in international networks and implement undergraduate and graduate courses. But while a discipline's consolidation is usually associated with the increasing professionalization of its practitioners, along with their internationalization, in Portugal the past 15 years reveal the cohabitation of different stages of development. Together with episodic contributions to the discipline by people marginally related to it, and the still large participation of scientist-historians (especially mathematician-historians), a steady increase of professional historians of science is taking place. By professional historians of science I mean those who hold Ph.D. degrees in the field and/or those who, irrespective of their fields of origin, publish regularly in international forums. Opposing an old trend in which the great majority of professional historians of science held a scientific undergraduate degree, some hold undergraduate degrees in history — the interface with economic history, history of culture, and history of ideas being noticeable.

At the present time, the community of Portuguese professional historians of science includes roughly 20 senior historians of science, and a few post-docs (around five, some of whom are foreigners). Senior historians of science are mostly professors affiliated with major Portuguese universities (Lisbon, Évora, Coimbra, and Aveiro), a few being researchers associated with universities, research institutes or museums of science. There are around 20 Ph.D. students and an equivalent number of M.Sc. students. Recently, the Portuguese government launched a program aimed at hiring junior post-docs at an international level — the history of science is already benefiting from this program.

In Portugal, scientific research is funded by the Fundação para a Ciência e a Tecnologia (Foundation for Science and Technology - FCT), not by university departments. At present there are three research centers on the history of science and technology accredited and funded by the FCT (two in Lisbon, one in Évora). They are evaluated periodically by an international panel and their budget depends both on the number of their Ph.D. members and on the evaluation's grade. There are two graduate programs on the history and philosophy of science, both in Lisbon (one

Replica of mathematical game Ludus Regularis, 10th century

Nineteenth-century chemical laboratory, University of Lisbon (Photo courtesy P. Cintra, Museum of Science of the University of Lisbon)
including both a M.Sc. and a Ph.D. program, the other just a Ph.D. program). Presently, the fusion of different programs, as well as their reformulation to focus more on the history of science and technology, are under discussion. Next year, a minor in history and philosophy of science (corresponding to one semester out of a three-year undergraduate degree) will be launched in the Faculty of Sciences of the University of Lisbon as well as an M.Sc. program in History and Heritage of Science, Technology and Innovation at the New University of Lisbon.

An on-line international journal specifically devoted to the history of science and technology (HoST) was launched in 2007, the first after the short-lived attempt associated with Petrus Nonius, but there is no active scientific society. A considerable number of national and international meetings have recently been organized by the Portuguese scholarly community. During 2008 Lisbon housed (or will house) the Board Games Studies Colloquium XI (April), the XXVII Symposium of the Scientific Instruments Commission (September), SHOT 50, the Society of the History of Technology Annual Meeting (October), and the HoST Annual Meeting (November), all headed locally by members of the community of historians of science (and technology). Portuguese historians of science have been participating on a regular basis in international forums such as the STEP – Science and Technology in the European Periphery International Group, and European networks such as “Circulation of Knowledge in Early Modern Science,” “Scientific Periodicals in Modern Europe,” and “Thesaurus - Network of Portuguese and Brazilian Museums of Science.” Additionally, there has been a concerted effort to organize exhibitions that offer history of science topics to the public at large.

The scarcity of a history of science bibliography in Portuguese libraries and the limited access to on-line journals still haunts historians of science. Added to this are difficulties in accessing many archives, which are often poorly – or not at all – organized. Small improvements include translations of recent landmark literature on history of science, and publication of primary sources, both printed and manuscript. The recent offer of the private library of historian of science S.G. Brush to the Center for the History of Science of the University of Lisbon, located at the Faculty of Sciences, has been a major event in the community’s life.

The community of professional historians of science covers a wide variety of thematic areas, ranging from the 16th to the 20th century. Most publish on Portuguese topics, which indicates not a lack of internationalization but a willingness to unveil and interpret many new episodes, revise received views in the few cases in which they exist, and offer case studies informed by recent mainstream historiographical trends – thus enriching international scholarship with case studies from the history of science in Portugal. They apply a broad range of methodological approaches, including essentially descriptive ones, internalist-oriented, and those more consonant with recent trends in science and technology studies, including an integrated approach to material culture and collection-based history of science. Especially important has been input from STEP. Among Portuguese STEP members, many have framed the study of science in Portugal by shifting the emphasis from transmission to appropriation, from the perspective of the center to the perspective of the periphery, and from the isolated study of the periphery to the comparative assessment of developments.

At this juncture and despite the small community of professional historians of science, it is not too optimistic to predict that a first preliminary overview of many episodes can be offered, answering new questions, and contributing in the not-so-distant future to a sketch of a “big picture” of the history of science in Portugal, a framework in which detailed case studies should find a place.

by Ana Simões
Centre for the History of Science, University of Lisbon

M.Sc. students at work. Course on “Collections, Museums and History of Science”
As a curator at the CSTM, I was able to hold a course in the storage facility, but there are many ways for outsiders to conduct versions of this course by coordinating with museum staff to host seminars or by developing a small teaching collection on your own campus. Almost every campus has a collection (official or not) from which a lively artifact course can be taught.

The other challenge is working with artifacts. The museum storage facility is a stimulating environment, but also an intimidating one because students (and mature historians, for that matter) are not comfortable with actual objects. For most visitors, artifacts are something to identify, contextualize in a general sense, and then use as an illustration for themes that have little to do with the actual material object. As Taylor noted about art, rapid identification can often dampen curiosity. Even experts in a particular field will not necessarily notice or ponder details of an instrument they have written at length about.

One strategy is to arm students with a broad set of questions and examination tools based on the Winterthur method.1 Basically, I began the artifact sessions by asking the students to examine the most basic properties of the artifacts—materials, colors, finish, markings, modifications and manufacturing labels. These are followed by questions that deal with the history (when, where, who, and how was it made?), design (what is its physical structure and shape? is it ornamented?) and function (how it works and evidence of use?). Another part of the examination is more analytic with questions about the identity (what criteria do we use for identifying an object?), and aesthetic qualities (form, style and ornament; identify the unnecessary or non-functional elements). There are also questions about construction, design, signs and symbols and how they convey status, ideas, values, meaning and feelings. I also encouraged the students to compare the object to others that come from the same time, geographical region, or culture; and objects that share a similar set of physical, aesthetic or symbolic characteristics. Finally, during or after classes I would walk the students through the collection to encourage unusual, unexpected connections.

The key to this exercise is a careful and wide-ranging interrogation of artifacts. The more the students examine, the more questions appear. With persistent questions, they begin to transcend the traditional narratives determined by the artifact's name and classification. They start thinking critically about specific features and how these features represent choices and context of makers and users. Where there is choice there is culture, context, and history. Why these kinds of markings? Why this construction? Why this style of container? Why this kind of component or another? Why this kind of material? The latter question, to take one specific line of questioning, came up repeatedly in class. We examined a range of artifacts and asked from where the materials came and the conditions through which they were obtained and manufactured. These questions link the artifact to different geographies, historical spaces, environmental issues, scientific research, industrial, manufacturing, and commercial contexts. Mylar, for example, dating back to DuPont's polyester research in the 1950s, appears in a variety of instruments in our collection, from space to medical artifacts, demonstrating cross-fertilization of skills and materials.

Similar to the approach of an archeologist who recovers and studies a single object from a past civilization, a broad line of questioning creates distance and wider perspective. One of the seminar students, for example, wrote a descriptive essay about one of our CT scanner units from the mid 1970s. There is a large secondary literature on CT technology that deals with the development of computer tomography, the inventors, and the medical and scientific context. But the object itself had other stories to tell. The student focused on the main screen unit and placed the artifact in the context of console design and culture from the 60s and early 70s. The aisles and shelves of the storage buildings, filled with consoles from that period, became a source of questions and comparison.

The cultural analysis of artifacts requires students to probe for hidden beliefs, values, associations, and meaning.2 For the first descriptive essay, one student compared the shape and design of a small electrical inhaler to a tea cup as a way of linking the item to the domestication of medical electrical devices.3 She also situated the electrical plug in a mid-century design context as a means for exploring underlying values related to selling and using medical technology at the time (Figure 4). To elaborate on this point, she...
compared the inhaler plug with other historic electrical plugs in our collection (and trade literature) from the same period. The examination of such a seemingly basic feature stimulated original research in the collection and insights into medical technology from that era.8

What can we learn by examining related artifacts from a different culture? In order to shift perspectives from Western post-war medical technology, we visited the Museum of Civilization (another national museum in Ottawa) to examine healing artifacts from the Northwest Coast. The students "read" the objects for evidence of choices, culture, and history (e.g. construction, materials, ornament, status, and symbolism). This exercise produced interesting contrasts and similarities with Western medicine and technology. The examination of several wooden rattles, for example, precipitated a discussion about the role of sound in medical technologies which in turn led to a discussion about MRI machines and their acoustic effects (moving gradient magnets in MRIs create unsettling bangs and sounds). In this way, the examinations lead to a different perspective on a recent, familiar technology. (The CSTM has a complete 1993 Philips MRI machine (the largest artifact in our medical collection) that will soon be displayed in an exhibit on medical imaging).9

The goal of artifact teaching, therefore, is the same as that of a museum—to broaden our experience and take us places beyond our present context. In Vladimir Nabokov’s short story “The Visit to the Museum,” the narrator wanders through the rooms of a French provincial museum suddenly finding himself back in the streets of Russia. Do twentieth-century artifacts have the potential to take us places? Can museums, exhibitions and teaching reflect the many voices of these complex objects? In some cases, one could argue, artifacts are the ideal vehicle for a curious historical imagination. They invite speculation on a number of fronts. Immersion with objects and collections, combined with a broad framework of examination, can liberate students from traditional narratives about science and technology. There is nothing more rewarding than learning something from even the most common object.

With persistent questions, [students] begin to transcend the traditional narratives determined by the artifact’s name and classification. They start thinking critically about specific features and how they represent choices and context of makers and users. Where there is choice there is culture, context, and history.

Figure 4. Design of electrical plugs in the 1940s and 50s. Canada Science and Technology Museum, acc. # 1999.0028. Photo by author 2008.

Figure 5. Soviet Thermolectric Generator, 1959. This kerosene thermolectric generator is a window into Soviet semiconductor research in the 1950s; it also embodies underlying cultural influences with its resemblance to orthodox vigil lamps. The American version from the same period simply rested on a table. Canada Science and Technology Museum, acc. # 1988.0288. Photo by Tony Misio 2008, Conservation Department at CSTM.

3 There have been two conferences related to this theme at Dartmouth College and the University of Mississippi, see http://www.dartmouth.edu/~sicu/ and http://home.olemiss.edu/~sicu2web/. Rich Kremer has transformed the Dartmouth collection into a teaching and research collection, see David Pantalony, Richard L. Kremer, and Francis J. Manasek (2005) Study, Measure, Experiment: Stories of Scientific Instruments at Dartmouth College. Norwich VT.
8 CSTM has a large collection of electrical plugs in our Ontario Hydro collection.
9 A good discussion of this challenge, with creative suggestions about MRI machines, can be found at Thomas Söderqvist’s blog on medical technology, http://www.corporeality.net/museion/.

− by David Pantalony
Curator, Physical Sciences and Medicine
Canada Science and Technology Museum
History Department
University of Ottawa

History of Science Society Newsletter • July 2008
Call for Papers


Upcoming Conferences


The following announcements have been edited for space. For full descriptions and the latest announcements, please visit our Web site (http://www.hssonline.org). The Society does not assume responsibility for the accuracy of any item; interested persons should verify all details. Those who wish to publish a future meeting/program announcement should send an electronic version of the posting to newsletter@hssonline.org.


Re)constructing the Aging Body: Western Medical Cultures and Gender 1600-2000. Johannes Gutenberg-University, Mainz, Germany, 26-28 September 2008. Meike Wolf: wolfmec@uni-mainz.de.


International Network for the History of Hospitals Fifth International Conference: Hospitals and Communities. 1 April 2009, Barcelona, Spain.


HSS Annual Conference. 18-22 November 2009, Phoenix, AZ, USA.

HSS Annual Conference. 4-7 November 2010, Montreal, Canada. Joint meeting with PSA.

**JOBS**

**Montana State University-Bozeman** seeks tenure-track assistant professor in Modern Islamic World History from candidates interested in environmental, ethnic, gender, science, and technology, and/or post-colonial studies, as well as those who can teach history of the Middle East or Africa. Screening begins 1 October 2008 and continues until hire is made. http://www.montana.edu/history/index.php?ps=default.

**School of Historical Studies at the Institute for Advanced Study** seeks distinguished scholar in the History of Science. Only candidates with distinguished scholarly accomplishments will be considered. Deadline: 10 October 2008. http://www.admin.ias.edu/hr/jobpostings.php. (See advertisement page 22)

The Department of History and Political Science at Missouri University of Science & Technology invites applications for a tenure-track assistant professorship for fall 2009 in the History of Science with a specialization in any area of European History. http://hr.mst.edu/employment/history_political_sci.html.

Research Fellow in Biomedical Ethics, **Durham University** (U.K.). The Department of Philosophy seeks an applicant for a 5-year Research Fellow post. Deadline 1 October 2008. http://www.nchm.ac.uk/.

**GRANTS, FELLOWSHIPS, AND PRIZES**

The CHF Beckman Center Visiting Scholar Program: http://www.chemheritage.org or e-mail: travelgrants@chemheritage.org.

The H. Richard Tyler Award for research at the AAN Rare Books Collection at the Bernard Becker Medical Library in St. Louis, MO. Applications: http://www.aan.com/awards.

**The University of Oklahoma: The Andrew W. Mellon Travel Fellowship Program.** E-mail: kmagruder@ou.edu or mogilvie@ou.edu. http://libraries.ou.edu/etc/histsci/mellon.asp.


**INA Grant-in-Aid Program** for research at the Vanderbilt University Medical Center Archives, Nashville, Tennessee. Deadlines: 1 March, 1 June, 1 September, 1 December. Applications to: INA Grant-in-Aid Program, c/o CINP Central, Office, 1608 17th Avenue South, Nashville, TN, 37212.


**California Institute of Technology Grants-in-Aid.** Applications reviewed 1 January, 1 April, 1 July, and 1 October each year. http://archives.caltech.edu.


Nominations requested for the Francis Bacon Award in the history of science, the history of technology, or historically-engaged philosophy of science. Contact Lisa Keppel at (626) 395-3609.


2009 Summer Stipends from the NEH support full-time work on a humanities project for a period of two months. Applications accepted between 1 August and 1 October 2008, http://www.neh.gov/grants/guidelines/stipends.html.

2009 Jerry Stannard Memorial Award encourages research by young scholars in the pre-1700 fields of the history of materia medica, medicinal botany, pharmacy, folklore of drug therapy, and the bibliography of these areas. Correspondence to Victor Bailey at vbailey@ku.edu.

Fellowships at The Radcliffe Institute for Advanced Study for scholars, scientists, artists, and writers in academic and professional fields and in the creative arts. Deadline 1 October 2008. http://www.radcliffe.edu. (See advertisement page 22)
The Chemical Heritage Foundation, Beckman Center for the History of Chemistry Fellows for 2008-2009

The Chemical Heritage Foundation is pleased to announce the appointments of the Beckman Center Fellows for 2008-2009. CHF will welcome six fellows for the academic year and eight more short-term fellows. Below are the fellows, their affiliations, and the title of their research topics.

**Academic Year Fellows**
2. Hiro Hirai, Edelstein Fellow (Post-Doctoral Research Fellow, Ghent U. (Belgium) Center for History of Science): "Matter and Life in the Natural Philosophy of Daniel Sennert."
3. Yoshiyuki Kikuchi, Edelstein Fellow (Post-Doctoral Researcher, Graduate University for Advanced Studies (Sokendai, Japan), Hayama Center for Advanced Studies): "US-Japan Scholarly Relations in Chemistry in the 19th and Early 20th Centuries."

**Short-Term Fellows**
1. Charlotte Bigg, Allington Fellow (4 months) (Research Fellow, Max Planck Institute for the History of Science (Berlin)), "Spectroscopic Enterprises in the Early 20th Century."
5. Anna Foy, CHF Fellow (2 months) (Ph.D candidate, U. of Pennsylvania English Dept.): "The Georgic and the Common Weal: Promises of West Indian Improvement from Samuel Martin’s An Essay upon Plantership (1750) to James Grainger’s The Sugar-Cane (1764)."
7. Aristotle Tymapas, Dean Fellow (3 months) (Tenure-track Lecturer, U. of Athens (Greece) Dept. of Philosophy and History of Science): "On Nomography’s Magic and Fun: A Perspective from the History of Chemical Engineering Calculations."

The Institute for Advanced Study intends to make a professorial appointment in the School of Historical Studies. It will be in the History of Science, without limitation to period or culture. Only candidates with distinguished scholarly accomplishments will be considered.

Applications and nominations, including bibliography and curriculum vitae, should be sent by October 10th, 2008 by email to HStsearch@ias.edu or by mail to: Administrative Officer, School of Historical Studies, Institute for Advanced Study, Einstein Drive, Princeton, New Jersey 08540. All communications will be held in strict confidence. The Institute is an equal opportunity employer.

**fellowships available**

The Radcliffe Institute for Advanced Study at Harvard University awards 50 funded residential fellowships each year designed to support scholars, scientists, artists, and writers of exceptional promise and demonstrated accomplishment.

For more information, please contact:
Radcliffe Application Office
8 Garden Street
Cambridge, MA 02138
617-496-3324
fellows@radcliffe.edu
www.radcliffe.edu
The HSS Bibliographer's Fund

Contributors to this fund, through 30 May 2008, are listed here. It is an honor and a pleasure to recognize and record here their generosity. NEH donors' names appear in the January, July, and October Newsletters. All donors are recognized in the April Newsletter.

Sarton Circle ($2,500 and Above)
What is it? Twentieth-century Artifacts out of Context

Why does a control panel for a computer from 1950 (Figure 1) attract several viewers in the architecture and design galleries of the Museum of Modern Art (MOMA) in New York, while similar objects rest unnoticed in storage rooms and even science museums around the world? At the MOMA, where color and form are appreciated on their own terms, the tangle of primary-colored wires stands out as a delicate work of art from an unexpected source. The beautiful displays of the architecture and design galleries also help to create an inviting, comparative atmosphere. Whatever the reason, MOMA's design gallery allows us to see a seemingly ordinary object in a new light, and, in this case, prompts novel questions about aesthetics (conscious or not) and engineering culture in the 1950s.

The main challenge with recent technological artifacts, therefore, is to prod researchers, the public, and students to move beyond recognition, and to stimulate alternative perspectives and inquiry. As museums collect an increasing number of post-World War II technologies, multiple approaches to artifacts can only enrich scholarly and public understanding of science and technology.

Several scholars and museum curators are starting to deal with this challenge in creative ways through events, programs, exhibits, and research. Jim Bennett, for example, has suggested that we embrace the “ambiguity of objects.” Another way of exploring this issue is in the university classroom, where students and professors must face a basic question: what can we learn from post-World War II artifacts?

Last winter, I had the privilege of teaching a fourth-year artifact-based seminar (History Dept., University of Ottawa) at the Canada Science and Technology Museum (CSTM). The class, which focused on medical technologies, took place in the aisles of one of the museum's storage facilities (Figure 2). There are two major challenges for such a course: first, the logistics of planning a museum-based course, and second, the difficulties of using objects as a resource for teaching and researching history. The first challenge is considerable. Lessons have to be built from the unique strengths of a collection, keeping in mind access and conservation issues and time constraints of museum staff.

Continued on page 18