

Newsletter

of the History of Science Society

Vol. 42, No. 2
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WHY DID HSS CONDUCT A CLIMATE SURVEY?

by Georgina Montgomery, Constance Clark and Jay Malone

If you looked around the hotel lobby or meeting rooms at the 2012 annual meeting, or any other recent HSS conference, white males appeared to far outnumber women and minorities. Because appearances can be deceptive, the Women's Caucus and the HSS Council wanted to determine in a more precise manner who was attending the annual meeting and why, and who was not attending the conference and why. Was the conference attracting a more diverse group of scholars than suggested by simply looking around the rooms? Did people feel welcome at the conference? How could we attract more people to the annual meeting and what could we do to be more inclusive?

These questions reflect the primary motivation behind the climate survey—we want to ensure that people feel welcome at the annual meeting regardless of race, ethnicity, gender, sexual orientation, disability, disciplinary affiliation, or type of scholarly position. And we believe that a climate in which more people feel welcome will improve the meetings for everyone, bringing in new perspectives and experiences.

The questions also reflect the practical motivation behind the survey—we lacked basic demographic information on who was and who was not attending the conference, and we wanted to explore ways to get more people to attend. Currently about 23% of the Society's

membership regularly attends the annual meeting, with members comprising about 70% of meeting attendees (HSS is unusual, if not unique, in that participants are not required to be members of the Society).

Erika Milam and Georgina Montgomery co-chaired the Women's Caucus in 2012 and worked with Jay Malone to find someone qualified to conduct the climate survey. After months of searching, Georgina found someone who just happened to be on her campus: Isis Settles, a psychologist at Michigan State University, who has extensive experience conducting and analyzing climate surveys. In consultation with Erika, Georgina, Jay, officers of the HSS and various committees, Isis composed the survey questions, administered the survey, and provided preliminary results for discussion at the November 2012 annual meeting, and then final results shortly thereafter.

Isis provided all of this work pro bono, asking only that we pay the costs of her research assistant and that she be able to use the results in her research. Because climate survey research remains specialized (and rare) for academic societies, some of the questions reflect U.S. categories, which are based on reliable measures used in prior research. Even though the HSS is an international society, we hoped that these data would still provide us an accurate assessment of our conferences.

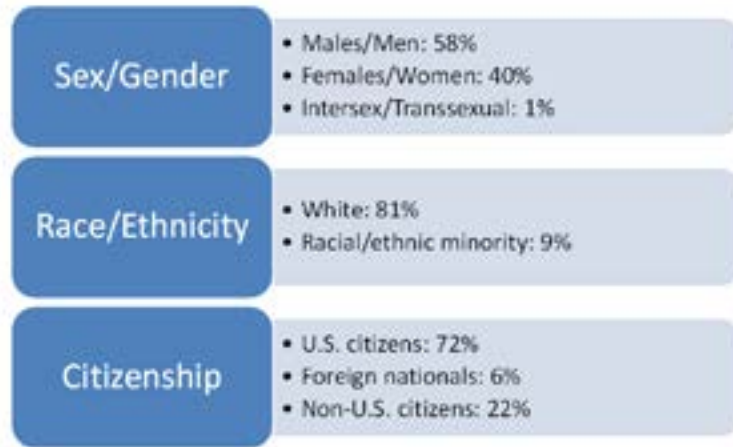
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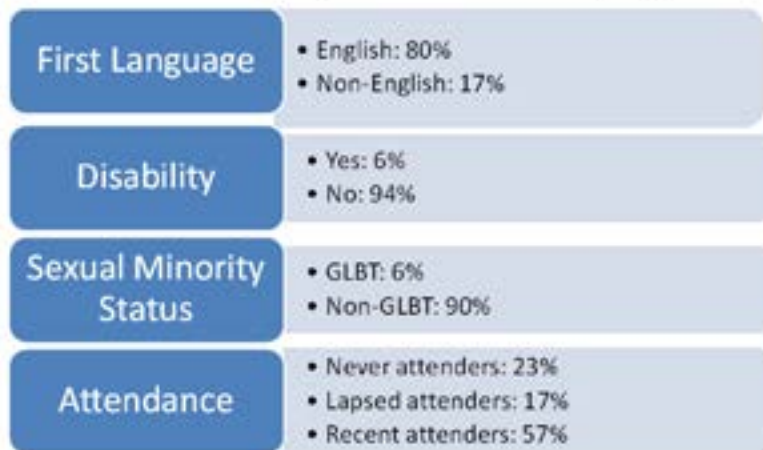
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Demographics Summary (1)



Demographics Summary (2)



(Note: Some surveyees did not answer demographic questions.)

Summary of the Survey Results: Quantitative Data

We sent the survey to current and lapsed members of the HSS, using membership rolls dating back to 1995. Approximately 821 people took the climate survey. This response rate is very high and reflects our members' commitment to exploring and improving inclusion at the meeting and to generating a more robust understanding of who is and is not attending the meeting and why. To the left are two tables showing basic demographic data for those who completed the climate survey, which includes whether or not they regularly attend the annual conference.

Although overall the level of meeting satisfaction was good, the following relationships were found to be statistically significant: White males who responded feel more comfortable at the conference than other groups. Those who had never attended the conference expected it to be more positive and diverse than those whose attendance had lapsed (had not attended in the past five years) or those who had attended recently (within the past five years). Recent attendees expressed more satisfaction

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EDITORIAL POLICIES, ADVERTISING AND SUBMISSIONS

The *History of Science Society Newsletter* is published in January, April, July, and October, and sent to all individual members of the Society.

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

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with the conference than lapsed attendees. Compared with men, women reported finding the conference more sexist, and less diverse; and they reported more incidents of incivility and/or harassment. Women also identified many more obstacles to attending the meeting, including money, caregiving responsibilities, health and disability concerns, and lactation.

Preliminary results suggested that racial/ethnic minorities felt that the conference was more exclusionary than did white individuals, but this was no longer statistically significant when all the data had been collected. This may have been a function of sample size. Preliminary data suggested there was a significant difference in perceptions of incivility at the annual meeting by LGBTQ status but this relationship was also no longer statistically significant when all the data had been collected. Interestingly, there were no differences by disability status in perceptions of the annual meeting.

Considering most of the attendees are from the United States, it is perhaps surprising that non-U.S. citizens viewed the conference more positively than U.S. citizens and foreign nationals.

Summary of the Survey Results: Qualitative Data

The survey collected 128 comments from recent attendees, 38 comments from lapsed attendees, and 25 from people who had never attended. There were no patterns in the comments provided

by lapsed or never attendees. Some themes did emerge, however, in the comments from recent attendees. By far the most common comment concerned the need for better childcare options. Several commented on the need for a more welcoming atmosphere for independent scholars. Others suggested more diverse speaker formats to increase “scholarly engagement” and decrease a “show and tell” feel to the sessions.

Next Steps

HSS and the Women’s Caucus have already taken steps in response to the climate survey. The 2012 annual meeting was the first to have a lactation room. Although this space had to serve as both a lactation room and family room in 2012, we hope to have a room dedicated to lactation at future annual meetings. The Women’s Caucus and HSS Council also continue to explore the issue of childcare. This is not a concern restricted to women, but the climate survey did demonstrate that childcare significantly impacts women’s attendance at the annual meeting.

Currently, we are exploring childcare grants, a strategy used by the American Historical Association, in which small grants are provided to caretakers to offset childcare costs. Other ideas include developing some field trips that could be attended by children and parents, and continuing to develop means of communication so scholars travelling with children can connect with one another for play dates, meals and so forth during

the meeting. Suggestions that came up in the discussion of the climate survey’s preliminary results at the women’s caucus breakfast in November included the idea that if we are able to provide grants, those grants could be used by people for care of children left at home as well as for children brought to the meetings; and one person pointed out that we might want to think in terms of family care, since there are probably people who care for family members who are not children.

A number of survey respondents also suggested that adding more diverse formats for panels and sessions might allow for a greater diversity of dialogue. Some ideas might include: panels for which the papers have been circulated online prior to the meeting, so that the panels at the meeting could include more time for discussion, and more detailed discussion; more roundtable discussions relative to paper presentations; or more poster sessions. We could also consider highlighting intersections between the history of science and LGBTQ studies, gender studies, and issues of race by selecting a scholar working in one or more of these areas as a keynote speaker. And, as Lynn Nyhart suggested in her recent *Newsletter* article, we might sponsor more talks and programs, such as the successful “Blue Marble” event last November at Scripps, intended to reach a wider audience, including members of the general public.

Lynn’s *Newsletter* article also mentioned the “HSS Outside the Academy” initiative, being

NOTES FROM THE INSIDE

Welcome Jessica Pfeifer and Thank You Gary Hardcastle!

I would like to extend a personal welcome to Jessica Pfeifer, PSA's new Secretary/Treasurer. I had a chance to meet Jessica at the AAAS meeting in February and look forward to our working relationship. I have more contact with my PSA counterpart than with any other society officer outside of the HSS and value the ties between our two societies.

Those ties have been strengthened over the years by the good fortune that I have had to work with the incomparable George Gale (aka Doc Logic) and his multi-talented successor, Gary Hardcastle. Gary never ceased to amaze me with his devotion towards the job of Secretary/Treasurer: from our biweekly phone calls—where we would discuss issues ranging from hotel site visits to where Michael Ruse would stand during the reception—to PSA election photos, he kept his sanity (mostly) through it all. Even as the drumbeat of the biennial meeting reached a tempo that surpassed the rhythmic ability of adolescent boys, he maintained an enviable sense of humor, frequently dropping references to obscure pop icons (Davy Jones' new-haircut video) and sharing bits of himself that I could never have guessed (a kiddie rocker). But what I particularly valued was Gary's deep interest in history, as evidenced by his long-time ties with the International Society for the History of Philosophy of Science (HOPOS) and the ways he blended history into his philosophy. He is a historian's philosopher. You will be missed, Professor Hardcastle.

- Jay Malone, HSS Executive Director

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developed by Tania Munz and Carin Berkowitz. This is another way to bring in new voices and experiences, including those of independent scholars and people working outside of academia and thus, as Lynn so nicely put it, "broadening who 'we' are." The Women's Caucus is also contributing to this effort by developing a section on the Women's Caucus website that highlights the biographies of women with History of Science degrees who have pursued careers beyond tenure-track academic positions. These biographies will be uploaded to the website by early summer.

The survey was intended to provoke discussion by helping us focus on things that we could improve on in order to make our Society and our meetings more inclusive. We hope that this will be the beginning of a conversation—or many conversations. The HSS website, currently being revamped, and the new Women's Caucus website would be good places for conversations to start. It seems worthwhile to reiterate the recent *Newsletter* invitations from Lynn and Jay for suggestions concerning inclusion and ideas for future meetings.

Future HSS meetings

One strategy for inclusiveness, nationally and internationally, is for HSS to meet in cities that are easily reached. Such meetings have been difficult to arrange because such places are usually exorbitantly expensive. Although New York remains out of our price range, we have been able

to secure good hotel rates in some major hubs. For example, the Society will convene in Boston in 2013, in Chicago (2014), in San Francisco (2015) (we have secured a block of grad student rooms for \$99/night!), in Atlanta (2016), in Toronto (2017), and in Seattle (2018), all in downtown properties. Each of these cities possesses diverse populations that can enhance the quality of our meetings. Atlanta, for example, is not only home to several Historically Black Colleges and Universities, it also boasts the third largest GLBT population (by percentage) in the U.S.

Each of these meeting sites can serve as benchmarks for us, as we try to increase diversity in the HSS. And because we meet in even-numbered years with the Philosophy of Science Association, we should note that PSA's Women's Caucus and leadership also endorsed the climate survey and encouraged their members to fill out a survey specifically for PSA. We therefore have the opportunity to collaborate with PSA as both societies strive to broaden our engagement. And we will need help as we reach for diversity. If you are interested in serving on our newly forming diversity committee, please contact Jay at jay@hssonline.org.

Medical Traditions: An Emerging Discipline

Over the past decade medical traditions, be they of the Mediterranean, China or India for example, have been increasingly researched all over the world with different objectives. Whereas in the case of Chinese medicine, such research is oriented toward validating the traditional practice, in other cases it is more about locating primary sources in libraries worldwide, digitizing them to make them more widely available, and deciphering, studying and publishing their texts.

Building on the decade-long research activity by Alain Touwaide, the *Institute for the Preservation of Medical Traditions* (<http://medicaltraditions.org>) was created in September 2007 by Touwaide in collaboration with anthropologist Emanuela Appetiti to host, foster and promote the study of medical traditions. Although it originally focused on the Mediterranean traditions because of Touwaide's own research, it rapidly expanded the scope of its activity and is gradually including the Ethiopian, Chinese, and Ayurvedic traditions.

As a research organization, the *Institute* curates the library and the other collections assembled by Touwaide over time and includes approximately 20,000 monographs and offprints, around 500 microfilms of Greek, Latin and Arabic manuscripts, more than 70,000 color images of 15th and 16th century printed herbals, and archive files on all aspects of medicine, botany and natural sciences in the Mediterranean world from Antiquity to the

Renaissance and even beyond, with the continuity of traditional medicine among the Greek speaking populations in the Ottoman Empire.

Since its creation, the *Institute* also organizes educational program, both intra- and extramural, in the U.S. and abroad. Students (from undergraduate to post-doctoral level) come from a great variety of horizons ranging from Classical Studies to Genetics, and including History, Geography, Anthropology, Religious Studies, Archaeology, Medicine, Botany and Complementary and Alternative Medicines.

Significantly enough, the *Institute* receives an increasing number of requests for educational programs, supervision of research, internship programs, direction of Ph.D. theses and short-term residential stays. It also receives requests for consultation of the library resources and the other material in the 'Touwaides' collections. Recently, the *Institute* hosted 6 Fellows for a 10-week intensive internship and has now 2 researchers from overseas engaged in pre- and post-doctoral research.

During 2012 the *Institute* reached a turning point in its rapid, yet constant growth. To better respond to the many requests it receives and the expectations it has generated, the *Institute* is exploring a move from the Smithsonian Institution, where it is currently located as an



Alain Touwaide and Emanuela Appetiti in the stacks of the Institute's library

independent research organization with 501(c)(3) non-profit status, to a degree-granting institution. Such relocation will make it possible for the students attracted by medical traditions to attend a proper curriculum and, more generally, for the scientific and scholarly communities to have more direct access to the scholarly resources under the *Institute's* curatorship.

The *Institute* is currently seeking to identify the best partner in order to create a mutually convenient synergy, and is interested in receiving suggestions, recommendations, and expressions of interest in order to further develop medical traditions studies and to establish them as an academic discipline in the field of History of Science.

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The Past, Present, and Future of a Treasure Trove: AIP's Niels Bohr Library, Archive, and Center for History of Physics

Gerald Holton (Harvard University)

[We are grateful to Professor Holton for allowing us to reprint the talk he gave on 24 September 2012 at the American Institute of Physics (AIP) in celebration of the 50th year of the founding of the Niels Bohr Library.]

Thank you for your kind invitation. I have been asked to share with you some of the joys and agonies during the precarious Founding Period of this constellation, then to remind ourselves of its hidden origins, further to speak about the extraordinary spectrum of achievements of this enterprise—so valuable, especially at this time during the continuing attacks on science—and to conclude with what is now still urgently needed here to conquer the future challenges, even to science in America. So, in attending to the past, the present, and the future here, our mood is one of justified celebration, but also of cautious watchfulness.

Now, first about the Founding Period. The high point came of course with the brilliant and moving Inauguration Lecture by J. Robert Oppenheimer, 50 years ago almost to the day. Choosing him to provide the imprimatur of the visibility and plausibility of our adventure was a masterstroke of the AIP administration. On his side, accepting the task must have involved deeply compelling reasons, overruling his physical vulnerability and his demanding work as Director of the Institute in Princeton. He spoke so eloquently, but was

gaunt, in his last years of life, struggling with a fatal cancer.

Let us think about him for a few minutes. He began his inaugural speech at the AIP on 26 September 1962, with two sentences, which by and large apply again today, so long afterwards:

“We meet on an occasion of particular sweetness at the home and center of a constellation of enterprises, in which all of us have deep hope and deep interest. I do not suppose that any of us could keep away from an occasion that is associated with the name of Bohr, and I am also very happy to start by expressing again the gratitude of the whole community for the bequest that the Heineman family has made to the American Institute of Physics.”

There may have been compelling reasons for Robert's attendance here. For one thing, we now know—of course from his archives—that unbeknownst to most of us, Robert had intended to write a history of theoretical physics in the 20th century. His deep interest in the history of physics comes through strongly in the rest of Robert's talk, on how the work here would help us to know what the scientists thought and “how they were led to think it.”

He called the history of physics a “particularly rich field and rich hope,” and especially pointed

to the use of the findings here for “the education of young people.” I shall expand a bit on this urgent mission later. But Robert rose beyond this to claim rightly that the work being done here is also of enormous value in documenting the proper place for science, fully understood, in our culture as a whole; for, as he said, “the discoveries in the sciences are among the great epics, and they should be available in our tradition,” conducing to the understanding of the elements that show an underlying “unity in human life.”

And of course the name of Niels Bohr, given to this enterprise, demanded from Robert especial respect. After all, Bohr had met him often, Bohr was with Robert at Los Alamos, where Robert persuaded Bohr to visit Franklin Delano Roosevelt to make the argument for the internationalization of atomic energy. Robert also published later a touching essay on Bohr.

But Robert's hopeful phrase “unity in human life” reminds us that at the time he spoke the world around him was in a state of serious chaos, as in many ways it is again now, 50 years later. In 1962, the Bay of Pigs disaster of the previous year, together with the intransigence of the Soviets, as seen also in the Berlin debacle, was leading to the Missile Crisis, coming to a head a few weeks later. The unraveling in Vietnam was turning serious

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too. The ardent search for more civil rights was escalating into ugly confrontations in 1962.

But for Robert personally, there were also ominous concerns. Perhaps I may briefly speak about that because we knew each other well, and often met and talked. A few years earlier, Einstein had died (without having been interviewed by oral historians), and then Erwin Schrödinger died in 1961. Niels Bohr was quite weak, and would be dead a few weeks after that inaugural meeting in 1962. Perhaps most shocking to Robert was the news that the physicist-philosopher, P.W. Bridgman, had killed himself, having suffered unbearably from cancer and almost complete disability.

Robert had been very close to Bridgman. He had selected Bridgman as the best scientist to work with during Robert's years as undergraduate at Harvard in the early 1920s, and he did his BA thesis in Bridgman's Lab (on the experimental effects of high pressures on crystals). Robert later returned often to Harvard's Physics Department, and spoke movingly at Bridgman's Retirement Conference.

But it is significant to note that young Oppenheimer at College saw himself still as an experimental, not theoretical, physicist. And evidently he was not very good at it. Bridgman told me later that at Robert's lab bench he had to keep two boxes: one to put in the equipment Robert had ruined, the

other for money that Robert had to pay for the replacement.

There must have been a vast chasm between these two men, emotionally. Young Robert was in a way a romantic; but Bridgman was an operationalist, down to his toe nails. Permit me a brief story to illustrate that. One day, early, I was in the machine shop next to Bridgman's lab, working on some high pressure cylinder for my doctorate dissertation work under Bridgman. The telephone there kept ringing, and I finally picked it up. The person on it reported the Physics Chairman had told him this phone was the nearest to Bridgman (who did not tolerate a phone in his lab), and would I please bring Bridgman quickly to the phone. Oh no, you must call him at his home, in the evening; he never takes it while he works. Well, tell him this time he must, because our paper just heard he got the Nobel Prize.

I ran into Bridgman's lab with the news in great excitement. He was just pumping up pressure by hand on the fore-pump. He did not change the up-and-down rhythm, and said quietly: "Tell them—I'll believe it—when I see it." (Which I did. I still think it was perhaps carrying operationalism too far.)

As to young Robert, things did not get much better for him after College, when he moved to do experimental work at the Cavendish Lab—where he was rescued to become a theoretician,

thanks to a chance encounter with Max Born, visiting from Germany. (America did not yet have its John Wheelers or Eugene Wigner, Schwinger, Weinberg, Feynman, etc.)

But having said this, as if by the way, it should become clear why I have focused on him now: Robert's career embodied the way Physics in America came of age, the whole trajectory—preparation on home soil, but having to go to Europe to mature, returning to help bring science in the U.S. to global eminence, and lastly the influx of scientists from all over the world, coming to the U.S. to study here. That was the big arc for Robert and the many others of our best in the 20th century. And where can you find the impressive evidence for this whole astonishing development, one of huge importance not only for science but to also for the world position of our nation? The evidence is of course right here, in this institution, in its archive, letters, drafts, visuals, books, and on and on. More on this later.

Now let me turn, in this story of the Founding Years, to what happened behind the scenes at AIP, for several years before Robert's Inaugural Lecture. And there the key person was the Director of the AIP, who served from 1957 to 1964: Elmer Hutchisson.

He was a deeply cultured man, married to Rose Valasek who had got her advanced degree in History, and he himself was devoted to the history

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of science. In the late 1950s he heard that the Smithsonian Institution in Washington, DC, was planning a new building there to exhibit progress in science and technology; but it was going to relegate Physics to a corner in the Hall for Electrical and Nuclear Engineering. Elmer thought this must change.

I really don't know why Elmer sent me to try to talk the Secretary of the Smithsonian, Lenard Carmichael, into a more sensible design. Carmichael was a biologist whose specialty was experimental psychology with primates, himself a big and imposing fellow. He essentially told me not to teach him how to design a museum, and to get out.

On my return to AIP, and hearing of my dismal failure, Elmer simply said: "We have a job of education." He asked me to initiate an AIP Committee on the History and Philosophy of Physics. It began as a one-man operation, with W. King drawing up a list of potential interviewees. There had been for this no push from the physics community, no external funds—it was a small experiment, so if it failed we could bury it in a quiet family ceremony. In short, the enterprise really started on a shoestring.

It did become more of a reality when the NSF gave us a five-year grant from 1961, and of course with the Gala Inauguration of the NBL and Archive in 1962. By 1965 the Board of

Governors of AIP allowed the establishment of the Center for History of Physics, housing the NBL and Archive, and pioneering also in the history of modern geophysics and astronomy. So the initially questionable beginner had grown up to be a promising young adult.

There was also an unexpected benefit. Seeing the operation on the history of physics taking place under the wing of the AIP, other professions began to copy and follow on their own. There are now similar centers in other professional societies, on the history of chemistry, IEE, IT and others, thereby filling out the picture of the profession of physical science, technology and engineering.

The growing success at AIP has depended of course on the work and devotion of some remarkable people: Bill Kelly, Charles Weiner, Joan Warnow, Spencer Weart, Directors of the AIP itself, and now Gregory Good and his team. Early, crucial supporters included Fred Seitz and Manny Piori, helping in fights during Board meetings, when occasional fiscal problems endangered the existence of the whole Center.

Above all, the growing success depended on the quiet passion of Elmer Hutchisson. Some reminder about him deserves indeed to be part of our celebration today. Elmer had done his Ph.D. work in physics at the University of Minnesota in the mid-1920s, under a young professor there, none other than John H. VanVleck, well before

Van came to the faculty at Harvard. No doubt Elmer did not always have an easy time of it—I still shudder on remembering Van's Group Theory course during my grad school days at Harvard.

Elmer became physics professor at the University of Pittsburg, but took a year off in 1929 to work in Berlin with Erwin Schrödinger. In 1957 Fred Seitz called Elmer up and persuaded him to become the second Director of AIP. There Elmer started a section on education, being deeply disturbed by the widespread illiteracy about science in America. You can find out much more about Elmer and his time, yes, in a detailed, archived oral history interview of him, conducted by Charles Weiner, and available, together with well over 1200 other lengthy, transcribed interviews, at this very NBL archive, but also, as with many of them, free on the Internet.

In his interview, Elmer looked back on his whole career, and singled out as his proudest accomplishment the establishment of the NBL, Archive and Center. What he of course did not mention was that his Will included a most generous donation to the AIP for an Endowment Fund for NBL.

Recollecting him makes me think of the challenging talk the psychologist William James once gave, on "What Makes a Life Worth Living." James' answer was that such a life involved nothing that comes easily, but rather "a real fight, in which something

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is eternally gained for science,” where one had “the courage to stake one’s life on a possibility.” This message comes also through again and again from many of the documents on scientists kept in this Archive, in the retrospective accounts of their work.

And perhaps James’ formula helps explain why the name of Niels Bohr was chosen for this enterprise at AIP. Bohr’s life and work are icons and ideals for a life in science at its best. His integrity was so detailed that it could even verge on the comical. Allow me to tell you a little story to illustrate what I mean. Bohr came to Cambridge for the Centennial celebration of MIT, but also gave a talk at the American Academy of Arts and Sciences there, with the title of nothing less than “On Atoms and Human Knowledge.” His commentators were chosen to be Philipp Frank and Robert Oppenheimer, with me sitting between them—I was then the Editor of the Academy, and was expected to get Bohr’s manuscript and publish it.

Well, Bohr’s talk was so complex, and he delivered it in his very quiet and somewhat mumbling way, that his two commentators became more and more agitated during his delivery. When finally I got hold of Bohr’s manuscript, I asked him if he would mind if I tried to “edit it a bit,” with the help of some of my colleagues at the Department. Yes, he said, this had often been suggested to him in past occasions of this sort, and I might try and show him our suggestions.

A couple of days later I visited him. He carefully read the revised manuscript, gave me his wonderful smile, and said: “This is (long pause) very interesting. I have only a small request: Publish it just as I gave it to you.” (Which I did later.) But somehow I had the nerve to ask: “Professor Bohr, why do you so often speak and write in such a complex way?” His answer illustrates my point. He said: “I do not choose to speak or write more clearly than I think.” (This may be carrying integrity too far.)

Let me turn from the Founding period to summarize the remarkable resources that have been built up here over these five decades. The web page gives details on these: Online international catalogs, book catalogs, visual archives; finding aids; thousands of photographs; well over a thousand oral histories, transcribed and on the Internet; collections of books, serials, still and moving images; grants awarded to scholars to come here for their research; exhibits at meetings, online, and at request; person-to-person advice on research questions, to scholars, teacher, students, also by mail, telephone, etc.; interaction with the group identified as Friends of the History of Physics; and of course publications by members of the staff, in articles and books.

Now to the last segment of my talk: Someone might still ask why all this was and continues to be so necessary. In answer one might begin with a thing we all know: that most non-scientists,

and even some scientists, have a dangerously false image of science, knowing of only one of its two complementary sides:

The popular view is only from the public part of science, as from text books, narrowly focused courses, and published papers that for good reasons follow Louis Pasteur’s advice to his research students: Make it look inevitable. But all these can give the wider public a sterile, forbidding picture of how these results were produced by real people. That is why science, out there, is often called “merely mechanistic.” This view perhaps makes it easier for some policy makers to turn against scientific evidence.

Meanwhile the other, complementary side is largely kept off stage. It is the art, the science in the making, the human adventure, the baring of soul or of teeth, the euphoria and despair, the long, long wait, the use of intuition, of good or bad luck, of metaphors, visualization, the private skills, and the big bet on a thematic idea that has gripped you despite all evidence to the contrary. And then, again and again, there is glory in the acceptance of one’s findings by the scientific community at large, spread over continents.

That second aspect of science is just what comes out in an archive like the pioneering one here, in its letters, lab books, drafts, interviews. And that is then made available, here, by the staff, to direct inspection. That in turn percolates to the wider

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public, also in textbooks of the more humanistic sort, and of course in the work of the large community of science history scholars.

I have no illusion that all this alone can turn the tide, which in much of academia is still being pushed forward by the believers in Nietzsche's saying that there are no Facts, only Interpretations. But ours is an essential component of a long fight to keep science acknowledged as a central part of culture, as Oppenheimer said five decades ago.

You may have to forgive me for what I am about to say. But I deeply believe that the adherence to the search for veracity and reality which characterizes science is vital to the persistence of democracy itself. It was not an accident that Thomas Jefferson and his colleagues—who had read Newton's *Principia* in school—wrote in the very first sentence of the Declaration of Independence that the whole plausibility of this new idea of Democracy rested in good part on belief in the “Laws of Nature.”

As some of you might recall, I have also expressed the hope that the better understanding of the way physics has developed can firm up the Sense of Self, of the intellectual identity of the members of our own profession. A physicist is not only a pioneer at a frontier facing the future. He or she is also the inheritor of a long history of efforts of their often unacknowledged predecessors. It bears saying again that we are standing on the shoulders of a few giants, but also on the grave of thousands

of others. Or to change the metaphor, the advance made by everyone of us is like a new fruit on a large, old family tree.

So, finally, what about the future of the enterprise here? Gregory Good will of course give the best answers. I see two sets of pressures, internal and external, for the continuation of the work here on a yet larger scale.

Internal to physics and related sciences is the increase in the community of scientists, the greater role of interdisciplinarity, of megateams, megadata, globalization and internationalization of the community and its work. Ever new advances in technology will open new windows to amazing facets of nature, as has always happened, and in turn will bring to life new technologies. We are facing immense problems and opportunities within physics itself, from the darkness of matter and energy to the new insights physics can give to biology and other sciences. And this is the place for the documentation and wider distribution of how research will have accomplished such advances.

The external pressures coming to this Center will include the ever greater interaction between science and the polity; the heavy reliance of the country's GDP on advances in science, engineering, and technology; the repairs so badly needed in science education. And last but not least, I see the need to spread, ever more effectively, throughout the country, the central values in doing science, as they

are revealed in the Niels Bohr Library, Archive, and Center: It is simply that the holdings here are witness to the fact that, despite all our limitations as mere humans, our tribe is dedicated to a habit of truthfulness, and to the search for an ever deeper understanding of this glorious universe.

In his lecture fifty years ago, Oppenheimer presciently asked a question about our institution, then being launched: “This is not just a five or ten year plan; what do you think things will be like, fifty years from now?”

Well, here we are. I think he would be very proud of what has been achieved in that span. The proven record also allows us to be confident that splendid work will continue here, on an expanding scale, for many decades to come.

“Grandma got STEM” celebrates women in Science, Technology, Engineering and Mathematics

Jacqueline Wernimont (Scripps College)

Rachel Levy, Associate Professor of Mathematics at Harvey Mudd College, found herself tired of hearing people try to teach students to speak accessibly about science, technology, and math by suggesting they should “explain it as if you were talking to your grandmother.” While she knew that they likely meant “explain that in a compelling and clear way so that a person without a technical background could understand it,” she was concerned by the profiling (female + maternal + age) such statements enacted.

While it is true that many people in the world, some of them grandmothers, have not had access to STEM education due to cultural, economic, geographic, gender-bias or other reasons—the grandma profile does more harm than good. Levy believes, like many others, that it is time to transition away from describing an elementary idea as “so simple your grandmother could understand it.”

To address this issue, Levy has created a new blog called Grandma got STEM (<http://ggstem.wordpress.com>). Initially, Levy began the blog in order to collect very basic profiles (pic, name, occupation) of grandmothers who had engaged with STEM in some way; she imagined that she might use that information to create a collage or other art project (which she still

might do). But as she began to get e-mails from contributors, the blog developed into a collection of more robust and personal narratives. “People began sending me stories” and “I thought, if people are going to come back to the blog more than once, it’s because they want to read those stories.” To this end, Levy is encouraging submissions that arise out of personal connections. “It’s the photo from the family album of women doing STEM or the memories of those experiences that readers find really compelling.” In addition to serving as a public forum to inspire, Levy hopes that the blog will eventually be used as classroom resources for K-16.

In the first two weeks of existence, the blog had about 3000 views from 40 different countries, including Madagascar, Kenya, Trinidad and Tobago, Latvia, and Colombia. Levy says, “I really have no idea how people in so many far away places have found the blog. It makes me want to shout to them a welcoming “Hellloooooo!” and “Who are you?” So far, most of the submissions have come from inside the US, although an early post was submitted from an Engineer in Turkey. Her hope is that the blog will receive submissions from all over the world. Each day the blog features a picture and personal narrative about a grandmother in STEM, affectionately known as



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“Grandma got STEM” *cont.*

a STEM-ma. Posts have been contributed by sons and daughters, granddaughters and grandsons, the women themselves and their partners. Levy was inspired to create the blog as a way of addressing the “so simple your grandma could understand it” problem on a larger scale after attending Science Online 2013, a conference about science communication. She features grandmother Karyn Traphagan, the Executive Director of Science Online, in an early post and on the site’s banner. For Levy, the blog “helps me think about a way to solve the problem in a way that celebrates these women rather than just complaining that they’ve been misrepresented.”

While the blog began as a project focused on the oft-referred-to grandma, it will not be limited exclusively to grandmothers. Levy has already heard from great aunts who would like to be included. She’s also heard from women in STEM who say they are longing to be grandmothers and certainly are old enough, but their own children have not yet had children. Other women have delayed or decided against child-rearing, making grandmotherhood less likely or impossible. Levy also notes that “some women did not have access to education. Some still do not. All of their stories are welcome. The experiences of all these women contribute to our impressions and attitudes about the relationship between gender+age+maternity and technical prowess.”

Readers can find the blog at <http://ggstem.wordpress.com> and they can follow on twitter [@mathcirque](https://twitter.com/mathcirque) and with the hashtag [#ggstem](https://twitter.com/ggstem). If you’re a grandmother interested in submitting your story, send an e-mail to ggstem@hmc.edu with your name, a photo, and a remembrance about your experiences with/in STEM. Readers are also encouraged to submit stories about grandmothers they know—include her name, photo, your relationship to her, and a story about her experiences with/in STEM. The blog provides some examples of different lengths and styles of posts. Submissions go through a basic editing process and then authors are given an idea of when their posts will appear. Levy is particularly eager to expand the range of experiences represented on the blog, she is hoping for a minimum of one post submitted from each country, and she encourages readers to spread word about this project as widely as possible. Additionally, if you have a global network (personal or professional) and are willing to help Levy spread the word, send an e-mail to ggstem@hmc.edu.



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Lessons from a February 2013 AAAS Session on the 25th Anniversary of *Uneasy Careers...*

Pnina G. Abir-Am, WSRC, Brandeis University (pninaga@brandeis.edu)

The American Association for the Advancement of Science (AAAS) recently held, as part of its Annual Meeting in February 2013 in Boston, a large format session¹ marking the 25th anniversary of *Uneasy Careers and Intimate Lives, Women in Science, 1789–1979*, (1987) (hereafter “*Uneasy Careers...*”) the first collective volume in the history of women and gender in science, (hereafter WGS).² The logic of anniversaries limits such occasions, by a long tradition, to fractions of Centennials such as the 25th, 50th, and so on, thus providing rare but culturally endorsed occasions to reflect on the nexus of past and present.³ Our session set to contrast the mid-1980s, as the “past” or the specific historical period which shaped this volume with the present. The present has been indelibly marked by a long public debate on the

under-representation of women in science, during and since 2005.⁴

A paradox posed by the nexus of past and present is why and how after two to three decades of WGS scholarship, (of which *Uneasy Careers...* is a great example of the sheer range of women’s contributions and experiences in various scientific disciplines and countries) influential segments of society which dominated the 2005 debate, most notably several university presidents who were also scientists, as well as media figures, proved unable to seize on the resources provided by WGS scholars, eventually burning out the issue of “women in science” for the time being due to unproductive over-exposure.⁵ This “present” was addressed by the 2nd speaker who is a woman scientist and a policy maker, though the historian of science speakers did not avoid it either.



AAAS session speakers. (Counterclockwise from right: Nancy Slack, Joy Harvey, Pnina Abir-Am, Betty Smocovitis, (a stand in for Sue who had to catch her plane) Margaret Rossiter, and Anne McLachlan (member of the audience)

At AAAS in Boston we were fortunate to receive a 3-hour or so-called “large” format session, which enabled the four speakers, Margaret Walsh Rossiter, Sue V. Rosser, Nancy G. Slack, and

¹ A HSS also held such a session at its 2012 Annual Meeting. In addition to presentations by authors of chapters in *Uneasy Careers...* on their evolving scholarly trajectories, among them Marilyn Bailey Ogilvie, Anne Hibner Koblitz, Joy Harvey, Nancy Slack and Sally Gregory Kohlstedt. The dozen participants in these two sessions are grateful to AAAS & HSS Program Committees for providing space and good time slots. Recent HSS Annual Meetings which marked the 25th anniversaries of WGS books include 2007 for *Women Scientists in America: Struggles and Strategies to 1940* (1982) by Margaret Walsh Rossiter; and 2005 for *The Death of Nature, Women, Ecology, and the Scientific Revolution* (1980) by Carolyn Merchant.

² By Rutgers University Press; Editors: Pnina G. Abir-Am and Dorinda Outram; Foreword: Margaret Walsh Rossiter; hardcover and paperback; 2nd printing in 1989. See Table of Contents at <http://pgabiram.scientificlegacies.org/books/uneasy-careers> The volume was commissioned in the mid-1980s by Karen M. Reeds in her then capacity of Science Acquisition Editor.

³ For further details on the logic of anniversaries with special emphasis on science-related ones see my Introductions to *Commemorative Practices in Science: Historical Perspectives on the Politics of Collective Memory*, (University of Chicago Press, 2000; known as *Osiris*, vol. 14, an official HSS publication) edited by Pnina G. Abir-Am & Clark A. Elliott; and to *La Mise en Memoire de la Science* (Paris: EAC, 1998) sous la direction de Pnina G. Abir-Am.

⁴ For details of this public debate, see <http://people.brandeis.edu/~pninaga/sger>; ironically, the first and third hypotheses (i.e. on the issues of “dedication” or willingness to work long hours, and “socialization” as social customs incorporating gender bias) which are amenable to policy and educational interventions, did not stir much discussion. By contrast, the 2nd hypothesis on the issue of “innate” lesser aptitude consumed the debate and wasted it unproductively on irrelevant issues of biological determinism.

⁵ Another paradox, also made clear by that debate, was the contrast between the progress of tokenism, i.e. small numbers of women reaching high visibility in top government, industry, and academic positions, at a time the “glass ceiling” continues to lead to “leaking pipelines” or under-representation for most other women. One of the insights surfacing as a result of the public debate is the growing realization that overt discrimination, by now illegal, did not disappear but was replaced by covert and more subtle forms.

Lessons from *Uneasy Careers...*, cont.

Pnina G. Abir-Am, as well as moderator and co-organizer Joy Harvey to cover a wide territory, as well as entertain questions from an engaged audience. All speakers had solid AAAS credentials: Margaret Rossiter was inducted as a AAAS Fellow just a few hours before our session began; Sue Rosser is one of three women on AAAS's 12 member Executive Council; Nancy Slack has been a practicing scientist and AAAS member since the 1950s; Pnina G. Abir-Am served as speaker at several AAAS Annual Meetings, most recently in 2011 at a session on the Centennial of Mme Curie's 2nd Nobel Prize, superbly co-organized by Penny Gilmer, Chair of Section C (Chemistry) and a biochemist at Florida State University who also attended our session in Boston; and Alan Rocke, outgoing Chair of Section L (HPS) and Chair of History at CWRU. That session was reported in the April 2012 issue of this *Newsletter*.

The first two talks, "Thirty Women who Changed American Science, 1970–2010" by Margaret Walsh Rossiter, a former Editor of *ISIS* and *Osiris*, currently the Marie Noll Underhill Chair at Cornell University where she has been since 1986; and "Policy Making for Women in Science: Breaking into the Lab," by Sue V. Rosser, Provost and Vice President for Academic Affairs at San Francisco State

University, focused on organizational interventions to increase the numbers of women in science. The talks complemented each other neatly since Sue Rosser, a scientist turned feminist activist and policy maker, took a top-down approach focusing on the impact of NSF Programs in the 1990s; while Margaret Rossiter, the foremost historian of women in American science, focused on a bottom-up approach or on archivally documenting the women scientists' own organizational strategies in resourcefully surviving the world of institutionalized science and their own status in it as a powerless minority. Both speakers presented topics addressed in greater details in books each published in 2012: Rossiter's *Women Scientists in America, volume 3, Forging a New World since 1972*; (Johns Hopkins University Press, reviewed in the 16 November 2012 issue of *Science*) and Rosser's *Breaking into the Lab: Engineering Progress for Women in Science*. (New York University Press, 2012).

As Rossiter argued, laws do not create change by themselves but require a generation of dedicated "implementers" who graft social change onto an often impervious status quo. Some of the 30 names highlighted by Rossiter, such as Jewell Plummer Cobb, the first African-American scientist on the *National Science Board* or Vera Kistiakowsky,

founder of the Women's Section in the American Physical Society, (whose last name evokes her dad, the first Presidential Science Adviser in the late 1950s, George Kistiakowsky) are known mainly in policy circles. Others, such as Louise Lamphere and Shyamala Rajender, both of whom led successful class law suits against universities (URI & UMN, respectively) which led to judicial interventions that reverberated well beyond their "home" institutions, are known mainly among WGS scholars and feminist activists. Still others, such as Anita Borg, a computer scientist enshrined in the title of a newsletter on women in science based at the University of Wisconsin-Madison; or Nancy Hopkins who exposed the lesser wages of women scientists at MIT in the late 1990s and was also instrumental in precipitating the year long debate on the under-representation of women in science in 2005, are known to the public at large. Hopefully, a new generation of scholars will soon build upon Rossiter's 3rd volume of her amazing trilogy⁶ and uncover the "second" and "third" women who made a difference beyond the 1970s.

The 2nd speaker, Sue Rosser, a zoologist trained at the University of Wisconsin-Madison has been a WGS scholar, activist, and academic administrator since the 1970s,⁷ when she came under the

⁶ At the Three Societies Meeting in Philadelphia in July 2012, in a session devoted to this 3rd volume, Ruth Schwartz Cowan, a former President of SHOT and renowned author of *More Work for Mother* (1983) and Ruby Heap, a historian at the University of Ottawa, Canada, Chair of Women's Studies there, and adviser to its President, elaborated on the enormous impact Rossiter's first two volumes (1982, 1995) had on themselves and many other scholars.

⁷ Her essay "Feminist scholarship in the sciences: Where are we now and when can we expect a theoretical breakthrough?" *Hypathia*, 2, 3, (1987) 5-19, mapped six strands of WGS scholarship at the time, helping women scientists, students, and scholars better orient themselves. This essay, much as others on related topics which also appeared in 1987, share in the 25th anniversary of *Uneasy Careers...* especially since its purpose is to mark a collective identity as WGS scholars.

Lessons from *Uneasy Careers...*, cont.

influence of pioneering neuroscientist and feminist activist Ruth Bleier.⁸ Rosser is perhaps best known for *Female Friendly Science* (New York: Pergamon, 1990) and *The Science Glass Ceiling: Academic Women Scientists and the Struggle to Succeed*. (New York: Routledge, 2004). The latter examined the persisting obstacles to women's advancement in science (besides the "glass ceiling" other well known such metaphors include the "sticky floor" and the "leaking pipeline").

Sue Rosser's talk focused on her findings from interviews with over 400 NSF-POWRE awardees from the 1990s. POWRE was an NSF Program which succeeded its VPW Program in the 1980s and preceded ADVANCE which began in 2001. ADVANCE currently awards around 10 institutional awards every other year, of \$3-5 million, mostly to state universities, for 5 years, so as to transform institutional structures in academia to improve the retention of women scientists. Still, NSF-ADVANCE's own PI meeting in May 2005 made us all aware⁹, via the creative device of

a theatrical troupe from its sponsored project in Michigan which impersonated hiring and tenuring committees, that their chairmen became very adept at derailing the careers of women without appearing to do so. Having held NSF visiting professorships under both VPW and POWRE Programs, I suggest that such interviews include not only the women awardees but also those adept chairmen who continue to specialize in derailing not only individual women scientists but also national policies and programs designed to address the under-representation of women in science. Not too long ago, a Nobel Laureate at MIT, S. Tonegawa, derailed the appointment of a woman scientist who was offered a position as assistant professor there on the ground that she will compete with him; he made news simply because he did not even bother to worry about appearances.¹⁰

Illustrated with poignant quotations from her interviewees, which repeatedly illustrated the challenge of balancing scientific careers and personal lives, Sue Rosser's talk captured both the increasing

opportunities for women created by affirmative action but also the persistence of obstacles. This is precisely the problem *Uneasy Careers...* set out to document in the mid-1980s with over a dozen case studies, from two centuries and various disciplines, countries, and familial conditions. Sue Rosser's talk and extensive studies of policy impact on women in science not only validates *Uneasy Careers'...* foresight 25 years ago but also testifies to its enduring relevance in the present.

The third speaker, Nancy G. Slack, Professor Emerita at the Sage Colleges, a botanist, ecologist, historian of American science, and by her own account, a life-long member of a collaborative couple with retired RPI physicist Glenn Slack, showed up bravely in a cast having broken her ankle on one of her many alpine expeditions. Nancy Slack is the author of *G. Evelyn Hutchinson and the Invention of Modern Ecology* (Yale UP, 2010) and co-editor of *Creative Couples in the Sciences*.¹¹ In her talk, she combined a discussion of collaborative couples in 19th and 20th Century

⁸ See Bleier's *Science and Gender* (1984) and Bleier (ed.) *Feminist Approaches to Science*. (1986) Together with Ruth Hubbard et al (eds.) *Women Look and Biology Looking at Women* (1979) and *Biological Woman: The Convenient Myth* (1982) and Evelyn Fox Keller's *A Feeling for the Organism, The Life and Work of Barbara McClintock* (1983) and *Reflections on Gender and Science*, (1985). Bleier's volumes were among the earliest and most influential works on women in science produced by women scientists turned feminist activists and scholars. Vivian Gornick's *Women in Science, Portraits from a World in Transition* (1983) based on interviews with over 100 women scientists, also proved influential at the time.

⁹ I attended as PI of a SGER project, see details in <http://people.brandeis.edu/~pninaga/sger>. I thank NSF-STP Program Director in 2005, Ronald Rainger, for suggesting that I attend that meeting.

¹⁰ Tonegawa had to resign as director of a research center, but the junior woman scientist in question had to leave for a much less prestigious institution. Ironically, this conduct took place during the MIT presidency of a woman scientist, Susan Hockfield. One can only wonder how prevalent such a conduct may have been all along since it explains the paradox of attrition of the more gifted: while mediocrities are allowed in because they do not threaten others, the most promising ones invariably run against "their own Tonegawas." It will be useful to hear from those who know of Tonegawa-like cases outside science.

¹¹ With Helena M. Pycior and Pnina G. Abir-Am (Rutgers University Press, 1996) This volume was part of the Series "Lives of Women in Science," mentioned in note 1. See also its review in *American History Review*, February 1998, by Margaret Walsh Rossiter.

Lessons from *Uneasy Careers...*, cont.

America, (that she first explored in chapter 5 of *Uneasy Careers...*) illustrated with superb slides, with her own experience as a woman scientist whose career was initially derailed by institutional bias against married women scientists with children. Nancy was able to regain her career once such attitudes began to change.¹² Her own existential experience as member of a dual career couple left Nancy Slack with a lasting interest in other such couples.¹³

She provided vivid contrasting examples of collaborative couples ranging from those in which the female spouse emerged as the more important scientist (e.g. the Brittons and the Brandagees) to those in which she resigned herself to a secondary role as career impresario for an authoritarian male spouse (the Clements). Nancy concluded by attempting a general typology of collaborative couples, redefined so as to include partners from different scientific fields.

The last speaker, Pnina G. Abir-Am, (who also organized the session with Joy Harvey) is a Resident Scholar at WSRC, Brandeis University,

since 2007, where she is conducting several projects on women in science, as well as completing a new history of the discovery of DNA's structure. Her most recent item in the July 2012 *HSS Newsletter* discussed history of science inspired plays, especially those on Rosalind Franklin's long misunderstood role in the discovery of DNA's structure. In her AAAS talk, Abir-Am focused on the dual role of the collective genre as both a carrier of intellectual innovation and a tool of community building. Abir-Am further inquired as to why *Uneasy Careers...* set to problematize the balancing of scientists' lives and careers, (an issue at the heart of current debates on the underrepresentation of women in science) as a persisting historical challenge? She also asked which impact did *Uneasy Careers...* have at the time, (1980s) and why did it all but disappear from the public radar when it was most needed, in 2005?

Abir-Am defined the 1980s as a historical period marked by the defeat of the ERA as a constitutional amendment in 1983. At the same time, the rise of the "me generation" throughout the 1980s strengthened the tendency to focus on

individual careers rather than collective social change. This meant an increasing focus on career advancing publications such as monographs, rather than edited collective volumes, except perhaps for those who never left the 1970s. The precedent of *Sexual Politics*, (1970) whose author Kate Millet was greeted by the media as the Mao-Tse-Tung of women's liberation was scary. Yet, the same media praised *Woman in Sexist Society, A Study in Power and Powerlessness*, (1971) edited by Vivian Gornick and Barbara Moran, with 35 authors, all preaching the same message as Millet, because ganging up on 35 is not the same as ganging up on one. The lesson was clear enough: a collective volume can signal both new ideas and a new community; it can even evoke, if not prolong, the 1970s!

Abir-Am emphasized that *Uneasy Careers...* was unique at the time (and unsurpassed since) in its very unusual range: it covered a wider historical, disciplinary, national-cultural, and social-theoretical range than most volumes in the history of science.¹⁴ It was informed not only by the need to balance the duality of history of

¹² For the experience of another resourceful dual career couple, in the late 1970s, again from the perspective of the female spouse, see Shulamit Reinharz, *Observing the Observer*; (Oxford University Press, 2009). Though written for methodological purposes, this book includes many insights into the challenge of balancing the careers of collaborative couples in the extended sense of spouses in different fields. The Reinharzs, (Jehuda served as President of Brandeis University for 17 years and Shulamit has been the founding director of its Women's Studies Research Center for more than 10 years) much as the Slacks, had their careers in different fields but also managed to collaborate occasionally. In *Creative Couples in the Sciences*, (note 10) we coined this term to mean collaboration on joint outcomes in science but Nancy emphasized that a collaborative spirit can also prevail among partners who specialize in different fields.

¹³ Most recently, she published "Epilogue: Collaborative Couples, Past, Present, Future" in *For Better or for Worse* (Birkhauser, 2012) edited by Brigitte van Tigellen, Anette Lykness, and Don Opitz; based on a double session at the International Congress for History of Science in Budapest, 2009.

¹⁴ Predecessor works in the history of WGS were often limited to science in the U.S. There were no works combining American and European science over two centuries and many disciplines.

Lessons from *Uneasy Careers...*, cont.

science as both social and intellectual analysis, (discussed in Part I & II, respectively) but also by then recent advances in both American and European social theory,¹⁵ and women's studies,¹⁶ both topics remaining unwelcome among historians of science at the time.¹⁷ By historicizing and comparing over a dozen well researched and well written case-studies, this volume put an end to then lingering doubts as to whether women scientists did significantly contribute to science.¹⁸ This could not have been accomplished by either biographies or monographs of women in scientific organizations, which accounted for the most prevalent genres at the time. Furthermore, at a time the history of science was divided into unfriendly factions of internalists and externalists, *Uneasy Careers...* was subversive enough to pave the way toward conciliation and rapprochement.

Uneasy Careers... was a global phenomenon. Its subject matter included women scientists

and their better known male mentors in both European and North American countries. Its case studies included scientific disciplines ranging from observational sciences such as astronomy and botany which accommodated relatively large numbers of women; experimental sciences such as chemical physics and molecular biology; as well as theoretical sciences such as mathematics and evolutionary theory; which had relatively few women but those few were of "star" quality. Its lives included all familial conditions ranging from single to married, widowed, separated, "union libre" and so on, all conditions shown to be compatible with scientific pursuits. *Uneasy Careers...* further encompassed an extended historicity ranging over two centuries, again a rarity at a time historians of science specialized by century. This range was made possible by collaboration between the two co-editors, one a 19th-century specialist¹⁹ and the other a 20th-century specialist.²⁰ Last but not least, by including contributors from several

countries, *Uneasy Careers...* transcended national scholarly communities.²¹

Questions from the audience by Anne McLachlan of the Center for Studies in Higher Education at the University of California at Berkeley; Jeannette Brown, author of *African American Women Chemists* (Oxford University Press, 2012) and a CHF Fellow; Penny Gilmer, a coordinator of the NSF-ADVANCE Program at five Florida Universities and co-editor of *The Centennial of Mme Curie's 2nd Nobel Prize*, (2011) and Sally Gregory Kohlstedt, a former HSS President, currently a Dean in the School of Engineering at UMN, among others, focused on whether *Uneasy Careers...* succeeded to reform both the history of science's conception of how to study the intertwined lives and careers of its scientist subjects; and the scientific community's own consciousness of its diverse past. These fascinating issues deserve a separate discussion.

¹⁵ As in my "The Biotheoretical Gathering..." (*History of Science*, March 1987, 1-70) which compared models of scientific change advanced by J. Ben David, P. Bourdieu, M. Foucault, E. Gellner, A. Giddens, T. Kuhn, R. Merton.

¹⁶ E.g. Gloria Bowles & Renate Duelli-Klein (eds.) *Theories of Women's Studies*. (1983)

¹⁷ The bias of historians of science against social theory made it impossible for me to publish my Ph.D. thesis as I was unwilling to give up on the two such chapters. (They were eventually published in *History of Science*, March 1985 and 1987.) Ironically, this impasse made me available to respond to the invitation to edit *Uneasy Careers...*

¹⁸ When I asked a leading historian of science why he was not studying women scientists, he replied that he was interested in ideas. A few years later, when we sat next to each other on the podium for HSS awardees, he may have noticed that I was there because I wrote on a woman who not only had an interesting love life but also an interesting theory.

¹⁹ Co-editor Dorinda Outram, a Cambridge University Ph.D. in history, specialized at the time in the history of 19th Century French biology and held a lectureship at the University of Cork, Ireland. She and co-editor Pnina G. Abir-Am were introduced to each other in Cambridge, UK where Outram was affiliated with Girton College and Abir-Am was affiliated with Robinson College.

²⁰ Co-editor Pnina G. Abir-Am had a Ph.D. from Université de Montréal and a MSc. from the Hebrew University of Jerusalem; she did post-graduate research in U.K. at the Wellcome Institute/ University of London) and in the U.S.

²¹ Though most of the authors were trained in the U.S., about half of them worked on European topics and were familiar with European communities of historians of science.

Lessons from *Uneasy Careers...*, cont.

The session was moderated by Joy Harvey of the Independent Scholars Alliance in Greater Boston, who made a heroic effort to formally introduce her long-time friends qua speakers, and gracefully navigated the lively interaction between speakers and audience. Best known as the author of *Almost a Man of Genius, Clemence Royer and the Evolutionary Debates in 19th Century French Feminism*, (Rutgers University Press, 1997) and a co-editor (with Marilyn Bailey Ogilvie) of *Biographical Dictionary of Women in Science*; (1999), Joy Harvey recently published “The vanishing wives of Nobel Laureates,”²² an

intriguing study of several scientific collaborations which raised major questions as to how scientific credit was distributed in science.

A quarter of a century had passed since *Uneasy Careers...* was published, having been acclaimed in the language of its HSS prize, as “outstanding research.” Both HSS and AAAS were gracious to it in the 1980s,²³ as well as in the present. Though the legacy of *Uneasy Careers...* remains uncertain at a time gender equality seems to stall, its spirit survives in both expected and unexpected places.²⁴ So what are the lessons from this session for history

of science as a field, for newcomer WGS scholars, for the best and for the rest who rarely if ever go to WGS sessions at HSS, AAAS or elsewhere? It’s better late than never! If you somehow failed to notice the subversive streak of *Uneasy Careers...* or missed why it is such a rare gem, then Amazon can help you: the paperback edition sells for one cent. Even more so, don’t miss another quarter of a century of pure joy and adventure by deluding yourself that the history of women and gender in science is not for you!

²² In *For Better or For Worse*, (Birkhauser, 2012) See note 13.

²³ *Uneasy Careers...* was introduced to HSS members as a double session at its 1986 Annual Meeting in Pittsburgh, just at the time it went to press. AAAS organized a session on women in science in 1989 which was covered by famous science journalist William Broad in *Science* magazine, right across from the AAAS Presidential Address. It also quoted three times from my talk.

²⁴ *Gender and Genre, 1700-2000*, edited by Paola Govoni & Alice Z. Franceschi. (London: Ashgate, 2013) For the “state of the art” in WGS in the international arena one can examine the most recent program of the International Commission for Women in the History of Science, Technology and Medicine, held at ENS in Paris in September 2011 at (see <http://www.womenscommission-dhst.net/>).

MEMBER NEWS

Tara Abraham (Department of History, University of Guelph) has recently guest-edited the September 2012 issue of the *Interdisciplinary Science Reviews*, entitled “Warren S. McCulloch and His Circle.” The issue focuses on neuropsychiatrist and cybernetician Warren McCulloch (1898–1969) and the ways in which his life and his circle of collaborators, influences, and students can illuminate the wider contexts of the past and present.

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Vasso Kindi and **Theodore Arabatzis** (National and Kapodistrian University of Athens) have co-authored *Kuhn's The Structure of Scientific Revolutions Revisited* (Routledge, 2012).

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Monica Azzolini (University of Edinburgh) has published *The Duke and the Stars: Astrology and Politics in Renaissance Milan* (Harvard University Press, 2013).

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Roland A. Boucher has presented his findings on Ancient Metrology at the Sigma Xi SW Region Research Conference in January 2013 at the University of Texas, Dallas. The title of his presentation was “The Pendulum and the Foot in Ancient Metrology.”

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Eric W. Boyle (Office of History, National Institutes of Health) has published his *Quack Medicine: A History of Combating Health Fraud in Twentieth Century America* (Santa Barbara: Praeger, 2013).

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Chunjuan Nancy Wei and **Darryl E. Brock** (Fordham University) co-edited a book *Mr. Science and Chairman Mao's Cultural Revolution* (Lexington Books, 2013). They co-authored a chapter—“Introduction: Reassessing the Great Proletarian Cultural Revolution”—and Brock authored another chapter: “The People's Landscape: Mr. Science and the Mass Line.”

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William Kemp and **Henri-Paul Bronsard** have published “The Type of the French Renaissance,” in *The Papers of the Bibliographical Society of America*, Book Review, New York, vol. 106:2, June 2012, ISSN 0006-128 x, p. 231-256.

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Peter Byrne was appointed Journalist-In-Residence at the Kavli Institute for Theoretical Physics in Santa Barbara, from January to April 2012. His biography *The Many Worlds of Hugh Everett III* (OUP, 2010) has just been released in paperback, and is now published in a German translation (Springer, 2012).

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Gary L. Cameron (Visiting Professor, Grinnell College) has published a paper “Perfecting ‘a Sharper Image’: Telescope-Making and the Dissimination of Technical Knowledge, 1700–1820” in the *Journal of Astronomical History and Heritage*, 2012. He plans to attend a workshop “The History of Amateur Astronomy: Current Research, Future Prospects” at The Observatory Museum, Stockholm, 3–5 September 2013 and hosted by the Center for History of Science at the Royal Swedish Academy of Sciences.

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Joyce E. Chaplin (Harvard University) has published *Round about the Earth: Circumnavigation from Magellan to Orbit* (Simon & Schuster, 2012).

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The second edition of **Lesley Cormack's** and **Andrew Ede's** (University of Alberta) *A History of Science in Society: From Philosophy to Utility* (University of Toronto Press, 2012) has been published.

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Chris Crenner (History and Philosophy of Medicine at the University of Kansas School of Medicine) is the new editor for the *Journal of the History of Medicine and Allied Sciences*. The journal will add a commentary section this year to provide a new forum for discussion of the wider implications of scholarship in the field.

MEMBER NEWS, CONT.

Nathan Crowe has accepted a tenure-track assistant professor position in the history department at the University of North Carolina, Wilmington.

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Andrew Ede has been appointed the Director of the Science, Technology and Society Program at the University of Alberta, Canada. The appointment started September 2012.

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Donald Forsdyke (Queen's University, Canada) has reviewed in *Biological Theory* (2013) the historical development of ideas regarding introns. He focused on the largely unrecognized work of microbiologist Darryl Reaney (deceased 1994) in Australia. The article, entitled "Introns First," may be accessed online from the publisher (doi:10.1007/s13752-013-0090-6), or from the author's webpages (<http://post.queensu.ca/~forsdyke/introns3.htm>).

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Judy Grabiner (Pitzer College) has been named a Fellow of the American Mathematical Society. The Fellows of the American Mathematical Society program recognizes members who have made outstanding contributions to the creation, exposition, advancement, communication, and utilization of mathematics.

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Eugene Garfield, now 87 years old, continues to serve on a few Boards, including Annual Reviews of Palo Alto and the Chemical Heritage Foundation of Philadelphia. He also provides a bibliographic alerting service for the SIG on Metrics for the American Society of Information Science and Technology, which is based on the Thomson Reuters Web of Science. He has maintained his interest in the history of science by supporting various named Fellowships and Lectureships at the CHF and Drexel University. These include the History of Chemical Information (Theodore Herdegen, History of Chemical Engineering (Noshir Mistry), History of Information Science (Paul Otlet), and the History of Intellectual Property (Arthur Seidel). Details can be found at www.chemheritage.org.

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Paul Hoyningen-Huene (University of Hannover) has published *Systematicity: The Nature of Science* (Oxford University Press, 2013).

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Toby E. Huff (Harvard University) has published a paper "Law and Science" on the academic questions that deals with the Western legal system and how it aided the rise of modern science. (Springer Science+Business Media, DOI 10.1007/s12129-011-9268-1).

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Christine Keiner has an essay "How Scientific Does Marine Environmental History Need to Be?" in the January 2013 issue of *Environmental History* (which features a special marine forum). <http://envhis.oxfordjournals.org/content/18/1/111.full.pdf?keytype=ref&ijkey=27KjROdMnXnAz3n>

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Sally Gregory Kohlstedt (University of Minnesota) and **David Kaiser** (MIT) have edited *Science in the American Century: Perspectives on Science, Technology and Medicine: Readings from Isis* (University of Chicago Press, 2013).

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Ed Larson (Pepperdine University) has been chosen as one of the inaugural DeVos Fellows for the National Library for the Study of George Washington at Mount Vernon.

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Roger D. Launius (Smithsonian Institution's National Air and Space Museum) has edited a new book *Exploring the Solar System: The History and Science of Planetary Exploration* (New York: Palgrave Macmillan, 2013)

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Gildo Magalhães' (University of São Paulo) new book about the history of electrification in Brazil has been published under the title of *História e Energia: memória, informação e sociedade* (Alameda, 2012).

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Marjorie C. Malley's book, *Radioactivity: A History of a Mysterious Science* (Oxford University Press, 2011) has been translated into French as *La radioactivité: Une mystérieuse science* (De Boeck, 2013).

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Adrienne Mayor's (Stanford University) article "Making Sense of Nonsense Inscriptions Associated with Amazons and Scythians on Ancient Greek Vases" co-authored with John Colarusso, a linguist specializing in Caucasian-Black Sea languages, and David Saunders, vase painting specialist at the Getty Museum, is forthcoming in *Hesperia: Journal of the American School of Classical Studies*, Athens).

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Karen Parshall (University of Virginia) has been named an Inaugural Fellow of the American Mathematical Society. The Fellows of the American Mathematical Society program recognizes members who have made outstanding contributions to the creation, exposition, advancement, communication, and utilization of mathematics.

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Stuart Peterfreund (Northeastern University) published *Turning Points in Natural Theology from Bacon to Darwin: The Way of the Argument from Design* (New York: Palgrave Macmillan, 2012).

Lawrence M. Principe's (Johns Hopkins University) *The Secret of Alchemy* was recently published by the University of Chicago Press.

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Lisa Rosner (Richard Stockton College of New Jersey) has been promoted to Distinguished Professor of History.

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Andrea Rusnock (University of Rhode Island) has been awarded an ACLS Fellowship for 2013-14 for her project "The Early History of Vaccination: An Environmental History."

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Voula Saridakis (Lake Forest College) was awarded an American Colleges of the Midwest (ACM)—University of Chicago Faculty Development Grant for her project "World History in the Windy City: Understanding the Past through an Exploration of Chicago Objects."

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Londa Schiebinger, Hinds Professor of History of Science at the Stanford University, has launched Gendered Innovations in Science, Health & Medicine, Engineering, and Environment, a globally accessible web site: <http://genderedinnovations.stanford.edu>. Gendered Innovations 1) develops cutting-edge methods of sex and gender analysis for scientists

and engineers; and 2) provides twenty-four case studies as concrete illustrations of how gender analysis leads to new knowledge. The international, interdisciplinary project involved sixty collaborators from engineering, basic science, medicine, and gender experts. Funded by Stanford University, the European Commission, and the National Science Foundation, the project was presented at the National Science Foundation, the National Academies, and the White House Office of Science and Technology Policy, November 2012, and will be presented to the European Parliament, May 2013. Web site materials are free and can be used in classes.

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Victoria Sweet has published *God's Hotel: A Doctor, a Hospital, and a Pilgrimage to the Heart of Medicine* (Riverhead, 2012). It has been reviewed in the *New York Times*, the *New York Review of Books*, *Health Affairs*, the *Financial Times*, and by the BBC. The paperback will be coming out April 2, and the audio version, narrated by the author, at the end of April.

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Alain Touwaide and **Emanuela Appetiti** were appointed Honorary Member and Corresponding Member, respectively, of the *Accademia di Storia dell'Arte Sanitaria* (Italian Academy for the History of Medical Arts).

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Glen Van Brummelen (Quest University Canada) has published *Heavenly Mathematics: The Forgotten Art of Spherical Trigonometry* (Princeton University Press, 2013).

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Laura Dassow Walls (University of Notre Dame), Vera Kutzinski and Ottmar Ette have co-edited *Alexander von Humboldt and the Americas* (Berlin: Verlag Walter Frey 2012). It is an interdisciplinary/trans-hemispheric/trans-Atlantic collection that puts history of science in dialogue with politics, economics, literature, art, and culture. More information is available at <http://www.avhumboldt.de/?p=8915>.

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Philip K. Wilson (Penn State University) and W. Jeffrey Hurst have published *Chocolate as Medicine: A Quest over the Centuries* (Royal Society of Chemistry, 2012).

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William R. Newman, Distinguished Professor and Ruth Halls Professor of History and Philosophy of Science, Indiana University, Bloomington is the recipient of the 2013 HIST Award of the Division of the History

of Chemistry of the American Chemical Society. This award is the successor to the Dexter Award (1956-2001) and the Sydney M. Edelstein Award (2002-2009), also administered by the Division of the History of Chemistry.

Newman was introduced to the history of chemistry by Otto T. Benfey in the 1970s as a student at the University of North Carolina-Greensboro. He did his graduate work at Harvard with the medievalist John Murdoch, also working with the classicist and historian Robert Halleux at the Université de Liège. Newman's doctoral dissertation was later published as *The Summa Perfectionis of Pseudo-Geber* (1991), which consisted of an edition, translation, and study of one of the most famous alchemical works of the Middle Ages. Newman demonstrated that this early 14th century Latin alchemical treatise, attributed to Pseudo-Geber, was not a translation of a work of the 8th century Arabic writer, Jabir ibn Hayyan, but an original work by Paul of Taranto. Thus in his doctoral dissertation, Newman laid to rest the Jabir-Geber problem.

Much of Newman's subsequent work has focused on the continuity between alchemy and chemistry in the seventeenth century. Two books, *Gehennical Fire* (1994) and *Alchemy Tried in the Fire* (2002, with L.M. Principe) deal with George Starkey. Newman identified the alchemical writer Eirenaeus Philalethes ("peaceful lover of truth") to

be the Harvard-educated chemist George Starkey (1628-1665). Starkey became Robert Boyle's tutor, was Isaac Newton's favorite alchemical author, and wielded a possible influence on the works of John Locke and Gottfried Wilhelm Leibniz. Newman and Principe have advocated the use of the terms "chymistry" and "chymist" to apply to the chemically related work of people such as Newton. Newman's 2004 *Promethean Ambitions* deals with the division between natural and artificial products that has been a problem for chemistry since its origin. His most recent book, *Atoms and Alchemy* (2006), argues that the atomic theories of the nineteenth century were decisively prefigured by a form of chymical atomism that displaced the dominant early modern scholastic matter theory. Newman's novel thesis is that later alchemists were concerned with chemical change in general, not just on the narrowly focused and futile searches for means to transform natural materials into gold. For the last seven years, Newman has devoted most of his time to the Chymistry of Isaac Newton Project (<http://www.chymistry.org>), an on-line edition of Newton's alchemical writings hosted by Indiana University. In addition to his appointment in the Indiana University Department of History and Philosophy of Science, he is Director of the Catapult Center for Digital Humanities and Computational Analysis of Texts, also at Indiana University.

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Roger Stuewer (center) being congratulated by Gloria Lubkin and Greg Good

Roger H. Stuewer (University of Minnesota) has been chosen to receive the 2013 Pais Prize for the History of Physics in recognition of his intellectual contributions to the field, as well as for his untiring efforts in fostering its development. In its citation, the Pais Prize Selection Committee recognized him "for his pioneering historical studies of the photon concept and nuclear physics, and for his leadership in bringing physicists into writing the history of physics by helping to organize and develop supporting institutions and publications."

Stuewer's research on the history of the light quantum was published in the definitive scholarly volume, *The Compton Effect: Turning Point in Physics* (1975), as well as a series of widely read articles. This body of work explains why

Einstein's 1905 proposal that light consists of individual quanta was rejected for almost two decades by virtually all physicists until it was confirmed by Arthur Compton's X-ray scattering experiments, published in 1923. Drawing upon Compton's research notebooks and many other archival resources, Stuewer's analysis was set in the context of attempts to understand the nature of X-rays and gamma rays.

During the 1980s, as one of the first historians to examine the discovery of the neutron and the rise of nuclear physics, Stuewer again combined his scientific knowledge with a deep understanding of the social, political, and institutional contexts of his subjects to write a series of pivotal articles. These influential publications include "The Nuclear Electron Hypothesis" (1983); "Rutherford's Satellite Model of the Nucleus" (1986); and "The Origin of the Liquid-Drop Model and the Interpretation of Nuclear Fission" (1994). His studies of early nuclear physics culminated in a brilliant demonstration of how the liquid-drop models as developed in Berlin and Copenhagen influenced the work of Lise Meitner and Otto Frisch and led to their famous formulation of the theory of uranium fission.

Throughout his lengthy career, he has brought the history of physics to wider audiences and helped practicing physicists contribute to the history of physics in collaboration with

historians. Stuewer edited several volumes in the history of science—for example, *Nuclear Physics in Retrospect* (1979), the proceedings of a historical symposium on nuclear physics in the 1930s, which he organized and sponsored at Minnesota in 1977. Among the participants and contributors were Hans Bethe, Otto Frisch, Maurice Goldhaber, Edwin McMillan, Rudolf Peierls, Emilio Segrè, John Wheeler and Eugene Wigner. His model for this gathering became the basis for subsequent symposia and scholarly volumes on the history of particle physics organized by Laurie Brown and others. In 1997 Stuewer and John Rigden founded and began serving as the co-editors of the journal *Physics in Perspective*. Among the most prestigious journals in the history of physics today, it publishes articles by a mixture of physicists, philosophers and historians.

Stuewer has also been highly productive in building social institutions to help physicists and historians work together. For example, he established the Program in History of Science and Technology at the University of Minnesota, which in 2007 merged with its Program in History of Medicine to form the largest such program in the United States. Its success is due in part to Stuewer's insistence that both scientists and historians be included. He served as Director of the Program from 1975 to 1989. Stuewer

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was also a co-founder of the APS Division of the History of Physics—and its successor, the Forum on the History of Physics—having served on its Organizing Committee in 1979–1980. He has served on the DHP and FHP Executive Committee, and as the Forum Chair and Forum Councilor, representing it on the APS Council. The series of annual Seven Pines Symposia, which Stuewer founded in the mid-1990s, has had a significant impact on the history and philosophy of physics by bringing together prominent physicists and leading historians and philosophers of physics for discussion of key issues in the foundations of modern physics. (This article was adapted from the AIP announcement written by Lillian Hoddeson and Michael Riordan and found at <http://www.aps.org/units/fhp/newsletters/spring2012/hoddeson.cfm>.)

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New Books in Science, Technology, and Society (NBSTS) Podcast

By Carla Nappi (University of British Columbia)

For the past several months, Patrick Slaney and I have been co-hosting a podcast devoted to interviews with authors of new books on science studies, with “science studies” here being defined for maximal inclusiveness. The channel is part of the larger New Books Network founded and maintained by Marshall Poe, and you can find it here: <http://newbooksinscitechsoc.com/> (You’ll

notice a link at the top of the page that says “List of Interviews”: click on it and you’ll find yourself looking at the archive of interviews that we’ve already posted.) The interviews, most of which are conducted via Skype, last anywhere from thirty to sixty minutes.

Each New Books Network host has her own approach to interviewing, and I’ll tell you a little bit about mine. For me, the interviews help to humanize the books and translate them for a wider range of readers than might otherwise encounter them. Each conversation is based on a close reading of the book at hand, and is meant to create a space to celebrate and talk in detail about a book in a way that differs substantively from that of the typical academic book review. These interviews are not about criticizing, judging, or situating the book within a narrow subfield. Instead, they are meant to explore and celebrate the work by (ideally) looking closely at each chapter and pulling out some of the most interesting contributions that each work makes to the larger field of knowledge-making. I like to keep the personal questions to a minimum, and I tend to use whatever personal questions that I do ask to situate the current book within the larger trajectory of the work of the person-as-author.

Based on the feedback I have received in the past several months, people are using these interviews in several different ways. They are

free and downloadable, so many of our listeners (including both STS scholars and members of wider interested publics) listen to them in their in-between hours to keep up with some of what is being published in STS. Some colleagues have been assigning relevant interviews on course syllabi. Members of book prize committees are listening to interviews to get more background on works they are considering. I have even heard of faculty assigning interviews to graduate students for whom English is a second language, to practice listening to conversational academic dialogue in their fields.

To the extent possible, I am aiming to contribute a broadly trans-disciplinary coverage to the channel. Philosophy, sociology, literary studies, history, anthropology: they are all warmly welcome on NBSTS, and part of what I am trying to do when I choose books is to create more of a conversation among the many fields that contribute to the social and humanistic understanding of science, technology, and medicine. I believe in a scholarly practice anchored in wide reading across disciplines as a way to achieve more creative and boundary-breaking work, and I am trying to bring this aesthetic to the channel. Of course, since I am balancing this work with the other demands of a full-time faculty job, a New Year’s resolution to start getting a more humane amount of sleep, and banjo lessons on the side, I am not always

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able to fit as many different kinds of books into the monthly schedule as I would like. I am working on it, though.

Stop on by the web site, browse around, come explore the new media landscape of academic work with us. And please do be in touch if you would like to recommend a book (including your own) for an interview!

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HSS Council approves Joint Caucus

The Council of the Society has formally recognized a new caucus: the Joint Caucus of Socially Engaged Philosophers and Historians of Science (JCSEPHS). The proposal was brought to the HSS by our colleagues in PSA. Initial activities will include a designated webpage that could contain a blog; the JCSEPHS syllabus modules project (initial organizer Zvi Biener, University of Cincinnati); news of events of targeted interest including workshops, lectures etc.; items on the history and current activities of socially engaged POS/HSS; and suggestions for reading groups/virtual reading groups.

It is also hoped that the Caucus can sponsor special sessions focused on how research in the history and philosophy of science can contribute to activities more directly involving the public and issues of public concern. These may be in the regular programs of the meetings of HSS

and PSA, as a satellite meeting adjacent to the meeting, or as special sessions occurring outside the regular meetings times. The manifesto for the Caucus appears below:

Manifesto for Joint Caucus of Socially Engaged Philosophers and Historians of Science

JCSEPHS was founded in 2012 to promote research, educational and public activities in history and philosophy of science that constructively engages matters of social welfare. JCSEPHS seeks to bridge scholarly research and public debate on science funding, research ethics, race and gender in science, risk assessment, climate science, the status of embryos, genetically modified foods or organisms, and other scientific and technological matters involved in public policy debates.

This vision of socially engaged philosophy of science is not new. In 1929, the famous Vienna Circle of philosophers published their manifesto, *The Scientific Conception of the World: The Vienna Circle*. Their pamphlet envisioned a progressive future for philosophy that was vitally linked to developments in physics, biology, and social science, to advances in logic and the foundations of mathematics, as well as to progressive movements in the arts, social democracy, and public education. “The Scientific

Conception of the World serves life,” the manifesto concluded, “and life receives it.”

Things have changed since the 1920s. Yet JCSEPHS agrees that historians and philosophers of science are well equipped to investigate the complexities of scientific thought and practices in the real world, and that they should join public conversations about them. To those ends, JCSEPHS supports socially engaged research, participates in public discussions with leaders in government or business who shape policy and opinion, and promotes widespread understanding of science’s relations to society and social welfare.

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Silvan Schweber’s George Sarton Memorial Lecture

By Jed Z. Buchwald (Caltech)

Silvan S. (Sam) Schweber, Professor Emeritus of Physics and Richard Koret Professor Emeritus in the History of Ideas, at Brandeis University, gave the George Sarton Memorial Lecture in the History and Philosophy of Science at the American Association for the Advancement of Science annual meeting this past February in Boston, Massachusetts.



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Schweber spoke to a crowd of over a hundred scientists, historians, and reporters about the life and work of Hans Bethe, with whom he and F. de Hoffmann wrote the influential 1955 text, *Mesons and Fields*. He has since written extensively on the history of 20th century physics.

Schweber began with an account of Bethe's early years. Bethe's father, Albrecht Bethe, was an assistant to the Strassburg University physiologist Richard Ewald and was strongly committed to an evolutionary view. This influenced Hans, whose work in physics embraced evolutionary, historical processes, such as the life and death of stars. Bethe studied with the great physicist Arnold Sommerfeld, who with others had developed the foundations of what became known years later as the old quantum theory. Bethe, then twenty years old, joined Sommerfeld's seminar at Munich in the spring of 1926, just when Schrödinger's seminal papers on wave mechanics were being published. Subsequently an assistant professor at Tübingen, Bethe lost his job in 1933 after the Nazi accession to power since his mother, though a convert to Protestantism when young, had been born Jewish. After a Fellowship in England, in February, 1935 Bethe joined the physics department at Cornell, where he remained until the end of his life.

During the 1930s, Schweber continued, the frontier shifted to nuclear physics, to which Bethe made seminal contributions. With Stanley

Livingston and Robert Bacher he co-authored three articles on the subject that became known as the "Bethe Bible." His work led in 1938 to an explanation of energy generation in stars, for which he was awarded the Nobel Prize in 1967. World War II transformed Bethe's life. He was the "paradigmatic example" of physicists' importance to the war effort and, afterwards, to the Cold War as well. Schweber explained Bethe's specific ability to translate technical mastery of the microscopic world of nuclei and atoms into macroscopic properties, thereby contributing to the design of such devices as radar junctions and atomic bombs. Bethe was an acknowledged leader at both Los Alamos and at MIT's Radiation Lab.

Bethe's managerial experiences during the war aided him in creating with Bache the Newman Lab at Cornell, dedicated to the investigation of the structure and forces governing atomic nuclei, a lab that, unlike others, was decidedly not inter-disciplinary, dedicated as it was entirely to research on high-energy physics. From the mid 1950s to the early 1970s Bethe and his students focused on the nuclear many-body problem. He was also instrumental in evolving an understanding of the different levels of physical description, indicating how parameters at a given level of quantum mechanical description are determined by a lower-level theory. His work here influenced many other physicists, including Richard Feynman and Freeman Dyson.

After the Soviet Union exploded its first atomic bomb in 1949, Schweber related, Bethe became deeply engaged with working out a response to the perceived threat. He played a crucial role in the early 1960s in negotiations leading to the above-ground nuclear test-ban treaty of 1963. In his later years, and following the election of George W. Bush in 2001, Bethe became particularly concerned with the ever-decreasing role of scientific expertise in governmental decision-making. The Bush administration's preference for political and military considerations over scientific realities left Bethe's faith in the power of reason and rationality to effect change deeply shaken.

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A Conference in Honor of Sally Gregory Kohlstedt

"Practicing Science, Engaging Publics: A Conference in Honor of Historian Sally Gregory Kohlstedt" will be held on 20 April 2013 at the University of Minnesota Twin Cities campus. This public event will feature talks by former students of Sally, tributes to Sally's influence in the field, and a celebratory banquet. In conjunction with this conference, funds are being raised to endow a graduate student research travel fellowship. For more information, see <http://www.sgk2013.com/>.

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Churchill Workshop at Indiana University*By Sander Gliboff (Indiana University)*

Last December 7-8, the Department of History and Philosophy of Science at Indiana University had the pleasure of welcoming friends, alumni, and colleagues to a Workshop on the History of Biology in Honor of Fred Churchill, on the occasion of his eightieth birthday.

Fred and his students have had formative influences on the history of biology. When Fred left Harvard for IU in 1967, the field was only beginning to move beyond the “harder” biological sciences, such as physiology, that engaged in quantification and experimentation. Evolution, morphology, and cell biology were poorly covered. Little work was being done on biology in the German context, and even less in the American.

Fred and his students changed all that. Fred’s own papers on August Weismann, turn-of-the-twentieth-century embryology, early genetics and cytology, protozoology, and IU biologists such as Alfred Kinsey, all broke new ground. And students, such as Jane Maienschein and Ron Rainger, along with Fred’s Harvard cohort Garland Allen, made inroads into modern American biology. Paul Farber branched into eighteenth-century French natural history and

the history of bioethics and race. Marsha Richmond focused on the German-American geneticist Richard Goldschmidt, helped edit the Charles Darwin correspondence, and went on to do award-winning work on women in genetics. Mark Borrello has done interdisciplinary work on history and philosophy of evolutionary theory, ecology, and environmental issues. Alice Dreger has become a public figure through her essays and lectures on sexuality and medical ethics. Fred’s students have also been mainstays of our professional organizations, especially the HSS, and journals such as the *JHB*. All this, of course, is only a sampling.

The HSS was well represented at the Workshop. Executive Director Jay Malone drove down from South Bend, Indiana. Two past presidents (Jane Maienschein and Paul Farber) and the current secretary (Marsha Richmond) were also there, along with recent and current members of Council, including Judy Schloegel.

At the Friday afternoon session, chaired by Jutta Schickore, Fred’s last Ph.D. student, Mark



From left to right: Brad Hume, Judy Johns Schloegel, Ann Mylott, Mark Borrello, Alice Dreger, Marsha Richmond, Alistair Sponsel, Fred Churchill, Natasha Jacobs, Paul Farber, Sandy Gliboff, Jane Maienschein, Gar Allen

Borrello had the honor of giving the first talk. He shared his insights on current issues in evolution and “Evolving Individuals.” Alice Dreger, who studied with both Fred and Ann Carmichael, spoke on methodological problems in doing contemporary history, as illustrated by her case of “Off-Label Use of Prenatal Dexamethasone for Fetal Sexual Normalization.” Following this opening session, we withdrew to IU’s University Club for a reception in Fred’s honor.

At an informal Saturday morning session we presented Fred, an avid birdwatcher, with a copy of *The Hawaiian Honeycreepers*, by H. Douglas Pratt, inscribed by all the participants, to take with him on his upcoming trip to Hawaii. We also swapped reminiscences and read written

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messages. Alistair Sponsel showed off his undergraduate notebook from Fred's History of Biology class. A message from John Beatty recalled tales of a larger-than-life Fred: of Fred flying around the Midwest with Norwood Russell Hanson; of how Jane and Ron always outshone John in Fred's Darwin seminar; and how a stern Fred still was willing to pass John on exams, even after he had melded the two Geoffroy St. Hilaires into one very accomplished person. (Some of these tales were so vastly improved in the retelling that they seemed like new to Fred.) Anita Guerinni recalled the hospitality and friendship of Fred and Sandy. Others, too, emphasized their close ties to each other and to Fred during their student days. Nick Hopwood, Ted Davis, and Sean Quinlan also sent greetings. And on behalf of IU's HPS Department, I expressed my appreciation for all the good work that has made our program a center for history of biology and history of German science.

The formal talks continued Saturday with Jane Maienschein on "Understanding Embryos, from Wilhelm Roux to Synthetic Biology Today." Current IU grad student Ashley Inglehart talked about early-modern conceptions of formative principles in "Malpighi, Galen, and the Egg." Garland Allen spoke on "Eugenics and Conservation," and Marsha Richmond on "Women and Academic Biology." Another current grad student, Ryan Ketcham discussed

"Science, Intuition, and Art" as reflected in later scientists' assessments of Goethe. And Paul Farber spoke on "Darwinian Evolution and Human Race." Fred himself gave the last talk: a preview of the recently completed draft of his long-awaited Weismann biography. In the evening we reconvened for dinner in downtown Bloomington.

In attendance, aside from those already mentioned, were also Elof Carlson, Ann Carmichael, John Cash, Jerry Churchill, Michael Dunn, Vreneli Farber, Ron Giere, Brad Hume, Natasha Jacobs, Noretta Koertge, Joe Lunn, Ann Mylott, and many current faculty and grad students.

As department chairman and principal organizer of the Workshop, I would like to thank all the participants, department staff members Becky Bledsoe and Peg Roberts, my assistant organizer Travis Weisse, and photographers Hannah Kasak-Gliboff and Marsha Richmond. Funding was provided by a workshop grant from IU's College Arts and Humanities Institute (CAHI), as well as by an anonymous Grateful Student. Thanks also to Sandy Churchill and Renate Kasak for help with the planning, and of course to Fred, not only for his scholarship and teaching, but also for connecting us all and for letting himself be fussed over.

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Ronfest: A Conference in Honor of Ronald L. Numbers

On 15 and 16 February 2013, approximately fifty people from the United States and abroad attended a conference in Tallahassee, Florida, entitled "Science Without God: Religion, Naturalism, and the Sciences." The conference honored Ron Numbers, who retired from the University of Wisconsin-Madison in December of 2012 after a long and distinguished career. The site of the conference was particularly fitting, for it was at Florida State University that Numbers began his career as a graduate student in history (he received his M.A. there in 1965). Hosted by Michael Ruse (Florida State University) and presided over by Peter Harrison (University of Queensland) and Jon Roberts (Boston University), the sessions of the conference featured eighteen papers that addressed various aspects of the interaction of science, religion, and naturalism and the ways in which they fostered or hindered an understanding of nature, human nature, and society. Generous support for the conference was provided by the Historical Society's program in Religion and Innovation in Human Affairs (RIHA), Florida State University, and the Department of Medical History and Bioethics at the University of Wisconsin-Madison. At the conclusion of the conference guests—a significant number of whom were Ron's current or former

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students—were treated to a fish fry at the home of Michael Ruse. The evening also included a “roast” of Ron by members of the group.

Photo Montage: The Many Faces of Ron Numbers



L to R: Michael Ruse, the mature Ron Numbers, Jon Roberts, and Peter Harrison – Photo courtesy of Jon Roberts



The young Ron Numbers, ca. 1962-63, as a student at Southern Missionary College (now Southern Adventist University). Photo courtesy of Stephen Weldon)



The huggable Ron Numbers – Photo courtesy of Lanny Lightman

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HSS in San Diego: The post-meeting survey

By Mousa Mohammadian, HSS Student Assistant

Responses to the survey’s General Aspects of the Meeting section suggested general satisfaction among attendees with the HSS/PSA Joint Meeting in San Diego. The pre-registration procedure and the host city generally garnered high satisfaction. The meeting hotel had some critics, especially regarding the distance from the downtown, but the overall response to Sheraton San Diego Hotel & Marina was positive (we had hoped that the distance from downtown would be ameliorated somewhat by the use of shuttle buses on Thursday, Friday and Saturday evenings). Most participants reported that the isolation of the hotel did not affect their attendance in sessions. Among those who said that the hotel’s location did influence their attendance, most of those indicated that it increased their number of sessions visited. Most participants did not use the buses provided in the evenings by the hotel for traveling to particular spots of the city; this was at least partly the result of insufficient advertising. The book exhibit and HSS program received positive marks (our thanks to program co-chairs, Janet Browne and Dave Kaiser). With respect to signage for meeting space, session rooms and audio-visual service, feedback indicated general satisfaction, though there were some negative remarks. Although some of the problems cited were out of our

control, we will try to anticipate and correct these issues at our future meetings.

The Thursday Night Joint Reception with PSA was generally satisfactory. Accessibility and the quality of food and beverages received positive marks, but there were some criticisms about the variety of food options and the overcrowding. Similar sentiments were expressed with respect to the Saturday night joint reception on the Bayview Lawn. The amount and variety of food received some critical comments, but the quality of food and beverages, reception duration, venue, and accessibility all received good marks.

The Blue Marble event at the Scripps Institution of Oceanography was rated highly by those who attended (our deep thanks to John Alaniz for his work in organizing this). The location, overlooking the Pacific Ocean, was described as “superb” by one attendee. Moreover, the quality of presentations and duration of the event were rated highly. However, there were concerns cited about the shuttle between the hotel and the Scripps Institution, both in regard to publicity and to the number of available shuttles (the event unfolded on a tight budget). There were numerous diverse suggestions about the form and content of similar events at future meetings, but there was considerable consensus among the survey participants that these sorts of events should be scheduled for Thursday before the formal start of the HSS meeting.

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The questions regarding cross-over attendance between HSS and PSA participants yielded striking results. Less than 20% of survey participants attended sessions jointly sponsored by both HSS and PSA, although this could be a bit underreported, as it may not have been obvious which sessions appeared on both programs. Only one PSA respondent reported attending any other HSS sessions; HSS respondents were similarly parochial in their session attendance. Running counter to this trend were two HSS participants who attended 10 or more PSA sessions; this may suggest that they were philosophers of science who presented papers for HSS (we personally know a couple of them!). However, this is not to suggest that the joint meetings are not valuable; joint events like the plenary (which featured a standing-room only session on Kuhn's *Structure*) and co-sponsored sessions create opportunities for socializing and for informal discussions between scholars in our two disciplines, thus providing countless opportunities for collaboration.

Although few participants used the space for scholars with young families (provided by the hotel for lactating and nursing mothers and for children with their caretakers), the idea was widely praised by the survey participants. HSS will try to provide similar spaces at future meetings.

As we look ahead to future events, respondents most frequently identified the program and

the host city as the most important factors in attending meetings. A majority of participants would attend a conference outside of the U.S. and Canada, although some said it would depend on the cost of travel and availability of funding. With respect to the scheduling of HSS/PSA joint meetings, less than 20% reported that attending a meeting scheduled close to the U.S. Thanksgiving holiday was problematic; although this is a relatively small minority, the percentage is not trivial. However, room rates were considered much more important than meeting dates. Moreover, most people think that it would be better to have one or two sessions on Thursday afternoon to decrease the number of concurrent sessions, which numbered as high as 12 in San Diego.

The Executive Office appreciates input from all of the attendees regarding all aspects of the meeting. We strive to make the meetings run smoothly and allow attendees and presenters to focus on the events and papers. We did receive numerous compliments from both HSS and PSA attendees, and we appreciate the kind words; they were a salve to frayed nerves on the closing Sunday. The criticisms and suggestions are also of great value, as the success of a meeting rests ultimately on the judgment of the attendees. We hope that you will be able to join us in Boston in 2013 and in Chicago in 2014. Your input will help us make those meetings better for all.

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In Memoriam

Erwin N. Hiebert¹

1926–2012

Erwin Nick Hiebert, 93, of Belmont, Massachusetts, passed away peacefully on 28 November 2012, in Waltham, Massachusetts. An active and prolific scholar and teacher to scores of students who became well-known academics in the field, he was also a devoted husband, father, and grandfather.

Erwin Hiebert was born on 27 May 1919 in Waldheim, Saskatchewan, the third of seven children of Tina Harms and Cornelius N. Hiebert, a renowned Mennonite Brethren minister. Pursuing his early curiosity and passion for science (chemistry and physics), Hiebert attended Tabor College in Hillsboro, Kansas for two years and then transferred to nearby Bethel College, where he received his B.A. degree in 1941, majoring in Chemistry and Mathematics. In 1943 he received his M.A. in Chemistry and Physics at the University of Kansas in Lawrence. While in Hillsboro, he met Elfrieda Franz; the two were married in 1943. They moved immediately to Whiting, Indiana, where he accepted a job as a Research Chemist at Standard Oil Company of Indiana. In 1950, they relocated to Madison, Wisconsin, where Hiebert received his Ph.D. in 1954, with a double major in History of Science and Physical Chemistry.

Hiebert enjoyed a long, illustrious academic and research career. His first teaching post, from 1952 to 1954, was an Assistant Professorship of

¹ A version of this obituary was published in *The Boston Globe* on 21 January 2013.

In Memoriam

Chemistry at San Francisco State College. He subsequently became a Fulbright Lecturer (1954-55) at the Max-Planck-Institut für Physik in Göttingen, Germany. The following year, Hiebert became an Instructor in the History of Science at Harvard University, a position he held from 1955 to 1957. From 1957 to 1970, he taught in the Department of History of Science at the University of Wisconsin-Madison, serving as Chairman from 1960 to 1965. Hiebert joined the faculty of the Department of History of Science at Harvard University in 1970, whereupon the family moved permanently to the Boston area, settling in Belmont. He was Chairman of the department from 1977 to 1984, and was Professor Emeritus at Harvard from 1989 until his death in 2012.

Hiebert headed a variety of regional, national, and international History of Science organizations. In 1967-68, he was elected President of the Midwest Junto for the History of Science; in 1971-72, he was Vice President and then President in 1973-74 of the History of Science Society. He was a member of the Academie Internationale d'Histoire des Sciences starting in 1971 and Elected Fellow of the American Academy of Arts and Sciences in 1975. In 1981, Hiebert became Chairman-elect of the History and Philosophy of Science Section (Section L) of the American Association for the Advancement of Science (AAAS), and in 1982, Chairman, serving until 1986. He was also President of the Division of the History of Science of the International Union of

the History and Philosophy of Science (IUHPS-DHS) from 1982 to 1985. Hiebert was a Member of the Advisory Committee of the 18-volume *Dictionary of Scientific Biography* (1970-90) and served on editorial boards of numerous other major publications and journals.

Hiebert was the author of three books (*The Impact of Atomic Energy*, 1961; *Historical Roots of the Principle of Conservation of Energy*, 1962; and *The Conception of Thermodynamics in the Scientific Thought of Mach and Planck*, 1968) and numerous articles. His research and teaching focused on the 19th- and 20th-century history and philosophy of science, in particular, atomic and molecular physics, nuclear physics and chemistry, energy and thermodynamics, physical chemistry and chemical physics, electrochemistry, the structure of matter, low temperature physics, science and Marxist thought, the interactions of Western science and religion, scientists as philosophers of science, and musical acoustics. At his death he was completing a publication on the implications of the science of acoustics for music composition and instrument construction.

Hiebert was perhaps best known for his teaching, evident in the generations of students (altogether 37) who worked with him on their doctoral degrees and who have populated academies throughout North America and Europe. They benefitted from the thoughtful and thorough guidance and encouragement that he provided them and were all also frequent guests in Erwin and Elfrieda Hieberts'

warm and hospitable home, typically keeping in touch with "E and E" throughout their careers and beyond. He was known for the intellectual zeal with which he engaged students in his seminars and notably never taught the same course the same way twice; he was perpetually looking for ways to bring new understandings to topics of research and study. One of his strongest convictions was that in order to study the history of science, it was essential to have basic grounding in the science itself. Hiebert was the recipient of two Festschriften: *Historia Mathematica: Papers in Honor of Erwin N. Hiebert*, ed. Joseph Dauben (1980), and *The Invention of Physical Science*, eds. Mary Jo Nye, Joan Richards, and Roger Stuewer (1992).

Hiebert was preceded in death in September 2012 by his wife of 69 years, Elfrieda Franz Hiebert, and is survived by his three children: Catherine Hiebert Kerst of Silver Spring, Maryland; Margaret Hiebert Beissinger and husband Mark Beissinger of Princeton, New Jersey; and Thomas Nels Hiebert and wife Lenore Voth Hiebert of Fresno, California. He also leaves seven grandchildren. Hiebert was keenly dedicated to scholarship for virtually his entire life. From his early years in the classroom in Winnipeg to the last year of his life, he was passionate about exploring the world of science and interpreting how earlier scientists and philosophers had also explored it. He will be remembered as a devoted researcher and teacher but above all as a committed, caring, and beloved husband, father, and grandfather.

NEWS FROM THE PROFESSION

New Executive Secretary and Treasurer of the PSA



The Governing Board of the Philosophy of Science Association is pleased to announce that Jessica Pfeifer, Associate Professor of Philosophy at the University of Maryland, Baltimore County, will assume the position of the Executive Secretary and Treasurer of the PSA.

Professor Pfeifer received her Ph.D. in Philosophy/Science Studies from the University of California, San Diego and has taught at the University of Maryland-Baltimore County since 1998. She was a Visiting Fellow at the Center for Philosophy of Science at the University of Pittsburgh, has published papers in a range of topics in philosophy of science, and co-edited, with Sahotra Sarkar, *The Philosophy of Science: An Encyclopedia, Vols. 1 & 2* (Routledge, 2006).

In addition to expertise she has gained as a result of her extensive scholarly, editorial, and administrative work within academia, Professor Pfeifer brings to the Philosophy of Science Association a range of financial and bookkeeping skills gained outside academia, skills that will serve the PSA well in advancing its mission of promoting research, teaching, and discussion of issues within the philosophy of science from diverse viewpoints. Professor Pfeifer is interested particularly in improving the PSA's institutional memory, facilitating the mentoring of philosophers of science at the start of their careers, and making the scientific community and the general public aware of the philosophy of science and its value in public discourse.

Professor Pfeifer has already assumed several of the jobs of the PSA Executive Secretary and Treasurer, including managing posts to the PSA-L Announcement List and the PSA jobs listing. In the near future she will assume all the duties of the position. Items for the PSA-L list or the PSA jobs listing can be brought to her attention at psa@umbc.edu.

The Governing Board invites all members of the PSA and related academic societies to join us in congratulating Professor Pfeifer and welcoming her as the PSA's Executive Secretary and Treasurer.



Steve Case addresses workshop attendees

Evidential Reasoning in Astronomy & Cosmology Workshop: Some Reflections

By Stephen Case (University of Notre Dame)

<http://evidentialreasoninginastronomy.wordpress.com>

One thing I quickly learned hosting the ISLA-Mellon workshop on Evidential Reasoning in Astronomy & Cosmology was the fallacy in assuming that only one of your speakers has a minor planet named in his honor. In fact, as I glanced around the table of assembled astronomers, philosophers, and historians in the concluding session that weekend, I realized a better question might have been, "Who here doesn't have a minor planet named after them?" With over forty attendees including philosophers of physics, historians of astronomy, and cosmologists, asteroids of the inner solar system were well represented at the workshop, which took place in the Jordan Hall of Science at the University of Notre Dame 22–24 February 2013.

The goal of this workshop was to assemble scientists, philosophers, and historians to share ideas on the role of evidence and reasoning in historical and contemporary research. As a historian of astronomy, I was curious what philosophers and astronomers had to say about the role that induction plays in the largest scales of space and time. I wanted to know more about how working cosmologists built their inductive ladders and what they did when those ladders led to unexpected results, such as in the case of dark energy.

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How are limited data sets like the Kepler Mission results translated into claims regarding the prolificacy of exoplanets throughout the galaxy? What assumptions are made in extra-galactic supernovae surveys? I also hoped for ideas about what a philosophy of astronomy might look like and how (or whether) it could be distinct from a philosophy of cosmology.

The workshop drew a wide range of participants. Attendees that weekend included senior scholars such as Dr. Peter Garnavich of Notre Dame's physics department, Dr. George Smith of Tufts University and Stanford University, Dr. Bill Harper of the Rotman Institute of Philosophy at the University of Western Ontario (now Western University), Dr. Marv Bolt of the Adler Planetarium & Astronomy Museum, and Dr. Steven Dick, former NASA chief historian (who was unfortunately unable to attend due to illness but sent a paper to be read). There was also a strong showing of philosophy of cosmology graduate students from Western University and the University of Pittsburgh. Graduate students from Notre Dame included students from the program in the history and philosophy of science as well as history, philosophy, physics, theology, and even creative writing students.

The workshop was organized into three sessions loosely grouped by topic: the first explored the historical role of evidence in astronomy, the second focused on contemporary astronomical and cosmological research, and the third dealt

with philosophical implications. In discussions at the conclusion of the workshop, Dr. Smith emphasized the need for a literature focusing on philosophical aspects of geophysics, astronomy, and cosmology. Such philosophical concerns were evident in the papers presented by philosophers of cosmology in the third session, which dealt with, among other issues, the role of data selection in supernovae evidence for the accelerating universe (Dylan Gault, Western University) and the role of essential idealizations in cosmology (Elay Shech, University of Pittsburgh). One set of issues that participants kept returning to was the philosophical implications of the use of evidence regarding regions of the universe that remain in principle unobservable.

For the second session, I asked working astronomers and cosmologists to speak on the role of evidence in their own work. Partway through this session I realized what a challenge I had set for the speakers: to present their research in a non-specialized form to an audience including their own colleagues and students as well as historians and philosophers of science. The feedback on this portion of the workshop, however, was quite positive. These talks, as well as a presentation on astronomical representation given in the Digital Visualization Theater by Dr. Keith Davis of Notre Dame, helped to frame a common intellectual context for the workshop. Matt Miexner, a Notre Dame physics graduate student who spoke on his work deriving an equation of state for supernovae core

collapse, said that he welcomed the opportunity to discuss the role of evidence and modeling in his own research. Other talks by scientists in this session included Dr. Garnavich on evidence for the accelerating universe and Colin Littlefield, also from Notre Dame, on issues of exoplanetary detection.

One general theme that emerged from the workshop was the issue of what new considerations cosmology and astronomy bring to philosophy. In cosmology, the philosophical implications are readily apparent. Contemporary astronomy, on the other hand, is largely composed of overlapping fields—chemistry, physics, biology, planetary geology—making the notion of a distinct philosophy of astronomy problematic. Yet throughout its history astronomy has been the classical case for extending evidence and observation to reach conclusions on potentially-unreachable regions of the universe. This became especially clear in the first session of the workshop, which explored the role of evidence in the history of astronomy. As Dr. Dick's paper illustrated, the issue of classification can serve as a powerful tool for analyzing the problem of discovery in astronomy. The recent fervor over the status of Pluto has shown the necessity for clear reasoning on the definition of astronomical classes and the role such classes play in the process of discovery. This question was recently raised again with the discovery of Kepler-37b, the smallest exoplanet on record. Should such an object be considered a

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planet at all, or does it represent the discovery of a new class of astronomical object?

The role of evidence in the history of astronomy also may help to inform speculations on the possibility of life in the universe. As Dr. Michael Crowe of Notre Dame drew attention to in his paper on the extraterrestrial life debate, in the nineteenth century analogical reasoning was used as a powerful argument both for and against the existence of life throughout the solar system. Again, the implications for contemporary questions are clear as exobiologists, as well as the public, grapple with what conclusions can be reached as we try to connect the existence of extremophile bacteria on Earth to life elsewhere in the universe. It is in such episodes from the history of astronomy that the philosophical considerations of the role of evidence seem to have the most bearing for contemporary issues in astronomy.

Pseudo-Masha'allah, On the Astrolabe

By Ron B. Thomson (Fellow Emeritus, Pontifical Institute of Mediaeval Studies, Toronto)

I am producing a critical edition of the astrolabe text of Pseudo-Masha'allah, to replace the defective edition published by Robert Gunther in the 1930s ("Science at Oxford" series). The critical edition of the Prologue and of chapters 1-6 have now been mounted on-line by the University of Oklahoma. See <http://ouhos.org/2013/01/08/pseudo-mashaallah-on-the-astrolabe/>.

[org/2013/01/08/pseudo-mashaallah-on-the-astrolabe/](http://ouhos.org/2013/01/08/pseudo-mashaallah-on-the-astrolabe/).

The material available online includes an introduction touching on various aspects of the project, including a manuscript list; the critical edition with apparatus, notes and diagrams and a facing English translation based on about 80 manuscripts; a Latin only version with diagrams and some notes (preserving the lineation of the critical edition); and an English only version with diagrams and some notes. I am currently working on the next section of the text (chapters 7 to 16: I have just completed a preliminary edition up to the end of chapter 12) which I hope to complete this summer in order to add it to the on-line text in the autumn.

As funds become available I will purchase copies of the few remaining manuscripts which I do not now have. I do not expect that this will produce any changes to the text; it will only increase the size of the apparatus. I expect to complete the whole project—Composition, Prologue to Chapter 24; Star Table; Uses—in about five years. As time passes I am willing to add comments that others might have on the text or translation to build a final edition based on the co-operation of scholars in the field. If you have any questions, please do not hesitate to contact me via thomson@chass.utoronto.ca.

New HIPAA Privacy Rule

U.S. Department of Health and Human Services' Description and Commentary from the January 2013 Amendments General Rules for Uses and Disclosures of Protected Health Information: Deceased Individuals

After considering the public comments, the final rule adopts the proposal. We believe 50 years is an appropriate period of protection for decedent health information, taking into account the remaining privacy interests of living individuals after the span of approximately two generations have passed, and the difficulty of obtaining authorizations from a personal representative of a decedent as the same amount of time passes. For the same reason, we decline to shorten the period of protection as suggested by some commenters or to adopt a 100-year period of protection for decedent information. We also believe the 50-year period of protection to be long enough so as not to provide an incentive for covered entities to change their record retention policies in order to profit from the data about a decedent once 50 years has elapsed.

With respect to commenters' concerns regarding protected health information about decedents that is sensitive, such as HIV/AIDS, substance abuse, or mental health information, or that involves psychotherapy notes, we emphasize that the 50-year period of protection for decedent health information under the Privacy Rule does not override or interfere with State or other laws that provide greater protection for such information,

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or the professional responsibilities of mental health or other providers.

Covered entities may continue to provide privacy protections to decedent information beyond the 50-year period, and may be required to do so under other applicable laws or as part of their professional responsibility. Alternatively, covered entities may choose to destroy decedent information although other applicable law may prescribe or limit such destruction.

We also decline to limit protections under the Privacy Rule to a certain period beyond the last date in the medical record. While we appreciate the challenges that may be present in determining the date of death of an individual in cases in which it is not sufficiently clear from the age of the record whether the individual is deceased, we believe that this determination is necessary in closer cases to protect the individual, as well as living relatives and others, who may be affected by disclosure of the information.

Further, as we stated in the NPRM, this modification has no impact on a covered entity's disclosures permitted under other provisions of the Privacy Rule. For example, a covered entity is permitted to disclose protected health information of decedents for research that is solely on the information of decedents in accordance with §164.512(i)(1)(iii), without regard to how long the individual has been deceased.

Finally, we clarify that the 50-year period of

protection is not a record retention requirement. The HIPAA Privacy Rule does not include medical record retention requirements and covered entities may destroy such records at the time permitted by State or other applicable law. (We note that covered entities are subject to the accounting requirements at § 164.528 and, thus, would need to retain or record certain information regarding their disclosures of protected health information.) However, if a covered entity does maintain decedent health information for longer than 50 years following the date of death of the individual, this information will no longer be subject to the Privacy Rule.

Catapult Center for Digital Humanities

Catapult is a Center established by the College of Arts and Sciences of the IU Bloomington in 2012 for the promotion of digital humanities and the computational and material analysis of texts. The goal of the Center is to build a visible community of scholars and researchers from the humanities, social sciences, computer and information sciences, and materials sciences who wish to collaborate in seeking innovative solutions to problems that arise in textual and para-textual research. In order to achieve this goal, Catapult offers a Workshop and Training series that meets throughout the year and provides hands-on experience in computational techniques ranging from the preparation of online text editions and encyclopedias to data mining and linguistic analysis of electronic documents. In

addition to these practical workshops, Catapult also offers a yearly Colloquium series where prominent figures in digital humanities and related areas of research are invited to speak. Topics range from computationally assisted study of text content and information visualization to materials analysis of text collections. For more information visit the website at <http://www.indiana.edu/~catapult/>.

Digitization of Botanical Archives from the India Office Records

The India Office Records at the British Library in London are a major resource for the history of science in pre-Independence India. Now, thanks to the generous support of the Arts and Humanities Research Council, over 100 files relating to botany have been digitized and placed on-line.

The files, which range in date from 1780 to 1860, include the following topics: botanical gardens (Calcutta, Bangalore, Saharanpur, Dapuri, Ootacamund, Madras, Samulcotta, Darjeeling); plant-collecting expeditions (Afghanistan, Assam, the Spice Islands, the Himalayas, southern India); economic botany (cotton, spices, hemp, India rubber, tea, coffee, indigo, bread-fruit tree, cassava); medicinal plants (cinchona, senna); pioneering botanists (Robert Kyd, William Roxburgh, John Forbes Royle, Nathaniel Wallich, William Griffith).

The material, which is still being added to, is listed with links at <https://bitly>.

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[com/RbQ54c](http://www.bl.uk/manuscripts/). The digitized images are at <http://www.bl.uk/manuscripts/> (search by keyword such as “Dapuri”). Files on the Calcutta Botanic Garden are also to be found at <http://www.kew.org/wallich>.

An Academic Roundtable on *What Did the Romans Know?*

An academic publication on Daryn Lehoux's *What Did the Romans Know? An Inquiry into Science and Worldmaking* (2012) was published in the Villanova journal *Expositions*, Vol. 6, No. 2. *Expositions* is available at <http://expositions.journals.villanova.edu/>.

Digital Records on Museum Objects

Historians at the Smithsonian's National Museum of American History are gradually creating digital records on Museum objects. We are first preparing entries for the Smithsonian-wide EDAN database and then preparing more extensive descriptions of like objects for the NMAH web site. Thus far there are online records for objects ranging from patent medicines and surgical instruments to surveying instruments to mechanical computing devices to celluloid objects to slide rules. These may be found by searching at the web address: <http://collections.si.edu/search/>. Some objects are also discussed together in groups at: <http://americanhistory.si.edu/collections/object-groups>. More are coming!

1st European Autumn School on History of Science and Education: “Sources and Resources for Educational Purposes in the Era of Internet”

Barcelona, 14-16 November 2013

Societat Catalana d'Història de la Ciència i de la Tècnica (SCHCT); European Society for the History of Science (ESHS); Centre d'Història de la Ciència (CEHIC); Universitat Autònoma de Barcelona (UAB); Càtedra Unesco en Tècnica i Cultura. Centre de Recerca per la Història de la Tècnica (CRHT); Universitat Politècnica de Catalunya (UPC)

The Societat Catalana d'Història de la Ciència i de la Tècnica is going to organize the 1st European Autumn School on History of Science and Education. The main goal of the School is to provide training and to encourage debate, participation and effective interaction among the attending public and the invited specialists, dealing with basic and practical aspects concerning the interplay between history of science and education.

The School is addressed mainly to students of doctorate or master degrees, post-doctorates, in-service teachers, scholars and researchers interested in the history of science as an interface with science and science education.

The topic of this first meeting is centred around the sources and resources of the history of science for educational purposes in the era of the internet. The digitization of libraries and museums collections has made accessible a significant part



17th century chemistry lecture. Artwork showing local people attending a chemistry lecture by the French chemist Nicolas Lemery (1645-1715)

of the literary and material cultures of science worldwide. Furthermore, some museums and academic institutions, which preserve this material culture of science, produce virtual reconstructions of the past that can be used for teaching aims.

Concerning this topic, there are some salient and challenging aspects that might deserve reflexion and discussion: The assessment of sources of the history of science regarding their educational value, the relevance of the historiographical analysis of sources based in their authenticity and reliability in relation to their teaching usefulness, the remaking of historical sources to turn them into educational resources, or the management of application software, social media applications and learning environment systems as tools to include the history of science in science education. For further information, visit the School's webpage at <http://schct.iec.cat/Web1AutumnSchool/FirstAutumnSchool.html>.

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Newton at the Worth Library Online Exhibition

Scholars may be interested in the following web site exhibition entitled “Newton at the Worth Library.” This is one of a number of exhibitions exploring the scientific and medical collections of the Edward Worth Library, Dublin, and is part of Dublin City of Science 2012’s program of events.

To visit the web site see:

<http://newton.edwardworthlibrary.ie/Home>.

University of Oxford Philosophy and Psychiatry Summer School: Mind, Value and Mental Health

A one-week accredited residential summer school from **14 to 19 July 2013** presented by the Faculty of Philosophy and the Department for Continuing Education, and based at St. Catherine’s College, Oxford.

We will explore the areas in which the philosophy of mind and ethics or the philosophy of value come into contact with issues about mental health.

The Summer School will appeal to a wide range of people with a professional or academic interest in the fields of philosophy and/or mental health. Further details are available at <http://www.conted.ox.ac.uk/ppss2>.

Announcement of the 2012 Popper Prize

The Editors of the *British Journal for the Philosophy of Science* are pleased to announce that the 2012 Popper Prize has been awarded to Dr. Elliot Wagner of the Institute for Logic, Language and Computation at the University of Amsterdam for his paper “Deterministic Chaos and the Evolution of Meaning,” 63(3):547 (2012).

Here follows the Editors’ citation:

Sir Karl Popper made important contributions to the philosophy of social sciences as well as to the philosophy of natural sciences. A prominent trend in contemporary philosophy of social sciences takes its cue from David Lewis’ signaling games, and more recently Brian Skyrms’ work in this area. In linguistics, economics, and biology, the communication between a sender and a receiver can help us understand the emergence of meaning, decision-making strategies, and even animal behavior. Traditionally, in the literature on signaling games, the sender and the receiver are assumed to have common interests. In his paper, Wagner analyses signaling games where the receiver and the sender have totally opposed interests. He shows that even in the worst case of a zero-sum interaction, partial information transfer and hence communication can be sustained due to non-convergent adaptive dynamics.

This is a timely, original contribution to a fast-growing area in the philosophy of social sciences, which brings together technical details and philosophical insight, and is a worthy recipient of the 2012 Sir Karl Popper Prize.

Fall 2013 Relocation of Centre for the History of Science, Technology and Medicine from Imperial College to King’s College

King’s College London announces today that it will welcome the Centre for the History of Science, Technology and Medicine to the Department of History beginning in August 2013. The move from Imperial College London follows work to identify the best academic home for the Centre to develop its research activities in the long term. The Centre will be strengthened not only by existing staff at King’s but also by two new appointments. A new M.A. program is expected to start in 2013 with up to five full M.A. studentships as well as an enhanced Ph.D. program, supported by a continuing program of Hans Rausing scholarships.

During its time at Imperial the Centre for the History of Science, Technology and Medicine (CHoSTM) topped the RAE tables for history in 2008 and became widely recognized for the excellence of its research and its strong record in winning high profile grants. It is known for its

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distinctive approach to modern history of science, technology and medicine, integrating the study of science, technology and medicine and being particularly concerned to address big historical and policy questions, addressed to many audiences.

An endowment of over £2.5m, drawing on existing endowed funds, will be provided by the Arcadia Fund to King's to fund M.A. and Ph.D. studentships within the Centre.

CHoSTM will be joining one of the strongest history departments in the country, with a strong reputation for both teaching and research. The Department at King's has in recent years been developing into a truly global department. Long renowned as a leading center for, among other things, the history of the British Empire and of medieval Britain and Europe, it now has noted strengths in African, Chinese and Australian history. CHoSTM will also intersect with other important investments at King's, such as the recent creation of the new Department of Social Science and Medicine and the development of the History and Policy unit.

New Ph.D. Program Philosophy (in English) at Fatih University, Istanbul

The Philosophy Ph.D. program at Fatih University, Istanbul has been approved. From the spring term 2013, Fatih University Istanbul is

offering a Ph.D. program in philosophy (taught in English). Areas of interest include the history and philosophy of science and medicine.

For inquiries regarding specific topics, please contact rbromer@fatih.edu.tr. For general information about the department, see <http://felsefe.fatih.edu.tr/?&language=EN>. To find out about the areas of specialization of the faculty, go to <http://felsefe.fatih.edu.tr/?staff&language=EN>. Informal inquiries about enrolment could be sent to the head of department Şengül Çelik scelik@fatih.edu.tr and the convening professors Manuel Knoll mknoll@fatih.edu.tr and Marc Rölli marcmroelli@gmail.com.

New York Academy of Medicine Rare Book Reading Room Closed for Renovations

Due to a planned renovation project to improve the environmental conditions in the space, the Coller Rare Book Reading Room at The New York Academy of Medicine will be closed to readers beginning 1 February 2013. The room will reopen for use on 1 June 2013.

While some materials will continue to be accessible for use, portions of the rare book collection will not be available throughout the renovation period, and readers will be relocated to another space in the building. We will do our best to accommodate

readers and reference requests, but please note that response times will be slower and appointment times may be limited.

If you have plans to use the collections this spring, please contact Acting Curator and Reference Librarian for Historical Collections Arlene Shaner at history@nyam.org or 212-822-7313 as soon as you have information about your plans, to verify whether the materials you would like to see will be available for use.

We are looking forward to welcoming readers back to a much-improved space in the early summer and thank you in advance for your patience during our renovations. Updates on the project and reopening will be made on our blog at <http://nyamcenterforhistory.org>.

Journal of Philosophy, Science & Law Accepting Articles

The *Journal of Philosophy, Science & Law*, an online peer-reviewed journal, is soliciting original manuscripts from scholars writing at the relevant intersection.

The *Journal* is a forum for lawyers, philosophers, scientists, engineers, historians, sociologists, and other interested scholars to express and exchange their views. The homepage for the *Journal* is: <http://www.miami.edu/ethics/jpsl/>. Topics

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of interest to the *Journal* include: Bioethics, Engineering Ethics, Environmental Ethics and Law, and the Ethical and Legal Implications of Emerging Technologies.

If you have any questions about the *Journal*, please send your inquiries to borenstein@gatech.edu. More information on submissions can be found at <http://www6.miami.edu/ethics/jpsl/submission.html> or the general web site: www.miami.edu/ethics/jpsl.

InScribe: Palaeography Learning Materials, a New Online Training Platform

InScribe is an online course for the study of Palaeography and Manuscript Studies developed by several of the institutes within the School of Advanced Study (including the Institute of Historical Research and Institute of English Studies), with support from Senate House Library and Exeter Cathedral Library & Archives. Devised by Prof. Michelle Brown (IES) and Dr. Jane Winters (IHR), InScribe aims to support the teaching of Palaeography and Manuscript Studies at a postgraduate level.

At present we are releasing the introductory module which introduces some basic notions about Palaeography and provides an overview of the evolution of script in the medieval period (with particular reference to the English

context). Similarly, it gives students the chance to transcribe text from a selection of newly digitized manuscripts from Senate House Library and Exeter Cathedral Library & Archives. Later in the year, new modules will be released that will provide advanced training on Diplomatic, Script and Translation, Codicology and Illumination. The introductory module is free of charge. To know more about InScribe click here: <http://www.history.ac.uk/research-training/courses/online-palaeography>.

Latest History of Medicine Finding Aids Consortium Release

The History of Medicine Division of the National Library of Medicine (NLM), the world's largest medical library and a component of the National Institutes of Health, is pleased to announce the latest release of its History of Medicine Finding Aids Consortium (<http://www.nlm.nih.gov/hmd/consortium/index.html>). The Consortium now indexes over 3,600 finding aids from 35 institutions and supports a search-and-discovery tool for archival resources in the health sciences that are described by finding aids and held by various institutions throughout the United States (and one Canadian). As with previous releases the new content crawled consists of finding aids delivered as EAD, PDF and HTML from a diverse institutional cohort.

NLM invites libraries, archives and museums with finding aids for collections in the history of medicine and health sciences to join the Consortium. For more information about the project or to request to join the Consortium, please visit <http://www.nlm.nih.gov/hmd/consortium/about.html>.

Call for Contributions to *The Gazette of the Society for the Social History of Medicine*

The Society for the Social History of Medicine is always interested in receiving contributions for *The Gazette*, which is sent out with their journal. Conference reports and pictures (500 words maximum), advertisements for conferences, lectures, events or awards, links to blogs or digitization projects, general news in the field... all are welcome! Please send your contributions, or questions about potential contributions, to Katherine Foxhall via foxhall@sshm.org. The submission deadlines for 2013 are **16 April**, **16 July**, and **15 October**.

Lloyd Library—Varro E. “Tip” Tyler Papers Now Available

The Lloyd Library is pleased to announce the completed processing and accessibility of the Varro E. “Tip” Tyler Papers.

NEWS FROM THE PROFESSION, CONT.

The collection consists of the manuscript records of Varro E. Tyler, from 1926 to 2001. Included are personal and biographical materials, correspondence with individuals and organizations, publications organized into four sub-series, records regarding conferences, speaking engagements and travel, and an extensive collection of medicinal herbs and plants data arranged alphabetically. The collection is approximately 50 linear feet, 98 boxes.

Varro E. “Tip” Tyler was born December 19, 1926 in Auburn, Nebraska. He had a classical education and loved history, poetry, travel, philately, and books. Tyler enrolled at the University of Nebraska, and graduated in pharmacy with high distinction in 1949. He attended Yale University as an Eli Lilly Research Fellow in 1950. After Tyler earned his MS and Ph.D. degrees from the University of Connecticut in 1951 and 1953, he was appointed Associate Professor and Chairman of the Department of Pharmacognosy at the University of Nebraska. He served with merit at the University of Washington for ten years. Dr. Tyler accepted the appointment as dean of the School of Pharmacy and Pharmacal Sciences at Purdue University in 1966. He studied medicinal and toxic constituents of higher fungi, phytochemical analysis, alkaloid biosynthesis, drug plant cultivation, and herbal medicine. Tyler’s outstanding career at Purdue culminated in the designation of the Lilly Distinguished Professor of Pharmacognosy, Emeritus. Service

as the first president of the American Society of Pharmacognosy (1959–1961), president of the American Association of Colleges of Pharmacy (1970–1971), and president of the Institute of the History of Pharmacy (1993–1995) are among Tyler’s many notable achievements. Dr. Tyler’s stature in the field of pharmacognosy is evident through national and international recognition by his peers, honorary degree awards, appointments to editorial boards, and his hundreds of publications. Tyler died 22 August 2001.

The finding aid is available on the Lloyd Library web site at <http://www.lloydlibrary.org/archivescollections.html>.

For reference questions and inquiries contact the Archivist, Devhra Bennett Jones, Devhra@Lloydlibrary.org.

University of Pennsylvania Announces Online Medical History Publication

The University Archives and Records Center of the University of Pennsylvania is proud to announce the online publication of Medical History at the University of Pennsylvania at http://www.archives.upenn.edu/faids/subguides/medical_history/med_hist_intro.html.

Created by Senior Archivist Joseph-James Ahern and edited by the Director of University Archives

Mark Frazier Lloyd, this guide is designed to assist researchers in accessing the Archives’ holdings related to Medical History. Included are faculty minutes, student records, lecture notes, administrative records, and publications. The guide is organized by the headings: Hospitals, Medical Education (including Administration, Faculty, and Students), Medical Research, and Physicians Papers.

The University Archives and Records Center is the official repository for historically significant documents and other materials for the University of Pennsylvania. The holdings extend to all aspects of the history of the University, including the personal and professional papers of prominent persons associated with the University. The collections also document the history of institutions of higher learning in the United States, American intellectual life, and the Philadelphia community in which the University lives. The University Archives strives to ensure the timeless preservation of these historically significant materials and to make these materials available to researchers. Located at 3401 Market Street, Suite 210 in the University City section of Philadelphia, the University Archives is open to the University community and the scholarly public Monday–Friday, 9:30 a.m. to 4:30 p.m.

Additional information on the University Archives can be found at <http://www.archives.upenn.edu/>.

NEWS FROM THE PROFESSION, CONT.

Call for Papers: *Antennae*— The Journal of Nature in Visual Culture

For Bataille, “every animal is in the world like water in water.” In other words, the animal is indissoluble in its immediacy and urgency from what makes it animal in an imminent world. *Antennae* is currently soliciting material from academics, artists and independent writers on the subject of one of the currently still under scrutinized area in human-animal studies: the underwater. Although Bataille’s conceit of the animal as ‘water in water’ is not representative of the multifaceted complexity with which the field of animal-studies currently approaches its subjects of scrutiny, would there be a case for claiming that those animals and other organisms living underwater currently present us with a heightened level of elusiveness than those living on dry land? With the environmental collapse of our oceans this seems a prescient time to discuss fish and their relation to our overall ecosystem and survival of the planet and this relationship to contemporary art/media. As per usual, the journal will feature a selection of artist’s works, academic essays and interview on the subject.

Please contact Giovanni Aloï, Editor in Chief of *Antennae* in order to discuss proposals and submissions. This issue of *Antennae* is co-curated by Professor Ken Rinaldo (Ohio State

University). Academic essays = maximum length 8000 words; Interviews = maximum length 10000 words; Fiction = maximum length 8000 words; Submission Deadline: **1 June 2013**.

More info at: www.antennae.org.uk. Submission e-mailed to: antennaproject@gmail.com

Hagley Museum and Library Announces Research Grant Fellowship Recipients

The Center for the History of Business, Technology, and Society at the Hagley Museum and Library recently awarded research grant fellowships for 8 Exploratory Grants, for eight H. B. du Pont Fellowships; and for two H. B. du Pont Dissertation Fellowships.

As the nation’s leading business history archive and library, Hagley offers research grants for scholars interested using our collections. Exploratory research grants support one-week visits by scholars who believe that their project will benefit from Hagley research materials. Henry Belin du Pont Research grants enable scholars to pursue advanced research in Hagley’s collections for periods of up to 8 weeks. Applications for Exploratory and Henry Belin du Pont Research Grants are considered tri-annually and are due **March 31, June 30, and October 31**, with a decision within 45 days of the deadline. Proposals are accepted annually by

November 15 for Hagley’s Henry Belin du Pont Dissertation Fellowships intended for graduate students who have completed all course work for the doctoral degree. All grants require use of Hagley’s collections for advanced research. For more information on these grant programs please go to <http://www.hagley.org/library/center/grants.html>.

New List Launched by H-Net: H-PhysicalSciences

H-PhysicalSciences provides a communication channel and resource nexus for historians of the physical sciences. Its topical scope covers the physical sciences broadly understood, including but not limited to: physics; chemistry; earth, space, and atmospheric science; astronomy; and materials science. H-PhysicalSciences encourages active dialogue between scholars studying a wide range of topics across the physical sciences, and promotes integration with the larger discipline of history of science.

For more information, please visit: <http://www.h-net.org/~physicalsciences/>. To subscribe, please follow the link in the web page menu or send an e-mail to listserv@h-net.msu.edu with: sub H-PhysicalSciences your name, institution and follow the instructions provided by the Listserv.

NEWS FROM THE PROFESSION, CONT.

24th International Congress of History of Science, Technology and Medicine—Registration Now Open

Registration for the 24th International Congress of History of Science, Technology and Medicine (iCHSTM 2013), to be held in Manchester, UK from Sunday 21 to Sunday 28 July, is now open.

To register, please go to <http://www.ichstm2013.com/registration/> and follow the link to open the registration form. Registration will be available at the early discounted rate until Sunday 14 April, and at a higher rate until Monday 1 July, which is the final deadline. Please note that the registration process is managed by the University of Manchester's conference services group. If you have any queries about registration, please direct them to mcc.reg@manchester.ac.uk.

Also, the first draft listing of pre-arranged symposia, including individual abstracts for around 1100 papers, is now available and can be seen at <http://www.ichstm2013.com/programme/guide/>.

Stand-alone papers are not yet listed; they are still in the process of being grouped, and will be added to the program around the beginning of March. Timetable/scheduling information will also be added around the same time.

If you are involved in the Congress as a presenter, symposium organizer, session chair or commentator, you should recently have received further details directly. If not, please contact us at submissions@ichstm2013.com and we will advise. For the latest updates, you can also sign up to the Congress mailing list <http://www.ichstm2013.com/maillinglist/>.

The Monist Accepting Submissions for Their Issue on Models and Simulations

In 2014, *The Monist* will publish an issue devoted to Models and Simulations. Submissions are invited for this issue. Prospective authors are encouraged to contact the Advisory Editor, Paul Humphreys, University of Virginia (pwh2a@virginia.edu) for further information and to ensure suitability of content. Papers must have a maximum length of 7,500 words. Deadline for Submissions is **31 October 2013**.

The introduction of computer simulation methods has radically changed certain scientific fields. Among the philosophical issues involved are: Why have some fields such as astrophysics embraced simulations while others such as economics resisted their introduction? What are the differences and similarities between laboratory experiments and computer simulations? Are very large scale simulations such as those used in climate models essentially different from smaller

scale simulations? What is the status of data from simulations? How can simulation models be tested and validated and what is their relation to traditional theory and models? Contributions that answer these and other, as yet unaddressed, issues in the area of models and simulations are invited. Papers dealing with general philosophical topics or with applications to specific sciences will be the focus of this issue; those addressing topics in biology and medicine are particularly welcomed.

Call for Works for the History and Philosophy of Biology

Pickering and Chatto is looking for manuscripts to be considered for this new series of academic monographs and essay collections that focus on significant developments and issues in the life sciences and includes all aspects of the biological sciences. In particular, they are looking for studies relating to evolutionary theory, environmental sciences, systems biology, biotechnology, bioethics, race and sex, but will consider more broadly constructed themes within the history of the life sciences. You can read more at <http://www.pickeringchatto.com/series/50-history-and-philosophy-of-biology>.

Send your dissertation abstract, your completed proposal, or your in-process idea that you'd like to propose, to Dawn.Digrius@stevens.edu, or to the commissioning editor at Pickering & Chatto, Ruth Ireland, rireland@pickeringchatto.co.uk.

UPCOMING CONFERENCES

Vital Traditions: Greco-Roman Medicine and the Life Sciences in the Twenty-First Century In Honor of Heinrich von Staden

Princeton University

19-20 April 2013

In a world where medicine and the life sciences increasingly shape how we understand and imagine who we are and the milieu we live in, what can we learn from the early history of these fields of inquiry? And what does their modern study bring to our grasp of ancient and medieval cultures? Over the past few decades, Heinrich von Staden has played a pioneering role in bridging past and present and in putting Greco-Roman science and medicine into dialogue with the history and philosophy of science, the natural sciences, cultural studies, and contemporary intellectual culture. “Vital Traditions” will celebrate Heinrich’s achievements and capitalize on the intellectual momentum he has created.

The confirmed speakers include Markus Asper (Humboldt-Universität zu Berlin); Rebecca Flemming (University of Cambridge); Maud Gleason (Stanford University); Jacques Jouanna (Université de la Sorbonne-Paris IV); Helen King (Open University); Shigehisa Kuriyama (Harvard University); G. E. R. Lloyd (University of Cambridge); Vivian Nutton (University College London); Philip van der Eijk (Humboldt-Universität zu Berlin), and Heinrich von Staden (Institute for Advanced Study)

All are welcome. There is no fee, but advance registration, ideally by 31 March, is strongly encouraged. To register, please visit <http://www.princeton.edu/classics/edita/conferences/vitaltraditions/> or contact Lucy Weise at lweise@princeton.edu.

Questions may be directed to Brooke Holmes bholmes@princeton.edu and Joshua Katz jtkatz@princeton.edu.

The 125th Anniversary Meeting of the Geological Society of America

Several history sessions are planned for the 125th anniversary meeting of the Geological Society of America in Denver 27-30 October 2013, among them T145, Great Books in Geology (maldrich@smith.edu for details) and T149 Parade of Presidents of the Geological Society of America (senewcomb@earthlink.net). The abstract of your history of geology papers may be submitted online at www.geosociety.org. The deadline is **6 August 2013**.