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of the History of Science Society

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From the HSS Editorial Office: From the *ISIS* Book Review Editors

Eric Jorink and Ad Maas, Isis *Book Review Editors*

Since *Isis* moved to Utrecht we have been working hard at the Book Review department to establish a routine in our daily procedures. Thanks to our fantastic assistants Noortje Jacobs, Ruben Verwaal, and Sebastiaan Broere, we're off to a great start. One important hurdle we had to clear was the integration of the existing book review administration system within Editorial Manager, the online manuscript submission and peer review system provided by the University of Chicago Press and officially adopted by our office in March 2015. Last year in July, when we were first introduced to this online system, it became clear that while Editorial Manager works perfectly for the submission and review of manuscripts, this was somewhat more complicated for the review of books, as the tracking system was never designed for this procedure. As we find it of essential importance to have personal contact with our reviewers (who should not be bothered with unnecessary, cumbersome administrative procedures) in the end it was decided only to *invite* colleagues to review a book via Editorial Manager and to keep up all subsequent contact via the "traditional" medium that is email. In this way, we are able to collect important statistics regarding the acceptance rates of books at our office and also engage in flexible and personal contact with our most important resource: our book reviewers. Before sending the final versions of reviews off for publication, our assistants upload them once more in Editorial Manager, so that the publisher receives all manuscripts from the *Isis* office in the same format.

Apart from this, we have of course been concerned with our most important task: commissioning and editing book reviews. During the last year, we have received almost all of the reviews which had still been commissioned by the Toronto office. As this amounted to a rather large number, our Managing Editor has made sure we could publish more reviews than usual in the *Isis* June issue in order to avoid a backlog. The publication of timely reviews is a priority for the entire *Isis* Editorial Office.

Once our reviewers send reviews to us, we go through one round of editing at the office before we send the review to our excellent copy editor, Joan Vandegrift. As our book reviewers will have noticed, this has led us on occasion to send them questions for clarification or elaboration upon the interesting reviews they have written. Our reviewers generally appreciate this personal approach and like to share their thoughts with us about the style and structure of their review. In order to make sure that we do not miss important books in our field, our assistants keep in close contact with all major publishing houses. Nevertheless, if any member of the HSS feels that we have not reviewed a

Continued on Page 2

Table of Contents

Future Meetings of the HSS

From the *Isis* Book Review Editors, *cont.*

book that deserves the attention of *Isis*, she should not hesitate to contact us. At the HSS meeting in Chicago, we asked the participants of the international breakfast (kindly organized by HSS president Angela Creager) if they were willing to keep us posted of books published in their native language, which has already resulted in a number of useful suggestions. We find it important that non-Anglo-Saxon and European books find their way to *Isis* more regularly. Therefore, if anyone is aware of such a publication, we warmly recommend them to send us an email at **isisjournal@uu.nl**.

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Notes from the Inside: *The Strategic Planning Dance*

Alert readers of the *HSS Newsletter* may have noticed the absence of "Notes from the Inside" in the April issue. Whether or not the missing column improved the *Newsletter* will be left up to you, but it is my intent to keep providing these updates on the Executive Office (for better or for worse).

Our main activity in the EO these past few months, aside from the usual litany of annual meetings, board meeting, prize coordination, and hundreds of other duties, has been the implementation of the strategic plan. The plan has many parts, some of them dependent on more money and/or more staff. We are making strides in reaching some of our goals, but most of the action steps for each goal are not one-off tasks. For example, Goal 1 "Create vibrant regular HSS meetings," will require ongoing efforts, and I am encouraged by our solid start, evidenced by the roughly 600 submissions for the San Francisco program (a record). The volume of the submissions can be traced, in part, to the allure of San Francisco, but it also has something to do with an increased emphasis on roundtables and trying to make the meeting more interactive, a step beyond the usual framework of one person talking and many people listening. Of course, our traditional framework has served us well for many years and one of the trickiest parts of the strategic-planning dance is keeping the things that work as we introduce novelty. We will rely heavily on you, our members, to tell us about successes, near successes, and let's-not-ever-do-that-again activities.

Those of you with good long-term memory, a desirable trait in the historical professions, may remember the reasoning behind the launching of the strategic plan in the first place. A few years ago, with the lesson of the 2008 economic downturn still fresh in our minds, we wanted to increase the size of the endowment to cushion future downturns. This is tricky since the more dependent we become on our endowment the higher the impact of a diminished stock market. But the time was right for a capital campaign since the Executive Office was now comfortably housed at the University of Notre Dame, which has been a fantastic supporter, and the stock market was rocketing upward, and we were seeing healthy budget surpluses. All that we lacked, we discovered after we met with a consultant, was a strategic plan. This situation was analogous to being ABD, and, as it turns out, dissertations and strategic plans require a lot of work. With the support of hundreds of volunteers, we finished the strategic plan this past November – a cause for celebration. We are implementing what we can with current resources but we now face the prospect of raising money to enact the entirety of the plan and that activity, our consultant told us, will require 50% of the Executive Director's time. This is a sobering percentage, especially given the extra time it is taking to implement the strategic plan. Even so, good fortune still shadows us, one example being PSA's decision this past November to focus their limited resources on supporting their secretary/treasurer rather than paying us to handle their biennial meeting, which means that we will have more time to focus on HSS activities. We will also bring in professionals to help with some of the Office's more time-intensive activities, e.g. bookkeeping and meeting planning, so that Greg Macklem and I can focus more fully on the plan and on fundraising.

These are exciting (and terrifying) times for the HSS. I am especially grateful to the HSS Executive Committee for its unwavering support, which can be measured in wisdom, in effort, in kindness, and in industry. When I speak to fellow executive directors, I am constantly reminded of just how lucky I am.

Thank you for your membership in the HSS.

Jay Malone
Executive Director

Teaching Physics through History and History through Physics

by Frederick Gregory (Emeritus Prof. of History of Science, University of Florida) and Peter J. Hirschfeld (Prof. of Physics, University of Florida)

At a moment during a mixed academic social gathering where the conversation turned to the divide between the STEM disciplines and the humanities, the authors, a historian of science and a physicist, chatted about teaching the history of humankind's ideas about the universe together. At this early stage in the evolution of the history/physics course "The Universe and Humanity's Place in It," the bureaucratic and pedagogical hurdles seemed considerable. Problems of cross-listing, allocation of student credit hours, team teaching credit, and questions of how to inspire and motivate a potentially disparate audience of humanities and science majors effectively ended the discussion that evening.

Our dialogue was rekindled, however, by a program sponsored by the local Center for Humanities in the Public Sphere, providing a small amount of funds for team-taught course development between disciplines. The institutional imprimatur of the Center also had the potential virtue of providing some political cover for each of us seeking permission from our respective chairs to teach something outside of the standard curriculum.

In the process of writing the proposal to the Center, we discussed our goals, which eventually crystallized into a course exploring humans' view of terrestrial and celestial phenomena from ancient to modern times and, in parallel, offering basic explanations of how science views these phenomena today. We hoped that non-scientists, at whom the course was primarily aimed, could appreciate how scientists go about their work today while learning how this method was actually developed. Rather than presenting modern ideas about time, space and the solar system as facts to be memorized and regurgitated, we proposed that the course should expose students to the convoluted path by which these ideas arose, including the many mistakes made by philosophers and scientists along the way.

Showing students that scientists have often changed their views for a variety of reasons (some of which are cultural and not scientific), we hoped they would learn to look at the current consensus as a work in progress that is affected by many factors. By the end, we said, students should not only understand a bit more about how the universe works and have acquired a framework to think about technological aspects of the world around them, but also realize that science is an organic, evolving enterprise rather than a static set of "correct answers."

Ultimately the class was taught in the Spring semester of 2015 under a course number that had been used by the Department of Physics to teach a traditional "Physics for Poets" course to humanities students, covering much of the usual territory of any introductory physics course, including velocity, acceleration, energy, Newton's law's, optics, etc. This forerunner of our course had a laboratory component and was originally designed to be attractive to nonscientists because it helped them satisfy university natural science and lab requirements, without requiring much in the way of mathematics. However, it had devolved over the years into a rather dull course which left students feeling that they had tasted science but not digested much.

In redesigning our new team-taught course, we wanted to retain the laboratory component, both to continue to attract humanities students seeking to fulfill their distribution requirements, and to give a hands-on sense of how scientists, including ancient natural philosophers, had been able to come to remarkable conclusions with a modicum of mathematics and a great deal of ingenuity. For example, we designed a lab where the students determined the circumference of a sphere of styrofoam by measuring the shadow of a toothpick inserted into its surface, thus emulating the essence of the famous measurement of the circumference of the Earth by Eratosthenes around 240 B.C.

Teaching Physics through History and History through Physics, *cont.*

The course began with the science of the ancient world, focusing on Aristotle's hugely influential ideas about both earthly and heavenly motion. In parallel, modern concepts of motion were introduced, deliberately creating a certain cognitive dissonance in the minds of students. They were asked to reason as Aristotle might have regarding, say, falling bodies, and then answer the same question as a modern person might. Similarly, medieval notions of force and impetus were contrasted with Newton's laws. The modern picture of the solar system was introduced in labs concomitant with discussions of the cosmologies of Ptolemy, Brahe, Copernicus and Kepler. Roughly the second half of the course was devoted to the classical physics of Newton and his successors in the 18th and 19th centuries, and to the revolutions introduced by Einstein and the progenitors of quantum theory. The semester closed with discussions of the expanding universe, big bang, and the discovery of the cosmic microwave background radiation. A full syllabus is available at **http://www.phys.ufl.edu/~pjh/teaching/phy1033/1033C2015index.html**.

Of course the goals of the physics teacher and the history teacher are not the same. The historian wishes, as much as is possible, to teach students to put themselves into the mindset of people from the past and to expose them to the means by which scholars have attempted to achieve that. Naturally, reading assignments of primary and secondary sources are essential, as are lectures and the occasional use of film or other audio-visual means. The physicist's goal in the classroom is to help students grasp the principles of physics through lecture, demonstrations, homework problems, and hands-on laboratory experiences. In this class not only did we do all of the above, but we crossed disciplinary boundaries without fanfare. It fell to the physicist to explain medieval critiques of Aristotle's understanding of motion and to the historian to demonstrate what happens when a magnet is inserted into or withdrawn from a coil of wire whose ends are connected to a small electric bulb.

It quickly became clear that each of us was going to have to make compromises. It was important to the historian in our pair to explain that Sadi Carnot believed that heat was conserved as he came to the realization that to run an engine you need reservoirs with different temperatures. The physicist, however, was quick to assure the students that the present view is that heat is not conserved. While one of us made peace with the practice of correcting historical figures whose reasoning did not mesh with current understanding, the other learned to tolerate explanations of "discarded" science. The difference reflected here ran fairly deep and the students picked up on the historian's reluctance to regard contemporary conclusions as "right" and the physicist's impatience with the historian's eternal suspicion of modern views. We worried that our differences would confuse students, but we found that they enjoyed our questioning each other and encouraged us in our differences.

Courses like this one are rare, first of all because funding is generally hard to come by. Our hope is that the overwhelmingly positive experience we enjoyed is indicative of the general merit of exploring history and physics together. Both of us are convinced that this course made a permanent impression on our students and that it will be among those that they look back upon as one of their most memorable classes, an impression bolstered by final student evaluations.

National Archives Resources for the History of Science

by Robyn Dexter and Meg Phillips, National Archives and Records Administration

The U.S.'s National Archives and Records Administration (colloquially the National Archives, or NARA) may not be the first place that leaps to mind when you're thinking about the history of science, but we actually hold all kinds of surprising records that document scientific activity. Permanent records from hundreds of federal agencies doing all sorts of work make their way to the archives and are used by researchers in many unusual fields. While we have buildings in Washington, DC and College Park, Maryland, NARA also collects archival records from the Federal government in twelve field locations, plus Presidential Libraries and affiliated archival facilities. NARA's holdings crisscross the nation from Seattle to Atlanta, New York to Yorba Linda; see our research rooms at **http://www.archives.gov/locations/**. These National Archives facilities are a resource for all kinds of researchers, including historians of science.

The items featured in this article provide a tiny snapshot of the Federal agency records that help tell the story of the government's involvement in science and medicine. To dive deeper, explore our website (**www.archives.gov**) and the National Archives Catalog, then plan a research visit by emailing us so we can advise you on records that might shed light on your topic. Although a growing number of records are available online, the majority are only available by researching in person. We list the archival record group (or RG number) for the records mentioned to help you follow up on items that pique your interest. (Contacting us through **http://www.archives.gov/contact/inquire-form.html#part-b** will help us send your question to the right person.)

To get a sense of the wide scope of our scientific holdings, consider that the National Archives holds records from the Office of Scientific Research and Development (RG 227), US Patent and Trademark Office (RG 241), the National Science Foundation (RG 307), the National Institute of Science and Technology, or NIST (RG 167), the Coast and Geodetic Survey (RG 23), the Army Corps of Engineers (RG 77), and the Chief of Ordnance (RG 156; check out Reports on Powder, Ammunition, Chemicals, and on Small Arms Experiments). Many presidential libraries also hold science files in White House Central Files. We hold records from the Department of Energy (RG 434) Lawrence Berkeley National Laboratory, the National Institutes of Health (RG 443), the Weather Bureau (RG 27), and many more!

In addition to the history of science, NARA supports current scientific research with archival records, too. For example, NARA participates with NOAA and many others on the "Old Weather" project, where the public can help transcribe historic ships' logs, including valuable weather observations that scientists can use. (See **http://www.oldweather.org/** to participate.)

We invited archivists across the agency to highlight some of their favorite science records to give you a few examples of textual records and images in the collection. Archivists know and love their records: one archivist asked us to include a heartfelt plea for some researcher to give the Records of the Bureau of Entomology and Plant Quarantine (RG 67) the attention they deserve. What follows are the rest of their responses:

- The Records of the Forest Service (RG 95) contain a collection of photographs dating from 1897 to 1980 documenting the agency's activities in the management and protection of national forests and grasslands. There are also images of Forest Service cooperative projects with other government agencies. For example, prior to the first moonwalk astronaut Walter Cunningham worked with NASA scientists and Forest Service personnel to test the dexterity of a human in a spacesuit by navigating lava flows, which simulated the Moon's surface. 61,111 of these photographs

Continued on Page 7

National Archives Resources for the History of Science, *cont.*

are available online at **http://research.archives.gov/description/651890**

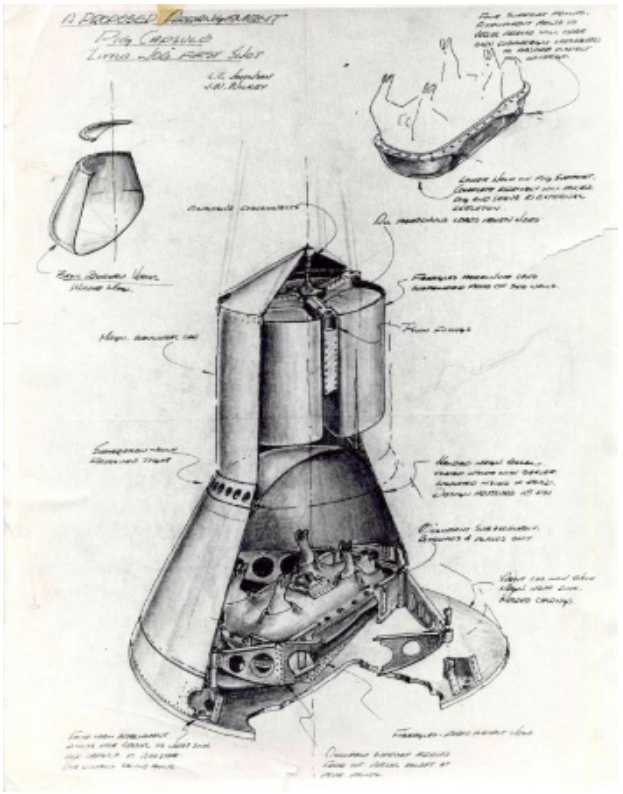
- The Surgeon General's Office (RG 112) has a useful series of correspondence related to the U. S. Army's World War I hospitals, posts, laboratories, camps, stations, and departments in the United States and Europe. (The box list for close to 1000 boxes has been posted at **http://research.archives.gov/description/719020**). Camp Lee's work in the influenza outbreak of 1918 – 1919 provides a rich source of research material in this collection.

- Another fascinating but underused collection was produced by the Office of Scientific Research and Development (RG 227). This office was created as a result of WWII to bring together the brightest minds in military and civilian research for military purposes. These records reflect a time when no idea was outside the range of possibility, funding was generous, and a sense of purpose drove research. Research and development could be dangerous, and scientists occasionally lost their lives. The Director's Budget and Finance series (**https://catalog.archives.gov/id/16955604**) contains letters to surviving spouses that talk about the work and how the victim's sacrifice helped the war effort. Because of the secret nature of the work, these letters often did not come until years after the war was over.

- A staff favorite from the National Archives at Fort Worth is "Pig in Capsule" (although those of us who watched The Muppet Show call it "Pigs in Space.") A part of the NASA (RG 255) series "*Source Files on Project Mercury*," this is a pen and ink drawing by G. C. Johnson and J. W. Wilkey. The housing was a theoretical design to take a pig into space and keep it safe upon re-entry. **http://research.archives.gov/description/6734335**

- The National Archives at Atlanta is home to the Centers for Disease Control and Prevention (RG 442) Public Health Service's "*Tuskegee Syphilis Study Administrative Records.*" Ninety-five images of records from this collection are available online, including a photograph of nurse Eunice Rivers Laurie's hands as she labels a vial of blood. **http://research.archives.gov/description/824613**

This is merely a sample of NARA records that document the history of science and the Federal government's extensive involvement in scientific research. These records hold many untold stories and document little-known but important programs. We invite you to explore the catalog and contact one of the National Archives locations around the country to see if NARA has records that can help your research.



"Pig in a Capsule" available at **https://research.archives.gov/id/6734335**

Proceeding on with Processing (or We Processed On?)

by Charles Greifenstein, American Philosophical Society

The full name of the American Philosophical Society is "American Philosophical Society, Held at Philadelphia, for Promoting Useful Knowledge." One can debate what "useful knowledge" actually is (Benjamin Franklin would see it as practical and scientific knowledge), but there is no doubt that the APS promotes scholarship and knowledge-sharing through its several departments: publishing, giving out grants, creating museum exhibits, holding semi-annual meetings for its members, and the use of its library collections.

The history of science is but one of three main collecting areas of the Library,[1] but it is the largest and fastest growing. Of the approximately 13,000 linear feet of archives and manuscripts held by the APS, about 7,800 linear feet are history of science collections. Of those 7,800 feet, about 7,260 feet are the papers of 20th-century scientists, and of THOSE, a great majority are in the biological sciences, especially genetics.

When I attend an HSS meeting, I find it invigorating to see the many people who have worked with APS collections and to meet those whom I have helped with reference questions (thereby for the first time placing a name with a face). In the past the Library has been able sometimes to help out scholars even with material from unprocessed collections, a business that has to be carefully handled. Since a collection's contents are largely unknown, it is more difficult to keep track of what is used. The good news is that in the last two years the APS has committed itself to processing several significant (and largely paper-based) collections.[2]

It was not until June 2011 that the APS hired its first full-time, permanent employee whose principal work was processing collections. Much processing was of course done before 2011, but staff who did this were either on soft money or had principal duties other than processing collections. There are now two permanent archivists on staff. One of the archivists has finished processing the papers of Herman Heine Goldstine (1913-2004).[3] The collection has much material about the development of early computers, especially ENIAC (Electronic Numerical Integrator And Computer), the first electronic general purpose computer, and its more powerful successor EDVAC (Electronic Discrete Variable Automatic Computer). Material includes early papers by J. Presper Eckert, John Mauchly and John von Neumann; the von Neumann files also have notes and correspondence. There are also schematics for ENIAC and the original manuscript copy of the first computer program, which was written by von Neumann.

Beyond the funding of two permanent positions, in the last couple of years the APS has received three grants specifically to catalog history of science collections. Altogether archivists are processing over 1500 linear feet of material. Attrition from processing will probably reduce this material by half,[4] so eventually about 750 linear—my current estimate—will be completely processed.

With the help of two of the grants—from the Arnold Beckman Foundation and from the Estate of Britton Chance (plus some funds from an unrestricted gift), the library has been able to tackle processing the papers of Britton Chance (1913-2010). At 750 linear feet the collection was among the largest ever received by the APS.

1 The other two are Native American ethnography and linguistics and American history before 1860 (though there is much material after that date). It bears mentioning that there is also an archivist on staff who works with Native American collections (cataloging some 3,000 hours of recordings) and another, attached to the technology department, who works on digital projects.

2 Like all collecting repositories, the APS is concerned with how to handle born-digital material, its access and preservation. At the moment as much material as possible is transferred to servers to minimize deterioration of files, but access procedures are still being developed. The big problem is of course how to handle email, a problem beyond the scope of this article.

3 The Library also has Dr. Goldstine's papers from his service as executive director of the APS from 1984-1997.

4 Removing material such as multiple copies of works, interim grant reports, and photocopies of articles can reduce collections considerably.

Continued on Page 9

Proceeding on with Processing, *cont.*

The bulk of it had been kept in its original filing cabinets and shipped to a storage facility near the New Jersey shore. Other material came from Chance's lab office, his house, and a warehouse in Germantown.[5]

Chance held two doctorates and was at the time of his death Eldridge Reeves Johnson Emeritus Professor of Biophysics, Physical Chemistry, and Radiologic Physics. The papers document his long career, from his time at the Radiation Laboratory at MIT during World War II where he worked on radar, to his later work developing techniques to use florescent molecules to detect breast cancer. Early in life Chance's gift for invention was apparent. As a young man he developed—and patented—an automatic steering device for ships. As a graduate student he devised a microflow version of the stop-flow device that allowed for tracking of enzyme reactions in milliseconds. With improved versions of the device he was able to study the substrate-enzyme reaction complex—one of the important discoveries of his career.

In a tribute to Chance, Gottfried Schatz noted that Chance was a "full-blooded hunter" who had a "single-minded impatience for discovery."[6] It was the probing into the unknown, indeed, *discovering the unknown*, that intrigued Chance. Exploring the implications of a discovery did not interest him.

Perhaps his most intriguing discovery was that respiring isolated mitochondria attract calcium ions from the suspending medium and that these ions act as stoichiometric uncouplers. Had he followed up this observation, he might have solved the riddle of oxidative phosphorylation a decade before Peter Mitchell.[7]

One could go on listing observations and discoveries Chance made, such as "that biological electron transfer – vital to respiration, photosynthesis, and oxidative metabolism – was quantum-mechanical tunneling, an understanding that now underpins engineering of nanoscale electronic devices."[8] He did pioneering work in magnetic resonance imaging. But in talking about Chance, one needs to bring up another significant activity: he was an accomplished sailor. Sailing was as much a part of his life as science. Chance competed in the 5.5 meter event in the 1952 Helsinki Olympics and won the gold medal. This accomplishment and the rest of his sailing are documented in the papers, making the APS unexpectedly a future stop for historians of sailing.

Britton Chance in the laboratory, Stockholm, Sweden, 1946, where he worked on enzymes with future (1955) Nobel laureate Hugo Theorell. Chance Papers, American Philosophical Society.

Ultimately of course it is the science that will be of most interest to researchers. There is still probably two years of work left, but much has been done. The hardest series to process was the correspondence, which has now largely been sorted and alphabetized and totals over 120 linear feet. Other series include works by Chance, meetings and organizations, and research. It's not yet clear how big the research series

5 17 linear feet are in the University of Pennsylvania Archives & Records Center, including correspondence with Efraim Racker and Max Perutz.

6 Schatz, Gottfried, "What Britton Chance Means to Me," **http://www.brittonchance.org/wp-content/uploads/2013/02/bcschatz.pdf**. Accessed 6/2/2015.

7 Ibid.

8 Home page of **http://www.brittonchance.org/**. Accessed 6/2/2015

Continued on Page 10

Proceeding on with Processing, *cont.*

will be, but the lab records are extensive. Chance bound many of his records. A volume will typically have a photograph of readings on a monitor and notes about what the experiment demonstrated (much regrettably fastened with cellophane tape). Readings from monitors were often graphed, the graphs photographed, multiple copies made, cross-referenced to the research volume, and stored in folders.

In contrast to the lab-centric papers of Britton Chance, the papers of H. Bentley Glass (1906-2005) are more centered on science in the public sphere. Policy, education, and ethics were his chief areas of activity. The papers have been examined in detail by Audra Wolfe, who produced a folder-level description of the collection. Wolfe has written about the collection in some detail. The Glass Papers, are essential for scholars researching academic freedom, anti-Communism, science education, postwar eugenics, medical genetics, national science policy, nuclear disarmament, organizational politics, scientific publishing, or the radiation and fallout debates.[9]

One of the most significant aspects of the papers is the record of Glass' involvement with the Biological Sciences Curriculum Study. Taken as a whole, the Glass Papers document a scientist who spent his career mainly in the public sphere. With a helpful assist from Wolfe's work and funding from the Richard Lounsbery Foundation, the Glass Papers are being processed.

Prior to the Lounsbery grant being used for the Glass Papers, the grant funded the processing of the papers of James Van Gundia Neel. The papers, 115.5 linear feet, cover much of Neel's career but is lacking in his early *Drosophila* work and his work with the Atomic Bomb Casualty Commission (most of the latter is in Houston). Most importantly the collection documents his work in South America and has much on his work with anthropologist Napoleon Chagnon.

However, the Lounsbery grant is being used chiefly to process the papers of Baruch S. Blumberg (1925-2011), winner of the 1976 Nobel Prize in Physiology or Medicine for "discoveries concerning new mechanisms for the origin and dissemination of infectious diseases" as the award said.[10] Blumberg discovered the hepatitis B virus and created a vaccine for it.[11] He freely distributed his patent and, once the vaccine could be massed produced, millions of people around the world benefitted.

Papers of Britton Chance, mainly correspondence, organized and awaiting box and folder labels in the manuscripts processing area of the APS. Photograph by Charles Greifenstein, 2015.

Blumberg (it is hard for me not to write "Barry") wrote hundreds of papers and spent much time in labs, but his papers are less lab-centric than Chance's and don't have the public policy focus that Glass' do. What comes through in the papers is that he was an explorer and disseminator. He traveled widely, meeting and talking and studying. In my contact with him I found him curious, unpretentious, involved. In one of our discussions about the Library's collections—he was APS President then—he said, "Every time I come to the Library, I learn something." As this was addressed to me, I took it as a great compliment, but it illustrates something about his fundamental character.

There is of course much about hepatitis B in the papers. One interesting item is a huge

9 Wolfe, Audra, "The Organization Man and the Archive: A Look at the Bentley Glass Papers," *Journal of the History of Biology*, published online 3/8/2011, downloaded 3/24/2011.

10 Blumberg shared the prize with D. Carleton Gajdusek (1923-2008), who discovered the causative agent of kuru. The APS has Gajdusek's (unprocessed) papers as well, though there is a large collection at the National Library of Medicine and records in Australia.

11 Although the collection is already huge, some material has not yet been received by the Library. Blumberg's journals, which he kept religiously all his life, are still in the family's possession.

Continued on Page 11

Proceeding..., *cont.*

(and unfortunately now very fragile) chart that Blumberg drew up to show the dozens and dozens of interconnected steps in the scientific process that made possible his discovery. His work to get the vaccine to countries such as India and China is documented. But Blumberg's wide-range of activities are also documented: the study of albumin variants in Naskapi and Montagnis Indians; service as the first non-English master of Balliol; investigating mistreatment of scientists in Chile at the behest of the National Academy of Sciences; serving as first director of the NASA Astrobiology Institute. One of parts of his work I finding intriguing is that with woodchucks. He discovered that woodchucks that carry the hepatitis B virus develop liver cancer and are thus useful for testing anti-virals.

Barry Blumberg was an explorer, and valued exploration as a necessary human endeavor. Indeed, he was a great supporter of the APS's Lewis and Clark Fund for Exploration and Field Research. It is an APS tradition dating to the time of Lewis and Clark. In Lewis and Clark's journals—most are held by the APS—there are many entries which begin with "We proceeded on." The Library of the APS has made a commitment to "process on" and will continue to open new collections for exploration.

Jas-Bio: The First Fifty Years

by Henry M. Cowles, Yale University

The Joint Atlantic Seminar for the History of Biology, commonly known as "Jas-Bio," is an annual conference for historians of the life sciences that has been hosted by various universities along the Northeast Corridor since 1965. In March of 2015, Jas-Bio returned to Yale University—the site of the first meeting—to mark its fiftieth anniversary.

This year's event, organized by Henry Cowles, Joanna Radin, and William Summers, played out in two dimensions. The first was familiar. A Friday reception paired historians with curators from the Peabody Museum of Natural History to discuss biology's material legacies. Saturday saw ten student presentations touching on the intersections of biology—broadly construed—with other scientific disciplines, with ideologies and cultural forces, and with society at large.

The second dimension in which this year's Jas-Bio played out was that of memory. With student presentations outlining the state of the field and where it is heading, a plenary session at the end of the two-day workshop highlighted where the field has been: how topics and methods have changed as the history of biology has evolved over the last fifty years.

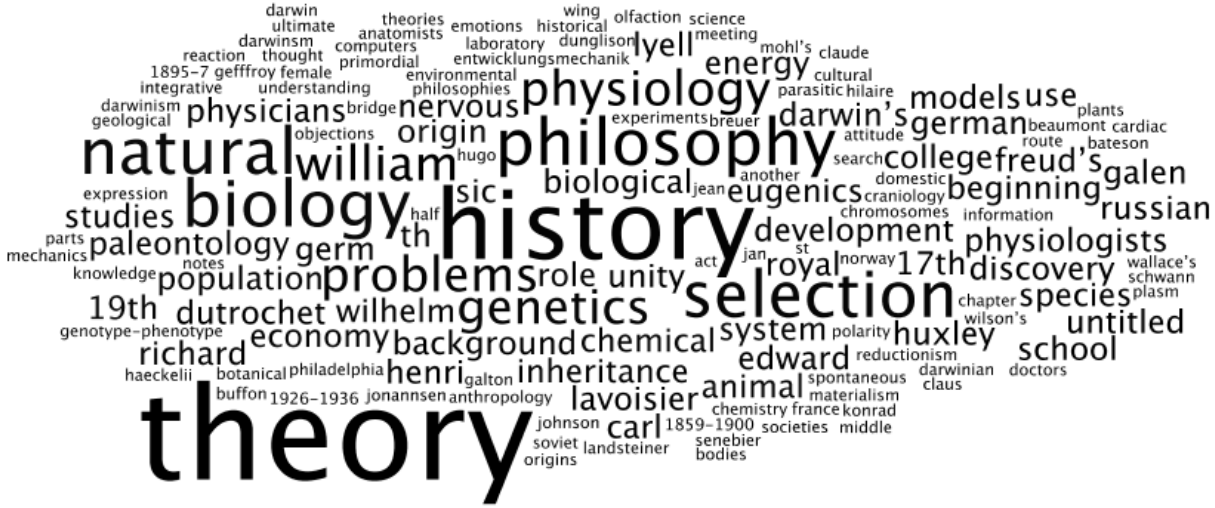
Attendees ranged from first-timers to three scholars who attended the very first meeting back in 1965. The final session was organized around reminiscences from "cohorts" of Jas-Bio attendees, beginning with the founding cohort and proceeding by decade through to the present day. Members of each group shared memories of the workshop, from first presentations and experiences in the audience to becoming mentors and organizers in their own right. This structured reflection shed light on both what has changed in the history of biology (and the broader history of science) and what has gone unchanged in the last half-century.

One major shift has been demographic. According to the first Jas-Bio program (and participants' memories), six men and three women presented their work in 1965. In 2015, the gender balance had flipped: of this year's ten presenters, three were men and seven were women. Of course, the fact that a third of presenters in 1965 were women is somewhat surprising: it was remarked by many that the history of biology was a relatively friendly place for female scholars in the context of the larger field, then dominated by men doing the history of physics. Most presenters in the last decade have been mentored by women, many of whom gave their own first presentations at Jas-Bio a few decades earlier.

Another shift has been topical—but again, the precise nature of the change is not obvious. On

Jas-Bio: The First Fifty Years, *cont.*

1965-1974



2006-2015

the first program, every paper title is linked to a particular (male) individual and the development or impact of their thought. This year, no papers telegraph the importance of individuals—male or female—in their titles. Instead, titles point outward to wider issues: to progress and politics, to popular culture and the family. This is not to say that early papers did not deal with these wider issues, nor that more recent talks have forsaken individuals. Much to the contrary. But as a matter of emphasis, specific practitioners, theories, and fields seem to have given way to a wider range of issues. One can see this in a pair of word clouds, included on the program, drawn from the titles presented during the workshop's first and most recent decades.

It would be a mistake to set too much store by titles, but the early prominence of "theory," along with terms such as "physiology" and "philosophy," as compared to the later landscape, is suggestive of shifts in the history of biology and related fields in the wake of the turn to social history, the rise of cultural history, and attendant emphasis on materials, practices, and political economy. The history of Jas-Bio sheds light on the history of science in its modern form.

One theme shared across the generations during the plenary session was the importance of workshops like Jas-Bio for building collegiality and common

Jas-Bio: The First Fifty Years, *cont.*

purpose. In 1965 and 2015 alike, Jas-Bio provided an encouraging atmosphere for young scholars, often presenting their work for the first time, to receive feedback and support from one another and from senior scholars. Ideas were incubated, connections were formed, and a community came together around the evolving issues at the heart of the history of the life sciences, broadly defined.

Over the weekend, many remarked that Jas-Bio was proof of the power of regionalism. The name "Joint Atlantic" is somewhat opaque—purposefully, it would seem, as participants have come from as far as Germany and Western Canada and the conference itself has been hosted a number of times in non-coastal venues, such as Washington, D.C. and Toronto. And yet, the clustering of core universities along the Northeast Corridor has contributed to the workshop's sense of community (and has kept it small).

Like the Midwest Junto for the History of Science, the History of the Physical Sciences Workshop

Photo by Dan Liu, UW–Madison
1st (top) row (l-r): Garland Allen, John Harley Warner, Ruth Schwartz Cowan, Daniel Kevles
2nd row: Janet Browne, Pamela Henson, Nathaniel Comfort, Nancy Hall, Lloyd Ackert
3rd row: Sharon Kingsland, Audra Wolfe, James Strick, Robin Scheffler
4th (bottom) row: Everett Mendelsohn, Susan Lindee, Luis Campos, Jane Maienschein

Jas-Bio: The First Fifty Years, *cont.*

(unofficially: "Phunday"), and the Consortium for History of Science, Technology, and Medicine (formerly "PACHS"), Jas-Bio is a reminder of the levels of discourse that exist between the local and the global, between our institutions and the national and international conferences at which we see our colleagues. These smaller, less formal settings are often where the mechanics of the discipline—lecturing and networking, conference planning and project pitching, shop talk and socializing—are worked out, especially for younger scholars.

There is much more to say about Jas-Bio. This report has included next to nothing about biology itself: about changes in the understanding of the field, or the role of biologists in writing its history. It has also been short on details of the workshop's founding. (For those, one may consult Winsor, Mary P., and Leonard G. Wilson, "The Joint Atlantic Seminar in History of Biology," *Isis* 90 (January 1, 1999): S219–25.) The list of items left out is a testament to the many meanings of Jas-Bio, to its role in dozens of careers in the history of science and its continued relevance in a changing field.

INTERNATIONAL UNION OF THE HISTORY AND PHILOSOPHY OF SCIENCE AND TECHNOLOGY/

Division Of History Of Science And Technology (IUHPST/DHST)
2017 DHST Prize
For Young Scholars

Scheme

The International Union of the History and Philosophy of Science and Technology, Division of History of Science and Technology (IUHPST/DHST) invites submissions for the fourth DHST Prize for Young Scholars, to be presented in 2017. Initiated at the 22nd International Congress of History of Science in 2005 held in Beijing, the DHST Prize is awarded by the IUHPST/DHST every four years to up to five young historians of science and technology for outstanding doctoral dissertations, completed within the last four years.

The 2017 DHST Prize will not specify distinct categories, but the entries must be on the history of science or technology in any part of the world. The Award Committee will endeavor to maintain the broadest coverage of subjects, geographical areas, chronology and civilizations (African, American, Asian, Islamic, Western and Ancient Civilisations, and others not included in the above list). Each Prize consists of a certificate, assistance with travel and accommodation expenditures to the IUHPST/DHST Congress in Rio de Janeiro in August 2017 and a waiver of registration fee.

Competition Calendar

Submission deadline: 31 August 2016
Qualification examination and preliminary selection: September 2016
Award Committee online meeting: October-November 2016
Approval by DHST Council: December 2016
Award Ceremony: August 2017

Award Committee

The Committee is comprised of the DHST President, Vice-Presidents, Secretary General, and distinguished specialists in specific fields.

Conditions and Application

Eligibility:
Applicants must have a doctoral degree in the history of science, or technology awarded no earlier than July 2012.

Language: Any dissertation in a language other than English must be accompanied by a detailed summary in English of no more than 20 pages.

Application procedure:
Applicants must submit online at **http://hpdst.gr/youngscholarsprize** where they can also find procedural details.

Member News

Hanne Andersen has been named Head of the Department of Science Education at the University of Copenhagen, and he looks forward to promoting the many fruitful connections between history and philosophy of science and science education.

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The 2015–16 Fellowship in Aerospace History has been awarded to **Colleen Anderson**, PhD candidate in the Department of History at Harvard University, for her project "'Two Kinds of Infinity': East Germany, West Germany, and the Cold War Cosmos." See more at: **http://blog.historians.org/2015/05/2015-aha-nasa-jameson-fellowships-awarded/#sthash.g7YkW2R9.dpuf**

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Jessica Barnes and **Michael R. Dove** (Yale) have published *Climate Cultures: Anthropological Perspectives on Climate Change* (Yale University Press, 2015). The volume contains eleven cross-cultural case studies of climate change and human society, most from scholars with Yale ties, and it concludes with an afterword by the noted British climate scientist Mike Hulme.

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Roland Boucher (Independent researcher) recently presented "The Pendulum, Three Standards that Measured the Ancient World and the Mystery of the Parthenon" to his local Sigma Xi chapter in Orange County California and at the 96th Annual Meeting of the Pacific Division of the AAAS in June.

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Emily Brock has published *Money Trees: The Douglas Fir and American Forestry, 1900-1944* (Oregon State University Press, 2015). She has recently taken a position as research scholar in Department III at the Max Planck Institute for the History of Science in Berlin.

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Stephen Brush's (University of Maryland, emeritus) book *Making 20th Century Science: How Theories Became Knowledge* was published by Oxford University Press in March 2015. On May 20 he was given an honorary doctorate at the commencement ceremony of the University of the Sciences-Philadelphia. His granddaughter Jennifer Roberts received her bachelor's degree in physics at the same ceremony.

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Richard Duschl (Pennsylvania State University) was honored recently for his significant contributions to science education research with the Distinguished Contributions Award at the 2015 awards luncheon for the National Association for Research in Science Teaching (NARST). You can read more at: **http://news.psu.edu/story/352630/2015/04/14/academics/waterbury-chair-awarded-highest-honor-narst-ceremony**

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In 2014 **Matthew Daniel Eddy** (Durham University) was elected to serve on the executive council of the British Society for the History of Science. In 2016 he will be a research fellow at Durham University's Institute of Advanced Study. His project focuses on the kinds of scientific evidence used to reconstruct and analyze the everyday experiences of 18th and 19th-century childhood.

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Treasure Your Exceptions. The Science and Life of William Bateson by Alan G. Cock and **Donald R. Forsdyke** (Queen's University, Kingston) was published in 2008. The publishers (Springer, New York) began monitoring electronic chapter downloads in 2011. The following are the yearly download figures since the records began: 2011, 278; 2012, 274; 2013, 579; 2014, 2336. Over the same period, Forsdyke's *Evolutionary Bioinformatics* had 14,806 chapter downloads, of which 6576 were in 2014.

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Monica H. Green (Arizona State University) together with 17 historians, bioarcheologists, and anthropologists, recently published a volume of essays, *Pandemic Disease in the Medieval World: Rethinking the Black Death*. This initially appeared open-access as the inaugural issue of *The Medieval Globe* in November 2014: **http://scholarworks.wmich.edu/medieval_globe/1/**

Member News, cont.

As of late May, the volume has been downloaded over 4600 times. The volume is also available in hardback, published by Arc-Medieval Press (Kalamazoo, MI and Bradford, UK, 2015), where it appears with a new preface by Green, "The Black Death and Ebola: The Value of Comparison." Green will be taking up a fellowship at the American Academy in Berlin in Fall 2015, where she will be working on her new book, "A Global History of Health."

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William deJong-Lambert (CUNY Bronx Community College) has been awarded a Franklin Research Grant from the American Philosophical Society to work in the Haldane family papers at the National Library of Scotland.

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Bert Hansen is retiring after forty years of full-time teaching, becoming Professor Emeritus after twenty-four years at Baruch College of CUNY, where he taught and published mostly in American history and the history of medicine. He began teaching at SUNY-Binghamton, with later stints at the University of Toronto and NYU and fellowships at Harvard and the Institute for Advanced Study. His *Picturing Medical Progress from Pasteur to Polio* about popular culture imagery in America appeared in 2009. An illustrated booklet with a condensed version of his lecture examining the place of the fine arts in Pasteur's career is available in pdf format courtesy of the University of Alabama Medical School, as "Louis Pasteur and the Pleasures of Art," at **http://www.uab.edu/reynolds/past**. Hansen has recently published three articles about an overlooked aspect of Pasteur's biography, namely the great chemist's numerous close friendships with leading painters and sculptors and the mutual interactions between his career and theirs. These articles were co-authored with a former student, Richard E. Weisberg (1943-2011).

- Weisberg and Hansen, "Collaboration of Art and Science in Albert Edelfelt's Portrait of Louis Pasteur: The Making of an Enduring Medical Icon," *Bulletin of the History of Medicine* 89:1 (Spring 2015), 59-91.
- Hansen and Weisberg, "Louis Pasteur's Three Artist Compatriots —Henner, Pointelin, and Perraud: A Story of Friendship, Science, and Art in the 1870s and 1880s," *Journal of Medical Biography* (printed issue forthcoming; pre-prints available at **http://jmb.Sagepub.com**).
- Hansen and Weisberg, "Louis Pasteur (1822–1895), His friendships with the Artists Max Claudet (1840–1893) and Paul Dubois (1829–1905), and His Public Image in the 1870s and 1880s," *Journal of Medical Biography* (printed issue forthcoming; pre-prints available at **http://jmb.Sagepub.com**).

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David K. Hecht (Bowdoin) has published *Storytelling and Science: Rewriting Oppenheimer in the Nuclear Age* (University of Massachusetts Press, 2015).

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Ann Hibner Koblitz's (Arizona State University) *Sex and Herbs and Birth Control: Women and Fertility Regulation through the Ages* (Kovalevskaia Fund, 2014) was just awarded the Transdisciplinary Book Award of the Institute for Humanities Research of Arizona State University. More information about the book can be found at **www.kovfund.org/book.shtml** or on the author's blog at **http://ahkoblitz.wordpress.com**

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Kenton Kroker (York University) is pleased to announce that he is taking up a four-year term as co-editor (with **Erika Dyck**, University of Saskatchewan) of the *Canadian Bulletin of Medical History/Bulletin canadien d'histoire de la medicine*.

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Whitney E. Laemmli (University of Pennsylvania) has been awarded an ACLS/Mellon Dissertation Completion Fellowship for her project "The Choreography of Everyday Life: Rudolf Laban and the Analysis of Modern Movement."

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Ken Ludmerer (Washington University) received the 2015 Distinguished Alumnus Award of the Johns Hopkins School of Medicine for his

Member News, cont.

contributions to the history of medicine, with special reference to his latest book, *Let Me Heal: The Opportunity to Preserve Excellence in American Medicine* (Oxford, 2014).

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Kristie Macrakis (Georgia Tech) has been awarded a Woodrow Wilson Center Fellowship in Washington, D.C. for 2015-16 to work on her new project on "Technology and the Rise of the US National Security State." The paperback of her 2014 book *Prisoners, Lovers, and Spies*, Yale Press, was released in May 2015 and the first translation into Estonian in April 2015.

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Victor K. McElheny (MIT), author of biographies of Edwin H. Land (Perseus, 1998) and James D. Watson (Perseus, 2003), and a general history of the Human Genome Project (Basic Books, 2010 and 2012), has begun a series, "Milestones of Innovation," with the online innovation news service, **Xconomy.com**, based in Cambridge, MA. Items have covered such topics as the Frisch-Peierls uranium memorandum of 1940, Stephanie Kwolek's 1965 invention of Kevlar, and Franklin Roosevelt's 1940 summons of William Knudsen to join him in Washington in 1940 to work on "production matters." The pieces are archived on the Xconomy.com site. McElheny was technology reporter for the *New York Times* and inaugural director of the Banbury Center at Cold Spring Harbor Laboratory before founding the Knight Science Journalism program at MIT in 1982.

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Carla Mulford (Pennsylvania State University) has published *Benjamin Franklin and the Ends of Empire* (Oxford University Press, 2015) and is currently working on a monograph titled "Benjamin Franklin's Electrical Diplomacy."

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David Orenstein continues to pursue the rich research vein of the early international scientific congresses held in Canada. This has produced a formidable personal archive of research notes and photocopies that has led to many publications, ranging from minute to medium size, as well as several conference papers delivered across Canada. He will serve as a new executive member of Toronto's Riverdale Historical Society (RHS) and will organize the Friday afternoon excursion when the Canadian Science and Technology Historical Association (which studies the history of Canadian science) holds it biennial conference at Toronto's York University on 6-8 November 2015. He will serve as the Canadian Society for History and Philosophy of Science's representative on the Programme Committee for the Three Societies meeting at the University of Alberta next year.

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Peter Pesic's (St. John's College) book *Music and the Making of Modern Science* (MIT Press and iBooks, 2014) received the 2014 American Publishers Award for Professional and Scholarly Excellence (PROSE Award) in Music & the Performing Arts, presented by the Professional and Scholarly Publishing Division of the Association of American Publishers.

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Elizabeth Petrick (New Jersey Institute of Technology) has published *Making Computers Accessible: Disability Rights and Digital Technology* (Johns Hopkins University Press, 2015).

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Raffaele Pisano was awarded his Habilitation HDR (Accreditation to Supervise Research) by the University of Lorraine, France. He continues to serve as Vice President-elect (2011-) of the Inter-Divisional Teaching Commission (DLMPS/IUHST). He is also under contract (with Paolo Bussotti) for a full translation from Latin into English of four volumes of Newton's *Principia* Geneva Edition (2020, Oxford University Press).

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Lawrence Principe (Johns Hopkins University) has won a Guggenheim Fellowship for 2015-2016. He will finish his book about the life and work of Wilhelm Homberg and the transformations of chemistry at the Academie Royale des Sciences, 1666-1730.

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Raphael Rosen began work at the Princeton Plasma Physics Laboratory as a science writer in

Member News, cont.

February 2015. In this role he will write press releases about research papers published by Lab physicists and help manage and execute the Lab's overall communications strategy. In 2014, he published *Math Geek*, a book about finding mathematics in everyday life. **http://amzn.com/1440583811**

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Alexandra Rutherford (York University) has been awarded a grant from the Association for Psychological Science's Teaching and Public Understanding of Psychological Science grants program. The project, entitled "Gender Matters: Gendered Innovations in Teaching Psychological Science," inspired by Londa Schiebinger's Gendered Innovations initiative, will produce teaching materials exploring how gendering affects the design, conduct, interpretation, and communication of psychological science.

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Gildo M. Santos (University of São Paulo) has edited a special issue of the Brazilian electronic journal *Labor & Engenho*, focusing on the history of electrification in Southern Brazil. The link is **http://www.conpadre.org/v9n12015.php**

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Claudia Schaefer (University of Rochester) had *Lens, Laboratory, Landscape: Observing Modern Spain* published last September 2014 by the State University of New York Press. It is being released in paperback on 2 July 2015. The volume explores competing views about the power of vision in Spain between the 1830s and 1950s. Placing Spain in the middle of a European cultural milieu, rather than fading it into the margins, the book moves from the work of the "father of neuroscience" Santiago Ramón y Cajal--both a scientist and a photographer--to Manuel de Terán's cultural topographies, the "retinal vision" of philosopher José Ortega y Gasset, and Salvador Dalí's notorious romance with quantum theory.

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Robin Wolfe Scheffler will start as an Assistant Professor at the MIT Program in Science, Technology, and Society on 1 July, after completing a year as a Visiting Scholar at the American Academy of Arts and Sciences.

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Jason L. Schwartz has joined the faculty at Yale University as an assistant professor in the Department of Health Policy and Management in the School of Public Health, with a secondary appointment in the Section of the History of Medicine in the School of Medicine. He was most recently the Harold T. Shapiro Fellow in Bioethics at Princeton University. He received his Ph.D. in the History and Sociology of Science from the University of Pennsylvania.

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Carlos Eduardo Sierra (Universidad Nacional de Colombia) has published (with Steve Macraigne and Sergio Osorio) *La bioética a la luz de las epistemologías de segundo orden I: el aporte crítico de Iván Illich y de Hans Jonas* (Universidad Militar Nueva Granada, 2014). He also served as guest editor of *La Revista Internacional Magisterio: No 71: Bioética y educación de future* (Cooperativa Editorial Magisterio, 2014). He published many articles in 2014 and 2015, including "Polemoética: límites y posibilidades" in *Revista de Bioética Latinoamericana*, Vol. 14, No 1, 2014; "Tecnología bélica medieval: Giro en la historia de la tecnología" in *Revista Universidad de Antioquia*, No 315, 2014; and a series of articles on the history of astronomy in *Circular de la Red de Astronomía de Colombia*. Sierra was a researcher and evaluator for the National System of Science and Technology, Departamento Administrativo de Ciencia, Tecnología e Innovación (Colciencias), Colombia in both 2014 and 2015.

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Pamela H. Smith (Columbia University) was selected as Vice President of the Renaissance Society of America. She will serve a 2014-16 term, then become President for 2016-18, and Past President 2018-20. She recently co-edited the following books: Christy Anderson, Anne Dunlop, and Pamela H. Smith (eds.), *The Matter of Art: Materials, Practices, Cultural Logics, c.1250-1750* (Manchester University Press, 2015), a volume that explores attitudes to matter and materials in the early modern world, as well as the meaning, use, and production of materials for building, mining, and various types of artistic

Member News, cont.

production, and Pamela H. Smith, Amy R. W. Meyers, and Harold J. Cook (eds), *Ways of Making and Knowing: The Material Culture of Empirical Knowledge* (Bard Graduate Center/ University of Michigan Press, 2014).

This volume explores the circumstances under which making constituted knowing, and, more specifically, it examines the relationship between making objects (crafts) and knowing nature (the natural sciences) in Europe and its colonies from about 1450 to 1850. It includes both museum and academic scholars in an attempt to draw the study of objects more centrally into history and the history of science.

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Miriam Solomon (Temple University) has just published *Making Medical Knowledge* with Oxford University Press.

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David Spanagel earned tenure and the promotion to Associate Professor this past winter at Worcester Polytechnic Institute.

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Anthony N. Stranges (Texas A&M) has published *Transforming America* (Kendall Hunt Publishing Company, 2014). The book is a comprehensive survey of science in America from colonial times to the present.

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David J. Stump (University of San Francisco) has published *Conceptual Change and the Philosophy of Science: Alternative Interpretations of the A Priori* (Routledge, 2015).

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Arnold Thackray (Chemical Heritage Foundation) has co-authored (with David Brock and Rachel Jones) *Moore's Law: The Life of Gordon Moore, Silicon Valley's Quiet Revolutionary* (Basic Books, 2015), an account of Gordon Moore's life and his role in the development of Silicon Valley. The 560-page biography has been ten years in the making.

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Elly Truitt was granted tenure and promoted from Assistant to Associate Professor of History at Bryn Mawr College. Her book *Medieval Robots: Mechanism, Magic, Nature, and Art* was published by the University of Pennsylvania Press in May 2015.

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Glen Van Brummelen has been awarded the 2015 Distinguished Teaching award by the Mathematical Association of America's Pacific Northwest section.

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Mark A. Waddell (Michigan State) has published *Jesuit Science and the End of Nature's Secrets* (Ashgate, 2015).

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Kelly J. Whitmer has been promoted to Associate Professor of History at Sewanee: The University of the South. Her book, *The Halle Orphanage as Scientific Community: Observation, Eclecticism and Pietism in the Early Enlightenment*, appeared in May 2015 with the University of Chicago Press.

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Polly Winsor (University of Toronto) has published "Considering Affinity: An Ethereal Conversation," *Endeavour* 39 (1): 69-79, which uses an imaginary dialogue to explore issues in the history of systematics. Parts 2 and 3 of this project are currently in press.

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Christine Yi Lai Luk has published a paper titled "Building Biophysics in Mid-Century China: The University of Science and Technology of China" in the *Journal of the History of Biology*, Vol. 48(2), pp. 201-235. Her dissertation-based monograph, *A History of Biophysics in Contemporary China*, was recently published by Springer Press.

In Memoriam

Mel Usselman

5 January 1946 — 23 March 2015

Photo courtesy of Trixie Usselman.

Mel Usselman, a distinguished historian of chemistry and a dear friend to many in our community, died on 23 March 2015 at the age of 69, after a six-week illness. He is survived by his wife Trixie and three children. His just-published life's work is a magisterial full-scale biography of the extraordinary English polymath William Hyde Wollaston (1766-1828). He had completed the final task connected with the publication of the book—approving the cover design—a few days before falling ill. Advance copies of *Pure Intelligence: The Life of William Hyde Wollaston* (University of Chicago Press) arrived at the Usselman home six weeks after the author had passed away.

Melvyn Charles Usselman was born 5 January 1946 in Ottawa. He graduated with an honors B.Sc. degree in chemistry from the University of Western Ontario in 1968, then completed a chemistry Ph.D. there five years later under the direction of the eminent organic chemist Paul de Mayo. Partly under the influence of de Mayo's deep interest in the field, Usselman developed a passion for the history of chemistry even before completing his doctoral research. After the degree, he began teaching a course of his own design at Western (he called it "Liberal Science 101"), while studying toward a master's degree in history of science.

By great good fortune Usselman had the benefit of the mentorship and friendship of the eminent historian of biochemistry Frederic L. Holmes, who from 1972 to 1977 chaired Western's Department of History of Medicine and Science. Usselman earned his M.A. in 1975, was hired by Western's Department of Chemistry, and began his career as a historian-chemist. He ascended the ranks, regularly teaching organic chemistry as well as history of science, attaining a full professorship in 2005 and then becoming emeritus in 2013. Until 1981 he held a joint appointment in the Department of History of Medicine and Science.

One of the first subjects Usselman began to explore as a master's student was Wollaston's life and work, a worthy quest that he tirelessly pursued for the next forty years. In his own day Wollaston was universally considered to be one of Europe's greatest natural philosophers, but through a twist of fate that Usselman explains to his readers, no proper biography has ever appeared—until now. Usselman tenaciously sought and meticulously analyzed published and unpublished materials, including letters, laboratory notebooks, and business records, succeeding not only in thoroughly elucidating Wollaston's amazing life story, but also in illuminating his context within early nineteenth-century British (and global) society, politics, technology, and commerce.

In addition to his exceptional ability as a historian, Usselman was also a highly trained chemist with access to his own laboratory, to colleagues in other chemical specialties, and to talented undergraduate chemistry honors students. He employed all of these as invaluable adjuncts to his more bookish historical work. For example, he and collaborators carried out analyses and replications to provide important insights into Wollaston's innovative work on platinum, palladium, and rhodium, results that could have been obtained in no other fashion. Often with the help of students (whom he routinely gave coauthor status), in a series of remarkable journal articles and book chapters he replicated in historically sensitive ways crucial experiments by Wollaston, John Dalton, Thomas Thomson, and Justus Liebig.

In each of these cases, Usselman and collaborators were able to show that the actual historical details were far more interesting, and often more consequential, than had always been assumed. For example, we now know that Dalton's first case of multiple proportions—that which led him to the atomic theory—was experimentally much more complex than Dalton realized, and some of his fortuitously favorable conclusions were based

In Memoriam

on misinterpretations. The same was true for one of Thomson's decisive early verifications of Dalton's theory. And the meticulous experimental replications of Liebig's revolutionary procedure for the elemental analysis of organic compounds by Usselman et al. provided innumerable insights that could have been reached by no other means. For the latter project and related work, in 2004 Usselman was awarded the Liebig-Wöhler Freundschafts-Preis at the University of Göttingen.

I was privileged to witness some of Mel's work on the Liebig project at first hand. I stood in awe of his almost magical ability to surmount one obstacle after another, gradually coaxing an historically informed apparatus to work. It wasn't just his ability to analyze and resolve intractable problems that so deeply impressed; he was simultaneously (and brilliantly) mentoring two student collaborators who learned the procedure and actually carried out the lab-work. Usselman was indeed a teacher as well as a scholar—a teacher for the ages. He had a well-earned reputation at Western, collecting major teaching awards on the national as well as regional and local levels. His introductory course on the normally dreaded subject of organic chemistry was regularly heavily oversubscribed.

Mel's exceptional appeal as a teacher was based on many factors, but I suspect three were paramount. The first was his habit of extraordinary clarity and careful organization in whatever he did and said. I am sure that Mel had a natural aptitude to speak and write clearly, but there is also no doubt that this result was the outcome of hard work and careful thought. A second factor was his almost preternatural patience. Mel loved people, and he was amazingly generous with his time and attention—to students of course, but the same can be said about his relations with colleagues.

The final and maybe the most important point to mention was Mel's many other sterling human qualities. A consummate colleague, mentor, and friend, positive and thoughtful in all his dealings, his wise voice was cherished at Western, as well as in the wider circles in which he moved. Mel was one of the most deeply and thoroughly decent people I have ever met. He had a wonderful sense of humor. In talking with him, working with him, learning from him, and laughing with him, one never felt it was ever about *him*; it was always about *others*. Mel Usselman not only enjoyed his life enormously, he made everyone around him enjoy theirs more. He will be dearly missed.

Alan Rocke
Case Western Reserve University

Activities of the HSS Committees, Interest Groups, and Caucuses

by Jay Malone, HSS Executive Director

Twice a year, the Executive Office asks our volunteers to report on their activities over the prior six months. The Executive Committee discusses these reports at its biannual meetings, where it offers guidance, considers various action items, prepares motions for presentation to Council, and, always, expresses deep appreciation for the dozens of volunteers who devote their time and intellect to Society business.

Since we are in the midst of implementing our strategic plan, I will try to provide more updates on the activities of the committees (members may wish to refer to my annual report, beginning on page 20 of the January Newsletter, to help with context: **http://hssonline.org/wp-content/uploads/2014/07/Jan2015-Newsletter1.pdf**).

Standing Committees:

Under our current bylaws, which we are in the process of changing, the HSS has 6 standing committees, each title describing the nature of each committee's work (each standing committee has at least one Council member who serves). We also have a nominating committee, elected by the membership each year. The following provides a summary of each committee's activities (not included are the deliberations of the Society's many prize committees):

- Committee on Honors and Prizes (CoHP): (Chair Sarah Igo, Lorraine Daston, Gregg Mitman, Jimena Canales, Larry Principe): CoHP members sit ex officio on our various prize committees, offer guidance on procedures and help with guidelines so as to ensure consistency in our prizes. The members do not read books or portfolios. The CoHP's major activity is providing 3 nominations to the Executive Committee for the Sarton Medal (the Executive Committee determines the winner). Due to a new procedure, where we invited short nominations, CoHP examined over 20 nominations, arrived at a short list of 5 for which they requested full nominations. They then forwarded 3 of these nominations (not ranked) to the Executive Committee. The Sarton Medalist will be revealed at the 2015 conference. The committee also considered and approved a nomination for the Outstanding Service Award, a prize established in the early 1980s for recognition of HSS members who provide outstanding service to the HSS.
- Committee on Meetings and Programs (CoMP): (Chair Rachel Ankeny, Arthur Daemmrich, James Fleming, Karen-Beth Scholthof, Debbie Coen, Matt Stanley, Sue Lederer, Florence Hsia, Brian Ogilvie, Sigrid Schmalzer, Ken Alder, Brian Dolan, Dorothy Porter, John Krige) CoMP is a large committee because we include the program chairs and local arrangements chairs for 3 meetings (prior, current, next) to provide continuity. Since the annual meeting is one of the more important activities of the HSS and the strategic plan calls for us to create more dynamic meetings, CoMP has been especially busy trying to reach that goal (the record number of submissions for San Francisco (over 600) suggests that we are on the right track). In addition to implementing the strategic plan, CoMP is helping plan the 2019 meeting in Utrecht (our first meeting outside of North America), reviewing models for meeting policies, discussing the use of various technologies to augment the meeting, monitoring aspects of the meeting to see what is working and what requires adjustments, nominating program chairs for future meetings, examining proposals for possible sponsorship at the American Historical Association meetings, and many other activities.
- Committee on Education (CoE): (Chair Kristin Johnson, Secretary Dawn Digrius, Muriel Blaisdell, Lloyd Ackert, Erik Peterson, Marsha Richmond (ex officio)). In addition

Continued on Page 23

Activities of the HSS Committees, Interest Groups, and Caucuses, *cont.*

to organizing and sponsoring sessions and workshops at the annual meeting, CoE provides nominations for the Joseph H. Hazen lecture, given biennially in New York; examines requests for educational sponsorships; provides advice on the Hazen Education Prize; and, most importantly, is implementing components of the strategic plan that call for increased engagement. For the latter, CoE is interested in developing a long-term strategy for increasing the role of the Society in building upon and taking advantage of STEM initiatives in K-12 education, and has good expertise in this realm represented on the committee. Discussions regarding eventual workshops for local educators at society meetings highlighted the need for strategic and careful, long-term planning for the success of such initiatives. Committee members have also expressed interest in discussing encyclopedia writing and similar work, given the increasing role of historians of science in such publications, both online and in print.

- Nominating Committee (Nom Com): (Chair Jan Golinski, Lissa Roberts, Luis Campos, Erika Milam, Neil Safier) This year's committee created a slate for the Vice President (2 candidates); Council (10 candidates); Nominating Committee from Council (4 candidates); and Nominating Committee at Large (6 candidates). We heard numerous positive comments about the international nature of the slate and the high qualifications of the candidates resulted in some tight election margins (with one race ending in a tie and requiring a run-off election). Because our strategic plan will require more of our nominating committee, we plan to increase the length of the terms (from one year to two years) to help with institutional memory and process.

- Committee on Finances (CoF): (Chair Adam Apt, Karen Parshall, Edith Sylla, Rich Kremer, Hamilton Cravens, Richard Sorrenson) The finance committee, chaired by HSS Treasurer, Adam Apt, provides advice and guidance for our Treasurer. The committee reviews the budgets (Adam creates budgets for the next 3 fiscal years), examines investment policy, and provides feedback on the uses of the Society's endowment (currently at $3.5 million).

- Committee on Publications (CoP): (Chair Soraya de Chadarevian, Secretary Florence Hsia, Michael Gordin, Katharine Anderson, Matt Jones, Janet Browne (ex officio)) The Committee has been focused on a pending press tender and how our strategic plan's emphasis on digital scholarship will figure into that tender. CoP also discussed the Hackathon and THAT camp being organized by HSS Bibliographer Stephen Weldon, as well as creating a statement that will be issued from the HSS on the value of digital works and publications and the guidelines for evaluating such works.

- Committee on Research and the Profession (CoRP): CoRP is the only committee without specific tasks to guide it. Its prior activities, such as the employment survey and membership diversity, had been taken over by other entities in the HSS, thus creating uncertainty about CoRP's purpose. Our strategic planning process has called for a reorganization of CoRP, possibly as a membership committee, and we will be providing updates on these changes.

Caucuses:

- Graduate and Early Career Caucus (GECC): (co chair Bridget Collins). GECC is devoted to the needs of graduate students and early careerists in the discipline. At the annual meeting they host CV review sessions, mentorship programs (including a special mentorship tea for women), and a mixer for grad students.

- HSS at Work (co chairs, Carin Berkowitz and Jessica Baron) provides a space and resources

Continued on Page 24

Activities of the HSS Committees, Interest Groups, and Caucuses, *cont.*

for historians of science who are not engaged in typical academic employment. It continues to maintain an online presence (website, Twitter, Facebook) and gathers resources related to work outside the tenure track. The Caucus is sponsoring a roundtable on "Communicating Beyond the Ivory Tower" at the 2015 HSS Meeting. In addition, HSS at Work will also sponsor a reception at HSS 2015, perhaps jointly with GECC.

- Joint Caucus for Socially Engaged Philosophers and Historians of Science (JCSEPHS) (co chairs Rachel Ankeny (HSS) and Janet Stemwedel (PSA)) is focused on activities to create more engagement in the history of science. They are focusing on practical events, such as the one in Chicago where over a dozen experts provided advice on topics ranging from how to speak to the media to hosting local events. They are supported in part by the Elizabeth Paris Endowment Fund, which is dedicated to increased engagement in the history of science.

- Women's Caucus: (co chairs Gina Rumore and Kimberly Hamlin) HSS's oldest caucus continues to host the ever-popular Caucus breakfast at the annual meeting, an important networking event. The Caucus also provides support for dependent care grants, lactation rooms at the annual meeting, and gender challenges in publishing.

Interest Groups:

Our 8 forums include the Forum for the History of Science in America, Forum for History of Human Science, Earth and Environment Forum, Forum for the History of the Mathematical Sciences, Forum for the History of Science in Asia, Forum for the History of the Chemical Sciences, the Physical Sciences Forum and the Early Science Interest Group. Each group is engaged with a subset of the membership and is actively planning for events at the annual meeting, including prizes, lectures, lunches, and other special gatherings, creating an increased dynamism at the conferences. There are some possible changes afoot for our oldest forum, History of Science in America, as its leaders ponder its future now that its main goal of seeing more sessions on the history of science in America at the annual meeting has been met.

News from the Profession

Consortium for the History of Science, Technology, and Medicine Newsletter

The Consortium for the History of Science, Technology, and Medicine publishes a newsletter, available at **www.chstm.org**. Events, news, and information on working groups are also available on the site.

25th International Congress on the History of Science and Technology

The 25th International Congress on the History of Science and Technology will be held in the city of Rio de Janeiro, Brazil, from 23 to 29 July 2017, with the general theme "Science, Technology and Medicine between the Global and the Local." You can learn more about the conference at **http://www.ichst2017.sbhc.org.br/**

American Association for the History of Medicine Awards

The American Association for the History of Medicine honored the following individuals at its award ceremony and 90th anniversary celebration on 2 May 2015 at the Commons on the campus of Yale University in New Haven, CT:

- **Osler Medal:** Julia Cockey Cromwell, (Johns Hopkins University), "Viral Knowledge: Autopsy and the 1918 Influenza Pandemic."

  Honorable Mention: John Thomas Stroh, (University of Kansas School of Medicine, Class of 2014 and resident at the Children's National Medical Center, Washington, DC) "The English Reformation and the Birth of London's Royal Hospitals."

- **Shryock Medal:** Marissa Mika, (University of Pennsylvania), "Surviving Experiments: Burkitt's Lymphoma Research in Idi Amin's Uganda."

  Honorable Mention: Cara Kiernan Fallon, (Harvard University), "Husbands' Hearts and Women's Health: Gender and Heart Disease in Twentieth-Century America."

- **J. Worth Estes Prize:** Hoi-eun Kim, "Cure for Empire: The 'Conuer-Russia-Pill,' Pharmaceutical Manufacturers, and the Making of Patriotic Japanese, 1904-45," *Medical History 57* (2013): 249-68.

- **Pressman-Burroughs Wellcome:** Deborah Blythe Doroshow, Yale University, for her project, "Emotionally Disturbed: The Care and Abandonment of America's Troubled Children."

- **George Rosen Prize:** Margaret Humphreys for her book, *Marrow of Tragedy: The Health Crisis of the American Civil War* (Johns Hopkins University Press, 2013).

- **Welch Medal:** Leslie J. Reagan for her book *Dangerous Pregnancies: Mothers, Disabilities, and Abortion in Modern America* (University of California Press, 2010).

- **Genevieve Miller Lifetime Achievement Award:** Caroline Hannaway

- **The Garrison Lecturer for 2016:** Susan E. Lederer, Robert Turell Professor of Medical History and Bioethics and Chair of the Department of Medical History and Bioethics, University of Wisconsin.

Doctoral Dissertations

You can view the latest batch of recent doctoral dissertations on the history of science and medicine at: **http://www.hsls.pitt.edu/histmed/dissertations**

ProQuest has altered how they put out their individual issues. No longer do they correlate to one month, so the dating is more random. Thus titles will range from 2015—yes they have some 2015 dates—back into the late 1990s. There is one additional aspect to point out about this latest batch of dissertations that make it unique. The University of Southern California downloaded the

News from the Profession, cont.

past 75+ years of its dissertations into the current issues—thus you will find titles dating back into the 1920s. While there are no abstracts for these earlier works you can pull up the full text of these dissertations.

Savant Relics: Brains and Remains of Scientists

4th Watson Seminar in the Material and Visual History of Science - University of Pavia, Pavia September 4th, 2015

Organized by Marco Beretta, Maria Conforti, Paolo Mazzarello in cooperation with the Museo Galileo in Florence

In contrast to what we may assume, relics of scientists are numerous and the practice of preserving and studying them covers a surprisingly long period, from the late medieval time to the mid-twentieth century. What inspired then natural scientists or the public of the curious and savants to preserve the bodies of their ancestors or scientific heroes as relics? What was the role of these relics within scientific culture? Motivations varied and included commemorative rituals; strategies to perpetuate memory; establishing the superiority of eminent scientists by investigating the size and anatomy of their brains' phrenology onwards; the institutionalization of the offering to the fellow scientists the corpse for scientific purposes; and last but not least the fear of being buried alive, that had become an obsession in 18th century Europe.

Seminar's Program

- Introduction: Marco Beretta (Università di Bologna)
- Anke Timmermann (Cambridge University): Of Death and Elixirs: The Remains and Resting Places of Alchemists. Commentator Brigitte Van Tiggelen (Chemical Heritage Foundation – Europe)
- Stefano Gattei (IMT Lucca): From Banned Mortal Remains to Worshipped Relics of a Martyr of Science: The Beginning of the Galileo Myth. Commentator John Heilbron (Oxford University)
- Rob Iliffe (University of Sussex): The Mask of Isaac Newton: Secular Hagiography and the Creation of Genius. Commentator Rebekah Higgitt (University of Kent)
- Ludmilla Jordanova (Durham University): Science, Memory and Relics in Britain. Commentator Anna Maerker (King's College London)
- Valentina Cani (Università di Pavia): Pavia's Relics of Notable Scientists: A Journey between Science and Scientific Mythology. Commentator Francesco De Ceglia (Università di Bari)

Galileo's finger. Courtesy Museo Galileo – Florence

- Silvano Montaldo (Università di Torino): Between Positivism and Nationalism: The Relics of 19th Century Scientists. Commentator Maria Carla Gadebusch Bondio (Technische Universität München)

Admission is free. For registration and other information contact Mrs. Marta Daffara at **marta.daffara@pragmacongressi.it** or see **http://www.shpusa.com/2014/10/savant-relics-brains-and-remains-of-scientists/**

IWHC-2015-Tokyo: Lessons from an Enchanted Conference I Almost Missed

by Dr. Pnina G. Abir-Am, Brandeis University

The IWHC-2015-Tokyo meeting [**http://kagakushi.org/iwhc2015**] on "Transformations of Chemistry from the 1920s to the 1960s" was held on March 2-4, 2015 at Tokyo Tech (Tokyo Institute of Technology, or the Tokyo equivalent of MIT according to its students). The participation of historians of science from over half a dozen countries was made possible by a group grant to historians who studied the history of chemistry in Japan during the above period. IWHC-2015-Tokyo thus reflected its organizers' desire to situate their findings in a wider, comparative and international context. The meeting's sponsors included the Japanese Society for the History of Chemistry; the International Commission for the History of Modern Chemistry; the History of Science Society of Japan; and the Chemical Society of Japan, among others.

In the spirit of "all is well that ends well" (a surprising statement since Shakespeare was all too familiar with the vast contrast between outcome and process) I will first describe why this conference was so rewarding and worthwhile, even when one's road to Tokyo was far from obvious. Second, I will reflect on lessons learned from the "process" of getting to IWHC-20115-Tokyo, so as to better address the predicament of many scholars who encounter obstacles in participating at international conferences.

Group photo at conference conclusion on 3-4-15 (all group photos by Masanori Kaji, Chair of Local Organizing Committee, 7th from left in first row)

This meeting was organized by two committees. The first was the Program Committee, which included eight members from five countries and was chaired by Professor Yasu Furukawa of Nihon University, (**http://www.nihon-u.ac.jp/en/**) President of the Japanese Society for the History of Chemistry, (JSHC) who also gave the Opening Address on JSHC's history. This Committee produced such an impressive program that several distinguished senior colleagues to whom I showed it, among them Roald Hoffman, a Nobel Laureate in chemistry; Margaret Rossiter, a long-term former Editor of *ISIS* and *Osiris*; and Irving Epstein, senior adviser to the Provost at Brandeis University, had all commented on the high quality of the IWHC-2015-Tokyo program.

The second committee responsible for the success of this conference was the Local Organizing Committee, composed of members from twelve Japanese universities, and chaired by Masanori Kaji, a Professor of history & philosophy of science & technology at Tokyo Tech's Graduate School of Decision Sciences. He hosted IWHC-2015-Tokyo with amazing "cool" at several sites in his home university. A team of resourceful staffers coordinated by Ms. Makiko Shiba was available on site to ensure the smooth running of the conference.

Continued on Page 28

IWHC-2015-Tokyo, *cont.*

IWHC-2015-Tokyo focused on various aspects of the history of chemistry between the 1920s and the 1960s, a period during which chemistry was transformed by advances in quantum theory and the discovery of nuclear fission, by changes in its relationships to biology, and by changes in its relationship to physics, as reflected in the impact of many new methods and techniques such as spectroscopy, electron diffraction, and X-ray crystallography, among others. The conference's eight sessions thus covered the international context of the chemical community. Most sessions combined guest and host country speakers, as well as professional diversity ranging from graduate students to professors emeriti.

The contributions of the Japanese historians focused on the international relationships of Japanese chemists (N. Hirota, K. Kawashima, Y. Kekuchi, and M. Wada); the history of research schools of quantum and organic chemistry in Japan (Y. Furukawa and M. Kaji, respectively); and theories and methods (S. Furuya, Mari Yamaguchi, Makoto Yamaguchi, and T. Mine). Eight participants came from Europe (Susanne Rehn-Taube, Victoria Lee & Jeremiah James from Germany; Danielle Fauque & Pierre Laszlo from France; Brigitte van Tiggelen from Belgium, Galina Shindriayeva from UK; and last but not least, Ernst Homburg, one of three keynote speakers, from Holland); seven came from USA (two additional keynotes speakers, Jeffrey Johnson and Mary Jo Nye, as well as Carsten Reinhardt, Ronald Brashear, Evan Hepler-Smith, Kevin Fujitani, and Pnina G. Abir-Am); and two came from Japan's neighboring countries (Buhm Soon Park from Korea; and Ian Rae from Australia). Regretfully, a scheduled speaker from India, Pankaj Kalita, who had an interesting topic, (polymer synthesis) did not arrive. Nine of the 30 scholars on the program (i.e. 26 speakers and four non-speaker session chairs) were women. The conference was also attended by an additional fifty or so historians of science and students from Japan who participated in the Q&A periods.

Three keynote addresses were delivered by former recipients of the Dexter Prize (given by the American Chemical Society for outstanding contributions to the history of chemistry). Ernst Homburg's (Maastricht University) address "On Molecules, Men, and Mirrors: Different Ways to Write a History of the Chemical Industry" was a tour-de-force, deftly covering the periods well before and after the conference time frame.

"From bio-organic chemistry to synthetic biology: Fulfilling Emil Fischer's dream," delivered by Jeffrey Johnson, (Villanova University, PA.) acquainted us with little known aspects of the great chemist's broad vision and dutiful efforts in WWI, whose centennial is currently unfolding all over the world. Indeed, a session on the role of chemistry in WWI is currently being organized by IWHC-2015 participants Yoshiyuki Kikuchi & Brigitte van Tiggelen for the upcoming HSS annual meeting in San Francisco (November 16-19).

"A Career at the Center: Linus Pauling and the Transformation of Chemical Science in the 20th Century," delivered by Mary Jo Nye, (Oregon State University) provided not only a comprehensive view of the famous chemist, but also an essential background for other talks which touched on Pauling, e.g. those by Y. Kikuchi & N. Hirota, as well as my own talk in Session 4, (Chemistry's Relationships to Biology").

Following Kevin Fujitani's (Ohio State University) fascinating talk on the attribution of credit for the discovery of vitamin B1 to seven scientists in session 4, I presented recent research on "Pauling's 'boys' and the mystery of DNA structure," conducted under a fellowship from the Special Collections and Archive Research Center (SCARC) at Oregon State University. Having had no opportunity to present this research beyond SCARC's own Fellows series, (**Paulingblog.wordpress.com/2012/11/21/dr-pnina-abir-am-resident-scholar**) I was both surprised and pleased to encounter a great interest in Pauling's misadventures with DNA, especially on the part of

IWHC-2015-Tokyo, *cont.*

our Japanese colleagues. A lively Q&A followed, skillfully moderated by Togo Tsukahara of Kobe University, whose name was already mentioned to me by a common colleague at UCLA. (see below) In seeking to better understand the reasons for the pronounced Japanese interest in Pauling's failed foray into DNA, I began to quiz Japan experts until I was able to confirm my hunch that such an interest reflected not only Pauling's fame as both a great scientist and a humanitarian who campaigned against nuclear testing, but also a fascination with the culturally central theme of the "nobility of failure," a theme going back to the history of the Meiji restoration.

Unfortunately, for reasons of space, it is not possible to comment here on all the talks, (about two dozen) especially since an electronic version of the program, as well as of the revised conference proceedings, is available on the IWHC-2015-Tokyo website (**http://kagakushi.org/iwhc2015**). An English language special issue of *Kagakushi*, the journal of the Japanese Society for the History of Science, will also include Japanese translations of the three keynote papers.

IWHC-2015-Tokyo provided ample opportunities for discussion during the Q&A periods as well as during the coffee breaks, lunches, and receptions. It concluded with two most memorable events: a banquet in a traditional Japanese garden and a day long tour of Tokyo. Our guide selected a rich itinerary, ranging from the Hamarikyu botanical gardens, (with 300-year-old pine trees) to the Meiji shrine (**www.meijijingu.or.jp/english/**); the Tokyo Waterworks Historical Museum; and the Asakusa district with its many traditional Buddhist temples and Shintoist shrines. The tour was punctuated by a tea ceremony in a tidal pond pavilion of a former seashore shogun villa from the Tokugawa period in the 17th Century and a Japanese style traditional lunch (**http://www.gonpachi.jp/?lang=en**).

Flying back to the US with the *South Pacific* musical sound track in my ear set, I had time to reflect on the fact that this unique experience had almost not happened. To make a long story short, quite a few institutions and individuals in the US proved to be distinctly unhelpful with my efforts to secure matching travel funds for this conference. To be sure, some were a long shot, while others, HSS included, chose to focus on participation at their own meetings only. But there were some organizations and individuals whose official mission revolved around promoting the history of chemistry, yet they strangely failed to foresee that participation on the program of IWHC-2015-Tokyo was an excellent way of promoting such a mission. Whatever the reasons for such a failure may have been, the "nobility of failure" mentioned above as a central theme in Japanese history & culture was obviously not among them.

The only ray of hope came from UCLA (University of California at Los Angeles) where several colleagues (Soraya de Chadarevian, Ted Porter, Mary Terrall, Maura Resnick and Yoram Cohen) graciously ensured that the transpacific long haul ahead of me should benefit from a friendly stopover by inviting me to give a couple of talks in the week prior to the Tokyo meeting. Also at UCLA, Sharon Traweek and Sandra Harding generously shared with me their own experiences of Japan. (Harding returned from a recent lecture tour in Tokyo, while Traweek spent considerable time at Tsukuba Science City researching her pioneering Ph.D. thesis on the particle physics community in Japan and the United States. (better known in its published form of *Beamtimes and Lifetimes*, Harvard University Press, 1992). My uncertain situation was resolved in the last moment only when, in a flash of inspiration and inclusivity, the Japanese organizers removed the last hurdles still standing between me and their amazing conference. I can only hope that their good foresight is appreciated not only by me but also in pertinent professional quarters in both Japan and the USA.

In conclusion, I wish to share a key lesson from my complex experience with participating at this conference. During the prolonged "process" of

IWHC-2015-Tokyo, *cont.*

leaving no stone unturned, one of many colleagues with whom I had consulted, Sally Gregory Kohlstedt (a former HSS President, Dean and academic activist at the University of Minnesota) recalled that the National Science Foundation (NSF) once had and might still have a program for travel to international conferences. Though my follow up with NSF-STS Program Director revealed that processing such an application would have required several months (and hence it could not, by then, apply to IWHC-2015-Tokyo) such a program was immediately recognized as pertinent for another upcoming international conference, on "Gender and Collaboration in Science," to be held in Prague. A group proposal for seven US based speakers, the majority of whom having no other source of travel support, was prepared and submitted. Much as IWHC-2015-Tokyo, the Prague meeting is also a biennial conference co-organized by a IUHST Commission, this time its Commission on the History of Women in Science, Technology, and Medicine. It is hoped that this lesson should also be absorbed by those "fat cats" (even if occasionally disguised as lean and mean) who may not need such a group grant for themselves, but may still want to remember that for others, such a group travel instrument may well be the only way to attend key international conferences such as IWHC-2015-Tokyo without having to depend on last moment miracles in another country.

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7 Sponsor-a-Scholar Program

8 Graduate Student Donation

9 2014 Meeting - HSS Women's Caucus Breakfast

0 Forum for the History of the Mathematical Sciences

† Dependent Care for the HSS Annual Meeting

* The Elizabeth Paris Endowment for Socially Engaged History and Philosophy of Science

‡Watson Davis and Helen Miles Davis Prize

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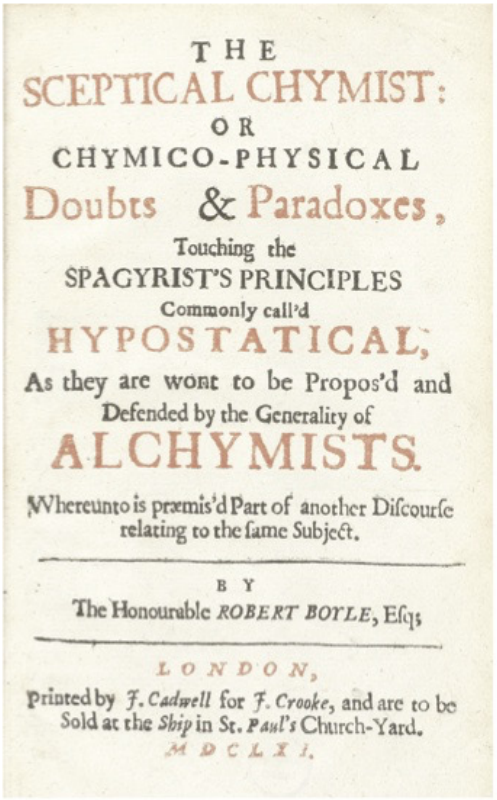
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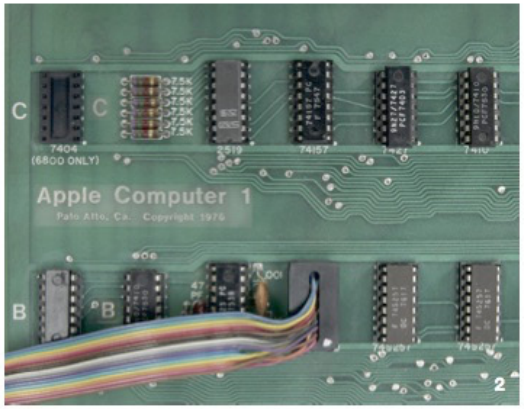

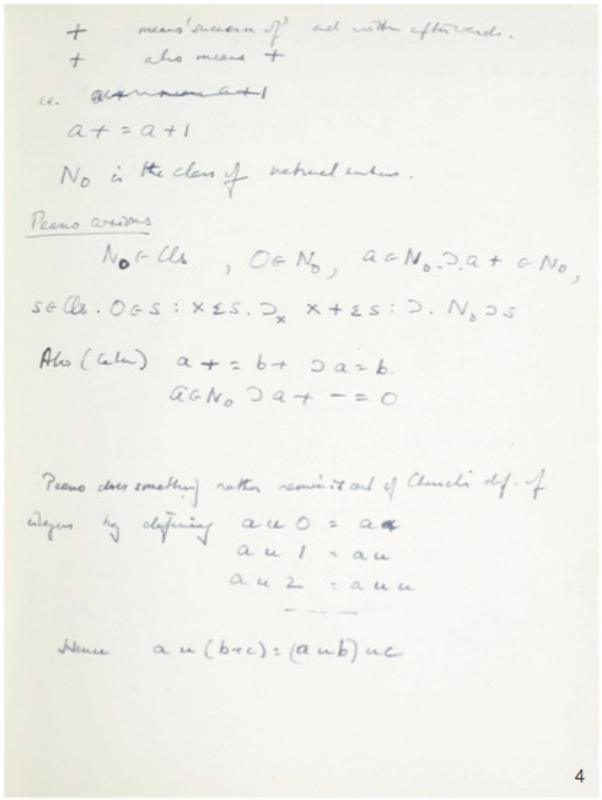

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