

# Newsletter

Vol. 39, No. 1 January 2010

## of the History of Science Society

### Table of Contents

News	2
HSS 2010 Annual Meeting Call for Papers	7
Member News	8
How Not to Engage “Anti-Evolutionist” Historians	12
The True Story of Newton and the Apple	13
Darwin Film Released	14
The John Tyndall Correspondence Project	15
Perspectives on Sciences	16
Adventures in Romantic Science	20
2009 Prize Winners	26
2009 History of Science Society Annual Meeting Survey	27
D. Kim Foundation for the History of Science and Technology in East Asia	29
HSS Employment Survey Report, 2008-2009	30
2010 Election Slate	32

### Notes from the Inside

As we begin this new year, and new decade, the advance of the calendar coincides with substantial changes in the HSS Executive Office. As many of you know, the suspension of the history of science program at the University of Florida prompted the Society to seek a new home for the Executive Office. Even with these discouraging economic times, we received four excellent bids and the site selection committee (Jane Maienschein, chair; Bernie Lightman; Maggie Osler; and myself) visited the schools with the top three offers (by the way, these officers devoted hundreds of hours to these site visits, and I am grateful for their efforts). We were enthusiastically received by each host and school leaders told us that they see history of science as an important part of their plans to restructure their universities during a time of massive cuts – some seeds of hope for the future of the history of science. In the end, the Executive Committee recommended to Council that we accept the bid from Notre Dame University, a recommendation that Council unanimously endorsed. We are in the process of finalizing the contract with Notre Dame, and I expect to move with the office during the summer of 2010. I will leave the University of Florida, the place where I was trained, with mixed feelings, but this sadness is tempered by the excitement of joining a well-established faculty in HPS, in a new facility at a school with a rich tradition in the history and philosophy of science. We also plan to work closely with the Reilly Center for the History and Philosophy of Science at Notre Dame – physically, as well as intellectually, since our proposed offices will be adjacent to the Center. I would like to express my gratitude to Don Howard and to my new Notre Dame colleagues for their hospitality and for their graciousness in welcoming us to South Bend.

The physical move will help us make some bold changes, including the rebuilding of the HSS Web site from the ground up. The redesign will help us improve services to our members and to the public, and I will welcome any suggestions that you might have for our Web site as we begin this project.

In closing, I wish you the happiest of new years and thank you for your membership in the HSS.

- Jay Malone

Executive Director, HSS

## NEWS AND INQUIRIES

### Survey New Teaching Volume on Franklin's Autobiography

Please respond to a brief questionnaire available on the MLA Web site at: [www.mla.org/approaches](http://www.mla.org/approaches). We are particularly interested in your response to the final item concerning whether you would be willing to contribute an essay to the volume. Like other books published in the Approaches to Teaching series, this one will contain not only a discussion of the most important and useful materials available to the teacher of Franklin's Autobiography but also a selection of essays by instructors.

The hope is that you will be willing to share with other colleagues your experience in teaching Franklin's Autobiography. The questionnaire will be available on the Web site until 15 February 2010, and all responses will be transmitted directly to the volume's editors.

### Southern Association for the History of Medicine and Science Website

Southern Association for the History of Medicine and Science encourages all interested in the 5-6 March 2010 meeting to visit [www.sahms.net](http://www.sahms.net)

### Smallpox Eradication Web Site

The Centers for Disease Control and Prevention and Emory University today announced a new web site devoted to documenting and preserving public health history. The emphasis will be on oral histories, unpublished documents, photographs and artifacts. The site is [globalhealthchronicles.org](http://globalhealthchronicles.org).

### DHST site update

Thanks to the efforts of Prof. Fabio Bevilacqua, The Division of the History of Science and Technology site has been updated. All new information will be found on [www.dhstweb.org](http://www.dhstweb.org)

## History of Science Society

### EXECUTIVE OFFICE

Postal Address	Physical Address
PO Box 117360 University of Florida Gainesville, FL 32611-7360	3310 Turlington Hall University of Florida Gainesville, FL 32611

Phone: 352-392-1677/Fax: 352-392-2795  
E-mail: [info@hssonline.org](mailto:info@hssonline.org)  
Web site: <http://www.hssonline.org/>

### SUBSCRIPTION INQUIRIES

University of Chicago Press  
Phone: 877-705-1878; Fax 877-705-1879  
E-mail: [subscriptions@press.uchicago.edu](mailto:subscriptions@press.uchicago.edu)  
Or write University of Chicago Press, Subscription  
Fulfillment Manager, PO Box 37005, Chicago, IL  
60637-7363

### Moving?

Please notify both the HSS Executive Office and the University of Chicago Press.

### 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](mailto:info@hssonline.org).

© 2010 by the History of Science Society

### **Exhibition: The Rarest of the Rare—Stories Behind the Treasures at the Harvard Museum of Natural History**

In 2003, Mark Sloan photographed the behind-the-scenes collections of Harvard's Natural History Museum. Enlisting the help of curators and department heads, he identified rare scientific specimens with fascinating histories. Harvard's natural history collections comprise some 21 million specimens—animal, vegetable, and mineral—from every imaginable part of the planet.

For every specimen in this exhibition, there is a story. These range from tales of wealthy explorers and obsessive collectors to those of visionary scientists. The items come from the farthest reaches of the globe and the deepest depths of the sea. Some are beautiful; others are intriguing; and others simply strange. The Harvard Museum of Natural History is a place of science, and yet it also conveys for anyone drawn to adventure and discovery an undeniable romance. Photographer Mark Sloan seeks to capture something of both in these images.

The exhibition is open through March 11, 2010. Further Information: [www.cpnas.org](http://www.cpnas.org)

### **Announcing the first Notes and Records Essay Award**

The first Notes and Records essay award has now been launched and is open to young researchers in the history of science who have completed a postgraduate degree within the last five years. The criteria for entry is that the essay should be currently unpublished, that it should be based on original research, and that it should relate to aspects of the history of science covered by the journal.

The winning entry will be chosen by selected members of the Notes and Record's Editorial Board using the journal's standard criteria for selection—excellence and interest to a wide audience—and the winner will be awarded a cash prize of £500, a year's subscription to Notes and Records <http://newsletters.royalsociety.org/c/1q79QIBO52kL4vO> and the opportunity to see their prize-winning essay published in the journal. The deadline for submission of entries is 31 March 2010. Further details, including how to enter, are available from the Notes and Records website: <http://newsletters.royalsociety.org/c/1q7p7EcuglMOpBV>.

### **Request for Prize Nominations**

All nominations are due 1 April 2010 unless otherwise noted. Visit [www.hssonline.org/about/society\\_awards.html](http://www.hssonline.org/about/society_awards.html) for full eligibility requirements and online nominations.

- Sarton Medal for exceptional scholarship over a lifetime. Nominations are due 1 February 2010.
- Pfizer Award for the best book aimed at a scholarly audience in history of science, published 2007-2009.
- Watson Davis and Helen Miles Davis Prize for the best book in the history of science directed to a wide public, including undergraduate instruction, published 2007-2009.
- Suzanne J. Levinson Prize for the best book in the history of the life sciences and natural history, published 2006-2009
- Margaret W. Rossiter History of Women in Science Prize for the best article on women in the history of science published from 2006 to 2009.
- Joseph H. Hazen Education Prize for outstanding contributions to the teaching of history of science.
- Nathan Reingold Prize (formerly known as the Schuman Prize) for the best graduate student essay. Deadline to submit essay is 1 June 2010.

### Linus Pauling Papers Resident Scholar Program

Oregon State University Libraries Special Collections - home of the Ava Helen and Linus Pauling Papers - is pleased to announce the renewal of its Resident Scholar Program for 2010. Grants of up to \$7,500 are available to researchers interested in conducting work in the OSU Libraries Special Collections. Researchers will be expected to conduct their scholarly activities while in residence at Oregon State University. Historians, librarians, graduate, doctoral or post-doctoral students and independent scholars are welcome to apply. The deadline for submitting proposals is 10 April 2010.

More details are available at the following link:  
<http://paulingblog.wordpress.com/2009/12/31/nw-accepting-applications-for-2010-resident-scholars/>

### T&C has Moved

Technology and Culture has moved to its new home at the University of Oklahoma. Contact information for all new business, including submissions and correspondence, is:

Email: [techculture@ou.edu](mailto:techculture@ou.edu)  
Telephone: 1-405-325-2311

Postal address:  
Suzanne Moon, incoming Editor-in-Chief  
The Technology and Culture Editorial Offices  
University of Oklahoma  
Cate Center 4  
332 Cate Center Dr. Room 484  
Norman, OK 73019  
USA

### Bakken Museum Honored with Leading Edge Award From Association of Science-Technology Centers

The Bakken Museum was honored by the Association of Science-Technology Centers (ASTC) with the 2009 Roy L. Shafer Leading Edge Award for

Visitor Experience for its Science Assets-based School Partnership program on October 31 in Fort Worth, Texas. The 'Edgie' recognizes extraordinary accomplishments that not only enhance the performance of the institution, but also significantly advance the mission of science-technology centers and museums.

The Bakken's Museum's mission is to inspire a passion for science but many children don't think science relates to them—particularly girls, students of color and students of poverty. Because science and technology are rapidly changing the twenty-first century world in which today's students live and work, The Bakken developed the groundbreaking Science Assets-based School Partnership program in collaboration with the Minneapolis Public Schools to change how students think about and approach science.

The program successfully builds upon children's creativity to help them develop confidence, receive support and understand that science is a meaningful part of their daily life. A team of Bakken educators visit the classroom, actively involving students in creative thinking and problem solving. As part of the program, children are introduced to 'People of Science' who help bring science to life in the classroom—such as a food scientist from General Mills whose job includes tasting cookies, and an engineer from Medtronic who uses Silly Putty to demonstrate his work with polymers.

The School Partnership program also includes a professional development component. Participating teachers report increased confidence in teaching science. Positive outcomes have led to expansion of the program, which will serve 2,700 district fourth graders and their teachers through 2011.

"The Bakken is honored to receive this national recognition," said Kelly Finnerty, Deputy Director for Programs for The Bakken Museum. "We are grateful to our educational partners at Minneapolis Public Schools and our community funders at the Bush Foundation, Medtronic and Boston Scientific for their support in building the Science Assets of every Minneapolis public school fourth grader."

### Conference Report

### The Dangerous Divide: The Two Cultures in the 21st Century

On May 9, 2009, the New York Academy of Sciences' Science & the City program hosted a daylong symposium in honor of the 50th anniversary of C.P. Snow's influential lecture on the "two cultures." Whereas Snow focused on a gap of understanding between scientists and literary intellectuals, speakers at the Academy spotlighted a troubling gulf between the scientific community today and the general public. Because science and technology are critical tools for responding to many of society's most troubling problems, participants argued that this lack of understanding is having dangerous consequences.

Panelists at the symposium focused on the historical context of the two cultures divide, barriers to effective science communication, ways in which lack of public understanding of science is affecting politics, and ways to improve science education and science citizenship. Topics discussed included challenges in making science relevant to nonscientists, institutional pressures that are making good science journalism more difficult, practical ways to engage politicians on scientific issues, and recommendations for ways to improve science education and public understanding of science. Speakers stressed that professional scientists have an important role to play in explaining what they do and why it should be important to those outside the scientific community.

The conference proceedings, including video of the presentations, are now up at the New York Academy of Sciences website: <http://www.nyas.org/two-cultures>.

### ASA: Science and Technology Panels/Events/Meetings

A large number of STS-related sessions were featured at the American Studies Conference in 2009.

Panel papers now available on-line, along with a pre-conference blog. To learn more, read the papers, and join the discussion go to the following site. <http://sites.google.com/site/asatechprogress/home>

### Announcement and Call for Submissions European Journal for Philosophy of Science (EJPS)

The European Philosophy of Science Association (EPSA) is pleased to announce the launch of its new journal: the *European Journal for Philosophy of Science (EJPS)*. The Editorial Team will be assisted in its work by an Editorial Board of highly reputed philosophers of science from around the world.

*EJPS* is the official journal of EPSA and will appear three times a year, beginning in January 2011. *EJPS* intends to publish first-rate research in all areas of philosophy of science, and now welcomes submissions via the on-line portal:

<http://www.editorialmanager.com/epsa>.

The Journal's website (still partly under construction) is here:

<http://www.springer.com/philosophy/philosophy+of+sciences/journal/13194>

### Recent Doctoral Dissertations in the History of Science

The latest batch of recent doctoral dissertations pertaining to history of science has been downloaded to [http://www.hsls.pitt.edu/guides/histmed/researchresource/dissertations/index\\_html](http://www.hsls.pitt.edu/guides/histmed/researchresource/dissertations/index_html).

Because of budget cuts at the host institution these dissertation lists are now bimonthly. For further Information: [http://www.hsls.pitt.edu/guides/histmed/researchresource/dissertations/index\\_html](http://www.hsls.pitt.edu/guides/histmed/researchresource/dissertations/index_html)

### A New Issue of History of Psychiatry is Available Online

December 2009, Vol. 20, No. 1

The below Table of Contents is available online at:

<http://hpy.sagepub.com/current.dtl>

- Psychiatry and homosexuality in mid-twentieth-century Edinburgh: the view from Jordanburn Nerve Hospital *Roger Davidson*
- Cheerful prospects and tranquil restoration: the visual experience of landscape as part of the therapeutic regime of the British asylum, 1800-60 *Clare Hickman*
- Child psychoanalytic psychotherapy in the UK National Health Service: an historical analysis *Elizabeth Rous and Andrew Clark*
- The vocabulary of madness from Homer to Hippocrates. Part 2: The verbal group of βακχευω and the noun λυσσα *Hélène Perdicoyianni-Paléologou*
- Lycanthropy in Byzantine times (AD 330-1453) *E. Poulakou-Rebelakou, C. Tsiamis, G. Pan-teleakos, and D. Ploumpidis*
- 'On alterations in the form of speech and on the formation of new words and expressions in madness' by L. Snell (1852) *G.E. Berrios*
- Essay Review: Does madness have a gender? *Lesley A. Hall*
- Book Review: Susan Piddock (2007) *A Space of their Own: The Archaeology of Nineteenth Century Lunatic Asylums in Britain, South Australia, and Tasmania* (New York: Springer). Pp. xii + 265. £63.99 ISBN-13: 978-0-387-73385-2 *James E. Moran*
- Book Review: Edwin R. Wallace and John Gach (eds) (2008) *History of Psychiatry and Medical Psychology* (New York: Springer). Pp. xlix + 862. \$219.00. ISBN 978-0-387-34707-3 *Edgar Jones*
- Book Review: Roger Bartra (2008) *Melancholy and Culture: Diseases of the Soul in Golden Age Spain* (Cardiff: University of Wales Press). Pp. x + 235. £75.00. ISBN 978-0-7083-2010-5 *Edward Shorter*
- Book Review: Richard C. Keller (2007) *Colonial Madness: Psychiatry in French North Africa* (Chicago: Chicago University Press). Pp. xi + 294 pages. £16.00. ISBN 0-226-42973-3 *Ivan Crozier*
- Book Review: Richard A. Skues (2009) *Sigmund Freud and the History of Anna O.: Reopening a Closed Case* (Basingstoke and New York: Palgrave Macmillan). Pp. xii + 204. £19.99. ISBN 978-0-230-22421-6 *Gavin Miller*
- The mental asylum of San Servolo, Venice (1860-1978) *Mario Galzigna, Egidio Priani, Simone Botti, and Elisabetta Basso*

### Darwin Year in Cuba

Cuba commemorated Darwin in many different ways. The Cuban Academy of Sciences established a Darwin Committee in 2008 to organize or back commemorative activities. A group of scientific societies, as well as the University of Havana, and the national museums of Natural History and of History of Science were enthusiastic participants.

The Year started in November, 2008, at the School of Biology of the University of Havana, with a lecture by P. M. Pruna-Goodgall, the editor of the first full Spanish translation of Darwin's autobiography and author of a book on the reception of Darwinism in Cuba. This was followed, in January, by a talk by the then president of the International Union of History and Philosophy of Science, Ronald Numbers, who was a guest of the Cuban Society of History of Science and Technology. Numbers, a professor at the University of Wisconsin, dealt mainly with issues examined in his recently reedited book on the creationist movement. Several professors and students of the Catholic seminar in Havana attended

his lecture. He later held an informal chat with them at the seminar.

Darwin's birthday, on February 12, was commemorated by the emission of four postal stamps and a special meeting of the Scientific Council of the University of Havana, at which Vicente Berovides, professor of evolution at the School of Biology and the author of a textbook on evolution, delivered a lecture on human origins. The Ambassador of the UK in Cuba attended this meeting. A Café Scientifique dedicated to Darwin took place at the Ministry of Science, Technology and Environment. Several well known specialists participated, as well as a group of students from a vocational high school in Havana.

On February 28, 2009, at a plenary meeting of the Cuban Academy of Sciences, Darwin was remembered in a lecture by Giraldo Alayón, a specialist in the taxonomy and evolution of spiders from the Caribbean region. On July 7, a panel within the National Environmental Convention was dedicated to Darwin. It addressed the issue on how evolution carries on under the current anthropogenic stress. During the following months, Educational Channel 2 broadcast a series of eight programs under the title Evolution. Some newspapers and journals carried articles on Darwin and the theory of evolution.

The office of the British Council in Cuba was quite active during 2009. It brought in the Darwin Now exhibit, which was shown in several institutions in Havana and went on to other Cuban cities. It also backed the participation of four Cuban researchers in the "Darwin's Living Legacy" gathering at the Bibliotheca Alexandrina, in Egypt, as well as the visit of James Moore, co-author with Adrian Desmond, of a biography of Darwin and of a recent book on Darwin and slavery. Moore gave two lectures in Havana.

The closure of the Darwin Year took place on November 24, during a panel organized jointly by the University of Havana and the Academy of Sciences, to commemorate the 150th anniversary of the publication of *The Origin of Species*.

### HSS 2010 Annual Meeting

#### Call for Papers

Montreal, Canada, 4-7 November 2010

The History of Science Society will hold its 2010 Annual Meeting in the Hyatt hotel in downtown Montreal (this will be a joint meeting with the Philosophy of Science Association). All proposals (sessions, contributed papers, and posters) must be submitted by 2 April 2010 to the History of Science Society's Executive Office. Poster proposals must describe the visual material that will make up the poster. The HSS will work with organizers who wish to pre-circulate papers. Electronic submissions are strongly encouraged – please go to <http://www.hssonline.org> after 1 January 2010.

Submissions on all topics are requested. All proposals must be submitted on the HSS Web site or on the annual meeting proposal forms that are available from the HSS Executive Office. HSS members are asked to circulate this announcement to non-HSS colleagues who may be interested in presenting a paper or poster at the Annual Meeting. You do not need to be a member to participate, but all participants must register for the meeting. Applicants are encouraged to propose sessions that include diverse participants: a mix of men and women and/or a balance of professional ranks (e.g., mixing senior scholars with junior scholars and graduate students). Strong preference will be given to panels whose presenters have different institutional affiliations. Only one proposal per person may be submitted. In order to ensure broad involvement, an individual may only appear once on the program (see the guidelines for exceptions). Prior participation at the 2008 or 2009 meetings will be taken into consideration.

Before sending a proposal to the HSS Office, we ask that everyone read the Committee on Meetings and Programs' "Guidelines for Selecting Papers, Posters, and Sessions," available at [www.hssonline.org/publications/Newsletter2010/January-2010-call-papers.html](http://www.hssonline.org/publications/Newsletter2010/January-2010-call-papers.html) The 2010 program co-chairs are Jamil Ragep (McGill University) and Yves Gingras (Université du Québec à Montréal).

### MEMBER NEWS

#### Michael J. Crowe Awarded the 2010 LeRoy E. Doggett Prize

The Historical Astronomy Division of the American Astronomical Society is pleased to announce that **Dr. Michael J. Crowe** will be the seventh recipient of the LeRoy E. Doggett Prize for Historical Astronomy. The Prize is awarded biennially to an individual whose long-term efforts and lifetime achievements have had significant impact on the field of the history of astronomy. The 2010 LeRoy E. Doggett Prize is presented to Professor Crowe in recognition of his research, teaching, and outreach.

Michael J. Crowe is the Reverend John J. Cavanaugh Professor Emeritus in the Humanities in the Program of Liberal Studies and Graduate Program in History and Philosophy of Science at the University of Notre Dame. Professor Crowe earned a B.A. in the Program of Liberal Studies and a B.S. in Science from the University of Notre Dame in 1958. He earned a Ph.D. in the History of Science with minors in Physics and Intellectual History from the University of Wisconsin in 1965.

Professor Crowe's first book, *A History of Vector Analysis* (University of Notre Dame Press, 1967, revised Dover editions, 1985, 1994), was followed by *The Extraterrestrial Life Debate, 1750-1900: The Idea of a Plurality of Worlds from Kant to Lowell* (Cambridge University Press, 1986, revised 1988, and Dover, 1999). This magisterial and ambitious work opened up a new and rich field for scholarship and made the history of beliefs in alien life a legitimate field for discussion. It is an indispensable resource that is unlikely to be surpassed for a long time to come. A companion source book, *The Extraterrestrial Life Debate: Antiquity to 1915*, was published in 2008 (University of Notre Dame Press).

Crowe's other main research interest has been the work of William and John Herschel. Here he

has offered new interpretations of their careers. For example, Crowe has made a very strong case for the importance of William Herschel's belief in extraterrestrial life as a guiding principal in his construction and use of large reflecting telescopes. *The Calendar of the Correspondence of Sir John Herschel* (Cambridge University Press, 1998), edited by Crowe, is an unparalleled resource for Herschel scholarship and many topics in 19th century science.

Professor Crowe has done much to advance the discipline of the history of astronomy through his teaching. He was the founding chair of Notre Dame's Graduate Program in History and Philosophy of Science and has also served as chair of the university's Program of Liberal Studies. He has taught for close to 50 years at Notre Dame. His *Theories of the World from Antiquity to the Copernican Revolution* (Dover, 1990, revised 2001), *Modern Theories of the Universe from Herschel to Hubble* (Dover, 1994), and *Mechanics: From Aristotle to Einstein* (Green Lion, 2007) started out as course readers. As published, they have become foundational texts widely used in college courses throughout North America and independently by newcomers to the history of astronomy.

Students and colleagues describe Michael Crowe as compassionate, inspiring, and generous in sharing results. He has been called a cultivator of scholars as well as scholarship.

His welcoming nature is best exemplified by his central role in establishing in 1993 the Biennial Notre Dame Workshops for the History of Astronomy. These workshops have become the premier gathering of historians of astronomy and done much to establish a sense of community among them. Crowe created a space in which scholars of all ages and backgrounds could rub shoulders and share in convivial discussions of history-of-astronomy topics

## History of Science Society Newsletter

without regard to seniority or hierarchy. Indeed, many historians in the field have attributed their successful launch to the welcome, encouragement, and mutual support that they first received at one of these forums. It has been said that if Mike Crowe had done nothing else for the profession, his organization and hosting of the Notre Dame Workshops is a contribution to the field of history of astronomy that is worthy of recognition by the LeRoy E. Doggett Prize.

Further Information: <http://www.aas.org/had/doggett/2010doggett2crowe.html>

.....

**Jim Fleming** was invited to speak before the US House Subcommittee on Energy and Environment of the Committee on Science and Technology 5 Nov 2009 on the topic history of weather and climate control and its governance. He was asked to address geoengineering's unique governance needs, potential first steps for establishing international consensus, and related topics.

.....

The HSS Executive Committee has selected **Michael Gordin** & **Matthew Jones** as Program Co-Chairs for the 2011 HSS Conference in Cleveland, OH. Dr. Gordin is a professor of history and director of the program in Russian and Eurasian studies at Princeton University. Dr. Jones is an associate professor of history at Columbia University.

.....

**Jeremy Greene**, Harvard University, was awarded the Rachel Carson Prize from the Society for the Social Study of Science at its 2009 annual meeting for his book, *Prescribing by Numbers: Drugs and the Definition of Disease* (Johns Hopkins University Press, 2007). The prize is awarded annually for a book-length work of social or political relevance in the area of science and technology studies. Past winners have included Joseph Masco's *The Nuclear Borderlands: The Manhattan Project in Post-Cold War*

*New Mexico*, Charis Thompson's *Making Parents: The Ontological Choreography of Reproductive Technologies*, and Joseph Dumit's *Picturing Personhood: Brain Scans and Biomedical Identity*.

### 2009 Forum for History of Human Science Awards

#### 2009 FHHS Article Award

**Kasper Risbjerg Eskildsen**, "Leopold Ranke's Archival Turn: Location and Evidence in Modern Historiography," *Modern Intellectual History* 5 (2008): 425-453.

2009 Article Award committee: Michael Pettit (chair), Kathy Cooke, Hunter Heyck

Kasper Risbjerg Eskildsen's "Leopold Ranke's Archival Turn" offers a brilliant interpretation of the emergence of the archive as the most important site in the production of historical knowledge. In a wonderfully symmetrical and reflexive fashion, he examines how the archive came to serve as the privileged site for history's production of truth, analogous to the laboratory, clinic, or field-site in other disciplines. By attending to the spaces of historical research, he offers a novel perspective on the character of "scientific history." Furthermore, he does an excellent job of illustrating how the reorganization of the structure of the European state made Ranke's investigative practices possible, thereby artfully connecting changes in political culture with those within the human sciences. He also brilliantly illuminates the interplay between the political and the professional dimensions of Ranke's vision. With great care, Eskildsen connects Ranke's personal career ambitions and his conservative politics to his conception of history and the role of the archive. The committee also commends Eskildsen for the high quality of his prose, which made his article a particularly engaging read.

#### 2009 John C. Burnham Award

The 2009 John C. Burnham Award Committee is delighted to award this year's prize to **Stéphanie**

## History of Science Society Newsletter

**Dupouy** for her essay “Darwin, Observer of Expressions.” In her persuasive, original, and clearly argued essay she presents a nuanced picture of Darwin’s strategy in his 1872 *The Expression of the Emotions in Man and Animals*, challenging the received wisdom that Darwin’s book constitutes an evolutionary ‘break’ in the study of emotional expression. Dupouy notes that this conventional interpretation is not only complicated by Darwin’s lack of discussion of natural selection, but more pointedly argues that Darwin’s originality lies in his rejection of a sentimentalist account of expression. This sentimentalist view, common to much nineteenth century scientific writing on the emotions, understood expression as the privileged and uniquely human manifestation of the interior or intimate self. For Darwin, however, sublime or elevated human emotions were either not conveyed in expressive gestures, or were, as Dupouy puts it, “ironic remnants of our animal origins.” Dupouy also sees Darwin’s treatise as marking a methodological break from his forebears in his reliance on particular observations for study, his use of photographic evidence, and his rejection of imagination, memory, and sympathy for the scientific study of emotions. Dupouy reads Darwin’s private notebooks in concert with the published text of the *Expression of the Emotions*, and places Darwin’s work within the rich context of early nineteenth century scientific and aesthetic writings on the expression of the emotions, including the work of anatomists Louis-Jacques Moreau de la Sarthe, Charles Bell, and Louis-Pierre Gratiolet. Dupouy’s close reading, comprehensive engagement with the historiography, and compelling presentation of her analysis made this essay a pleasure to read.

### Thank You Volunteers

A big THANK YOU to our volunteers whose terms expired in 2009. I have a deep appreciation for the time and effort that our volunteers devote to the HSS, time and effort that could be spent on so many other tasks. I humbly and gratefully offer my thanks to each one. *-Jay Malone, HSS Executive Director*

• Jane Maienschein, President

- Joan Cadden, Past President
- Rachel Ankeny, Treasurer
- Council: John Beatty, David Kaiser, Pamela O. Long, Karen Rader and Spencer Weart
- Committee on Education: Robert DeKosky, chair; Jessica Wang
- Committee on Honors and Prizes: Audra Wolfe, chair; Nancy Siraisi
- Committee on Meetings and Programs: Marc Rothenberg, chair; Pamela O. Long; Don Howard; Marsha Richmond; Anita Guerrini; Ted Porter; Ken Alder
- Committee on Publications: Karen Parshall, chair; Paul Farber
- Committee on Research and the Profession: Amy Crumpton, chair; Ron Rainger
- Derek Price/Rod Webster Prize: Sachiko Kusukawa, chair
- Nathan Reingold Prize: Marcos Cueto, chair
- Margaret W. Rossiter Prize: Ida Stamhuis, chair
- Pfizer Award: Susan Lindee, chair
- Watson Davis and Helen Miles Davis Prize: Roger Stuewer, chair
- Joseph H. Hazen Prize: Graeme Gooday, chair
- Nominating Committee: David Kaiser, chair; M. Norton Wise; Pamela Smith; Katharine Anderson; Thomas Söderqvist
- Women’s Caucus: Marsha Richmond, co chair
- Graduate Student Early Career Caucus: Jacqueline Wernimont, co chair
- HSS/NASA Space Fellowship Committee: Pamela Mack, Liba Taub



### International Colloquium Held at Queen's University Belfast (QUB)

The colloquium entitled “The Monist Century, 1845-1945: Science, Secularism and World-view,” held October 2-3, 2009, explored the history of natural scientific monism from the materialists to Haeckel and beyond. In addition it tested the thesis implied in the workshop title, namely that monism tells us something significant about the framing questions of intellectual, political and religious debate in this time period.

*Seated (left to right): Sander Gliboff (Indiana), Peter Bowler (QUB), Igor Polianski (Ulm), Todd Weir (QUB), Gauri Viswanathan (Columbia, NYC). Standing (left to right): Tracie Matysik (U Texas), Bernhard Kleeberg (Constance), Caroline Sumpter (QUB), Nicolaas Rupke (Göttingen), Sabine Wichert (QUB), Fred Gregory (Florida), Paul Ziche (Utrecht), David Livingstone (QUB), Robert Bud (London), Heiko Weber (Jena), Eve-Marie Engels (Tübingen). Not pictured: Mark Bevir (UC Berkeley)*

### In Memoriam: Elizabeth Paris

**Elizabeth Paris**, wife of Jay Barnet Ress and mother of Zachary and Elysha. Cherished friend, mother, and wife. September 4, 1968 – November 28, 2009.

Active in Nashville's Hillsboro Neighborhood Association, La Leche League, Attachment Parenting International, and Ronald MacDonald House. Stanford University graduate, PhD in History and Philosophy of Science and Technology.

Born in Cincinnati, traveled extensively, taught at a private high school in Los Angeles and in the Harvard University History of Science Department. Dibner fellow. Argonne National Lab Historian.

In lieu of flowers, please make a donation in Elizabeth's name to the ACLU.

## How Not to Engage “Anti-Evolutionist” Historians

*Richard Weikart, Department of History, California State University, Stanislaus*

In his recent brief essay in the *History of Science Society Newsletter*, “Some Thoughts on Historians and Contemporary Anti-evolutionism,” John Lynch suggests that historians of science should engage anti-evolutionists’ historical arguments. I want to second this suggestion, but I hope that the level of engagement will rise far above Lynch’s own attempts.

First, it would help for historians to understand the positions of those they are engaging and to define terms carefully, so as not to end up attacking strawmen. Lynch and many other historians continually conflate Intelligent Design (ID) and creationism, and rarely do they provide definitions for either position. Ron Numbers, a staunch opponent of ID and creationism, often warns against this mistake and admits that it is a rhetorical move to discredit ID.

ID is a broad claim that intelligence is empirically detectable in nature, both in cosmology (fine tuning argument) and in biology (DNA, molecular machines, biochemical systems, etc.). ID proponents include those who accept some form of common ancestry and thus evolution broadly defined (Michael Behe), old earth creationists (William Dembski, Steve Meyer, John West), and young earth creationists (Paul Nelson). Another term Lynch uses as a synonym for ID and creationism is “anti-evolutionism.” This term does indeed characterize most ID proponents, but not all. Some ID proponents, such as Behe, believe in some kind of evolution. However, they do not believe that evolution could happen solely through random mutations. Thus, it would be more accurate to use the term “anti-Darwinist” for ID supporters, for this would include all of them, rather than simply most of them.

We should also be careful to define creationism. In the public arena this term usually means Genesis literalists who believe in a six-day miraculous creation several

thousand years ago. If this is what is meant by creationism, then ID is clearly not identical with creationism. To be sure, young-earth creationists would belong to the ID camp. However, ID would also include many individuals who actively campaign against young-earth creationism.

If, on the other hand, by creationism Lynch and other historians simply mean someone who believes in some kind of intelligent being who by some means creates something or other at some time, then of course the vast majority of ID proponents are creationists (except maybe for a few skeptics, such as David Berlinski). Most people, I suspect, are not going to find this definition of creationism useful, however, since it includes the vast majority of people in the world, including multitudes of scientists. Using this definition, many biologists who clearly believe in Darwinian evolution, such as Francis Collins, would be creationists. Most theistic evolutionists would also be creationists, if we use this expansive definition.

One could define creationism in other ways than the two ways I have sketched above, of course, and that is fine with me, as long as historians define what they mean. Lynch and many other writers simply use the terms ID, creationism, and anti-evolutionism as synonyms without providing definitions, thus spoiling any attempts at analysis.

Another problem with Lynch’s analysis is that he complains that ID proponents do not engage with professional historians. After criticizing the work of three scholars—including me—who have written about some of the more unsavory ways that Darwinism has been applied—by Darwinists themselves—to ethical and social thought, Lynch complains that

Given the rigorous peer review process required for publication in leading academic journals and presses, it is unsurprising the ID proponents make little attempt to engage with the community of professional historians.

### The True Story of Newton and the Apple

Unsurprisingly papers are neither presented at conferences nor published in relevant journals and little attempt is made to undergo review by practicing historians with expertise in Darwin, his ideas, and their socio-cultural effects.

Apparently Lynch is suffering from amnesia. I distinctly remember meeting him at a scholarly conference on Darwinism at Arizona State University, his home institution, in 2004. The paper I presented to that conference was subsequently published in a peer-reviewed anthology with University of Chicago Press. He also fails to mention that my two most recent books—*Hitler's Ethic* and *From Darwin to Hitler* were both published by Palgrave Macmillan, a major academic press that did peer-review my manuscripts. I have published six peer-reviewed articles on social Darwinism and related themes in leading historical journals, including one that won the best article of the year prize from the *Journal of the History of Ideas*. I discovered a letter by Charles Darwin relating to social Darwinism that I published in *Isis*. My dissertation, "Socialist Darwinism," won the biennial prize for the best dissertation on the history of human sciences from the Forum for History of Human Science.

In addition to all this, I have presented papers at various conferences, including the History of Science Society and two academic conferences on Darwinism in 2009, one at Clemson University and the other at San Diego State University. In 2007 I was invited to an "author-meets-critics" session at the "Darwinism after Darwin" Conference at the University of Leeds. Why does none of this count as engaging professional historians and publishing peer-reviewed work?

I look forward to Lynch and others publishing peer-reviewed criticisms of my position, and I intend to reply in like manner, if possible. I hope this will lead to a fruitful exchange.

The Royal Society has announced that the original version of the famous story of Newton and the falling apple is being made available for the first time in manuscript form. The story—in which Newton claims to have received inspiration for the theory of gravitation from seeing a falling apple in his garden—was told by Newton to William Stukeley and originally appeared in his 1752 biography, *Memoirs of Sir Isaac Newton's Life*. The most celebrated anecdote in science exists as a fragile paper manuscript in the Royal Society's archives, but it can now be viewed in a fully interactive format by anybody with internet access.

Martin Rees, President of the Royal Society and thus Newton's modern-day successor, said: "The publication of Newton's biography as a Turning the Pages™ presentation represents our commitment to sharing the Royal Society's history with the widest possible readership in our 350th anniversary year. Stukeley's biography is a precious artefact for historians of science, and I am delighted that it is being made available today, along with other treasures from our archives, in a format that allows anybody to view them as if they were holding the manuscript in front of them."

The virtual manuscripts are being made available on the same day as the publication of *Seeing Further*, a lavishly illustrated new book telling the story of science and the Royal Society, edited and introduced by Bill Bryson. The launch of the interactive manuscripts and book publication form part of the Royal Society's 350th anniversary celebrations this year.

The presentations are created using innovative software which allows users to do much more than just turn pages—manuscripts can be magnified and rotated, and commentaries appear on many of the pages.

**Continued next page**

## History of Science Society Newsletter

### Continued from previous page

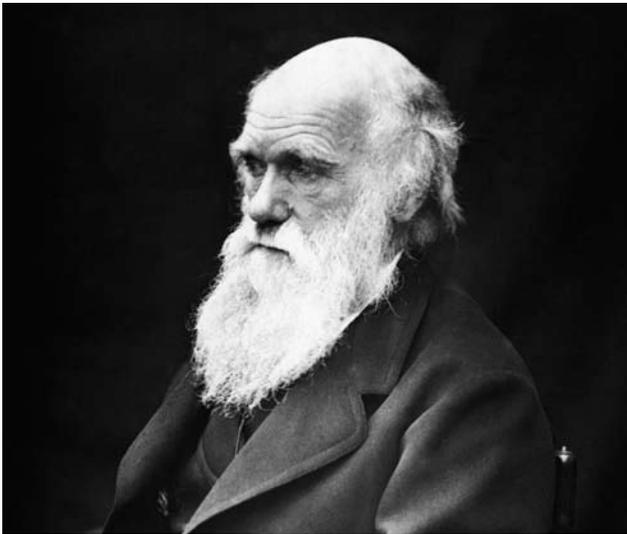
As well as collecting Newton's musings on his own life, Stukeley also gathered material about Newton's younger days from residents of Grantham, where he went to school. One story tells of him building a perfect, working scale model of a windmill, based on observation of a full-size version that was being built in the area. Unimpressed by his wind-powered model, Newton went on to build a fully functional mouse-powered version "wh[ich] worked it as naturally as the wind".

Other treasures from the Royal Society's archive that are being made available include the revolutionary Thomas Paine's iron bridge design, the philosopher John Locke's contribution to an early American constitution, and rare and beautiful natural history illustrations from the 17th through to the 19th centuries.

Turning the Pages will go live on 00:01 GMT Monday 18th January at the following URL:

[www.royalsociety.org/turning-the-page](http://www.royalsociety.org/turning-the-page)

### Darwin Film Released



*Creation*, the new film about Darwin starring Paul Bettany and Jennifer Connelly, premiered on Friday, January 22, in New York, Los Angeles, San Francisco, Boston, and Washington, DC. The movie is based on *Annie's Box (Creation: Darwin, His Daughter & Human Evolution in the U.S.)*, written by Randal Keynes, Darwin's great-great-grandson. Keynes sums up his great-great-grandfather:

[Darwin's] love for his wife; his observations of his children; his friendships with gardeners, schoolteachers and pigeon fanciers; his fears about death, revolution, bankruptcy, inbreeding...all these things found their way into his theory. He was the most inclusive of thinkers.

### National Run

The "Creation" national run began on January 22 in these markets:

- New York City: Landmark's Sunshine Cinema  
Clearview's 1st & 62nd
- Los Angeles: The Landmark
- San Francisco Bay Area:  
Landmark's Embarcadero Center Cinema (SF)  
Landmark's Shattuck (Berkeley)
- Washington, DC: Landmark's E Street Cinema
- Boston/Cambridge: Landmark's Kendall Square

Group rates may be available—readers should contact the theater in question.

### More Information

For more info about the movie, trailers, schedules, etc., go to:

- Darwin on the Big Screen: <http://ncse.com/evolution/darwin-gets-hollywood-treatment>
- The official site: [www.creationthemovie.com](http://www.creationthemovie.com)
- The Facebook page: [http:// www.facebook.com/pages/CREATION-The-Movie/39212784860](http://www.facebook.com/pages/CREATION-The-Movie/39212784860)
- The Twitter feed: [http://twitter.com/Creation\\_Movie](http://twitter.com/Creation_Movie)

## The John Tyndall Correspondence Project

*Bernard Lightman, York University; Michael Reidy, Montana State University; and James Elwick, York University*

Last October, we learned that our application for a three-year National Science Foundation grant had been successful. The NSF grant will enable us to take a major step forward in completing the goals of our project: first, to publish a one-volume calendar of the correspondence of the Victorian physicist John Tyndall (1820-1893) and to issue multiple volumes of his collected correspondence, both in print and, eventually, in an accessible, searchable, on-line format; and second, to galvanize a community of scholars at varied stages in their careers—from graduate students to postdoctoral researchers to senior personnel—around themes raised through an intense study of John Tyndall. Now the project will be able to draw on the expertise of scholars from fourteen universities located in four countries that specialize in the history and philosophy of Victorian science. Though the main intellectual merit of the project will be the publication of Tyndall's correspondence, we are putting graduate students at its center, thereby relying on a cooperative model of graduate student training and research that can be used for other similar large-scale endeavors. What we are creating is a unique, international, collaborative project that will provide scholars with an important resource that is difficult to access.

Tyndall was one of the most influential British scientists of the second half of the nineteenth century. As the successor to Davy and Faraday at the Royal Institution, Tyndall enjoyed a prominent place within the scientific elite. Due to his flamboyant lecturing style, he became well known as an eloquent public speaker for fashionable audiences. He was a member of the powerful group of scientific naturalists that included T. H. Huxley, Herbert Spencer, and Joseph Dalton Hooker, and became a leading figure in the debates over evolution. With a vast international network of scientific allies and colleagues, Tyndall's influence reached beyond Britain.

Tyndall made contributions to the advancement of scientific knowledge, though he is not known for making scientific discoveries of the highest order. He was among the first to explain the earth's natural greenhouse effect and the role played in this process by gases such as carbon dioxide. He also undertook important research in electro-magnetism, thermodynamics, sound, glaciers, and spontaneous generation, among other subjects.

The first phase of the project—locating, collecting, and digitalizing all of the estimated 8,000 extant letters—is nearly complete. Grants from the Social Sciences and Humanities Research Council of Canada and from the Mellon Foundation funded the first phase of the project at York University and provided for the transcription of approximately 2,000 letters. The NSF grant will enable us to finish the second phase of the project, completing the transcription of the rest of the letters, in the next three years. The NSF grant establishes a second center for the project at Montana State University, directed by Michael Reidy, that will coordinate the work of twelve scholars and their students, in addition to those working at York and Montana State. The team will include: Ruth Barton (Auckland), Janet Browne (Harvard), Gowan Dawson (Leicester), Graeme Gooday (Leeds), Piers Hale (Oklahoma), John Lynch (Arizona State), Iwan Morus (Aberystwyth), Elizabeth Neswald (Brock), Richard Noakes (Exeter), Simon Schaffer (Cambridge), Matthew Stanley (NYU), and Jim Strick (Franklin and Marshall). Montana State University will also be hiring a two-year postdoctoral researcher to help run the project, and in 2012 will host a conference on Tyndall and the science of the Victorian age, combined with a workshop for those editing the volumes of correspondence. For more information on the project, go to: <http://www.yorku.ca/tyndall/>.

### Perspectives on Science

by Michael Bycroft

Consider how secondary schools might teach history of science in an ideal world.

Assessment would be kept to a minimum, and independent research encouraged. Taught content would cover historical research methods and a few key case studies. Students would take the course out of a genuine interest in the field, and teachers would get involved for the same reason. Students (and teachers) from science and humanities backgrounds would intermingle and learn from each other, and academic historians would give their advice and inspiration. The course would capture the richness and rigor of the history of science, a breath of fresh air in a smoggy curriculum.

Is such a course possible in today's secondary schools? Two recent articles in this *Newsletter* suggest that the answer, at least in the short term in the US, is “no.” [1] But a group of teachers, educators and academics in the UK would give a more optimistic answer. Their answer takes the form of Perspectives on Science (PoS), a course on the history, philosophy and ethics of science that has—at least in theory—many of the features of the fanciful course described above.

After three years as a pilot program, PoS made its formal debut in UK secondary schools in September 2008. Now, ten years after the course was conceived at UK's University of York, it has entered its second fully-fledged year. Has the child grown as its parents expected, and has it been a tough upbringing? I spoke to some of the people behind the course, and discovered that the PoS format can work in practice, as well as in theory. Indeed, it has worked well enough to spread to other school subjects and even other countries. Student interest in the history of science component is alarmingly low, however. And PoS is a long way from being a mainstream part of the UK curriculum.

Elizabeth Swinbank is a Fellow in Science Education in York's Department of Educational Studies. She was among the teachers and teacher trainers who raised the idea of a PoS-style course at a teacher-training course at York in 1999, and has been involved in the project ever since. “PoS began with a ‘wouldn't it be nice if ...’ conversation over lunch,” she says. “The initial vision was for a course in history and philosophy of science that would give students opportunities to discuss and explore some of the ‘big questions’ that interest them in this area.”

The project team agreed at the beginning—and has insisted ever since—that those explorations should be “recognised as valuable in their own right, not merely a way of getting the teacher off the subject at the end of a more conventional science lesson.” They also agreed about the assessment of the course. “We initially thought there would have to be an exam of some sort,” says Swinbank, “though we were never very keen on that.”

Fortunately for the project, led by Dr. John Taylor, a teacher and Director of Critical Skills at UK's Rugby School, these desiderata were neatly aligned with the interests of some key UK funders. An initial grant from the Royal Society of London was “hugely helpful,” says Swinbank, and gave the team the time and resources to attract sponsors including the Wellcome Trust and the then Particle Physics and Astronomy Research Council. Wellcome appreciated PoS's goal of “promoting intelligent informed discussion about ethical questions in relation to science,” says Swinbank. Edexcel, one of UK's school examination boards, appreciated the light-weight (and therefore inexpensive) assessment format, and agreed to take PoS on.

Support from funders and examiners meant that the current PoS course is, to Swinbank, pleasingly similar to the course that the York group envisaged a decade ago. The course text (*Perspectives on Science*, Heinemann)

## History of Science Society Newsletter

gives equal attention to the ethics, history and philosophy of science. Learning time is split between class-based teaching of research and thinking skills, and independent research projects carried out by each student. The course can be taken over one or two years; each student is assessed on a ten-minute oral presentation and a 6000-word essay based on her own research.

The extended essay is one of PoS's key innovations. Each essay is organized into an abstract, introduction, literature review, discussion, and conclusion. Students must reference all sources using footnotes and a bibliography. Taylor says that this discipline has paid off, leading to some "quite impressive work." PoS students, of which there were 343 in UK schools in 2008, have answered questions as diverse as "Is schizophrenia genetic?" "Can the Kyoto Protocol be defended using a philosophical and ethical approach?" and "To what extent was the discovery of the structure of DNA due to meticulous research and to what extent was it due to opportunism?"

PoS has gathered high praise from students and teachers alike. An independent review of the course, produced in 2008 by researchers at London's Institute of Education (IoE), contains some glowing comments.[2] One teacher remarked that the course provided "probably the most enjoyable teaching I've ever done in my whole teaching career...for once the students and I are actually exploring knowledge, for the love of exploring knowledge, rather than trying to prove that Ohm's Law is still Ohm's Law." Another teacher noted that the oral presentation gave students a rare chance to put their intellectual colors on display: apart from PoS, students get "very few opportunities to say 'this is what I'm intellectually stimulated by.'"

PoS's resemblance to university study is a selling point for both students and teachers, the report says. "We are expecting these [PoS] students to do rather better at university interviews," one teacher remarked. One PoS student went on to study history and philosophy of science (HPS) at Cambridge University, and noted that "philosophical discussions of both Kuhn and Marx formed a large part of my [Oxbridge] application, and I was prepared for the rigorous debate by [PoS]." Taylor

estimates that between 3 and 6 students in a group of 30 PoS students follow HPS into higher education.

But forward thinking was not the only reason—nor the main reason—students have taken the course. In the IoE survey, 21% of students indicated that they chose the course for its relevance to their future work or study. But twice as many students said that the main enticement was their prior interest in the history, ethics, or (most frequently) philosophy of science.

Notably, one student took PoS after feeling "too out of contact with science doing too many art subjects." Taylor affirms that the course serves art students well. "[PoS] certainly does attract the interest of non-science students," he says, "and I have seen some excellent engagement with science from some of these. For example, students not studying A-level biology might well learn a fair bit of genetics in order to write a dissertation on e.g. genetic screening."

What role have academics played in all this? Although the 1999 York group had what Swinbank calls an "amateur" interest in HPS, preparing students for higher study has always been a goal of PoS. To this end the project team have had "several academic advisers from an early stage of the project," says Swinbank. Graeme Gooday (Professor of History of Science and Technology at the University of Leeds) and the late Peter Lipton (philosopher of science and former head of HPS at the University of Cambridge) were "particularly helpful and active," she says. Gooday's contribution included organizing workshops for PoS students to help them formulate their research topics.

Taylor and his colleagues drafted in other academics for comment or advice on PoS, and a number of these have lent their voices to the admiring chorus. Michael Reiss calls the course a "breath of fresh air...an opportunity for students to develop their intellectual muscles." And Gooday writes that the course equips students with research skills that "no existing qualification comes close to rivalling." [3]

**Continued next page**

### Continued from previous page

The course has enjoyed more than one kind of positive feedback. Success has bred not praise but also more success: the no-exam format has found such favour with Edexcel and UK's Qualifications and Curriculum Development Agency that in the 2009-10 year PoS is just one of a number of topics that UK students can study in the format pioneered by PoS. This suite of PoS-style courses make up the Extended Project Qualification (EPQ), a program that John Taylor now directs for Edexcel.

Taylor says that the PoS experience, along with a new set of text books and teaching guides to go with the PoS resources, has ensured a "smooth transition" to the EPQ. Student numbers for all EPQ courses are around 10,000 for the 2009-10 year. There are no clear figures on how many of these are studying the ethics, history and philosophy of science. But the total figure, and the leading role that PoS has played in the new qualification, suggest that PoS continues to grow at a healthy rate.

But how far can PoS grow? And does the growth of the history of science branch match that of the ethics and philosophy branches? The IoE report and one of its co-authors, Dr. Ralph Levinson, cast light on both questions.

Of the 358 PoS research projects considered by the report, just 9 focused on the history of science, compared with 65 on the philosophy of science and a whopping 260 on the ethics of science. That's 2.5% in history and almost 75% in ethics. Moreover, the authors of the report "did not observe any discussions of historical questions [in class discussions during the course] and few of our participants mentioned historical topics in interview." Another worrying sign for historians is the report's comments on the ability of students to assess their sources. Although students had a "keen awareness" of the fallibility of sources, "none of the students we interviewed demonstrated convincingly how they might identify a good source from a weak one."

Whence this massive indifference to history? Whatever its source, the course organizers insist that they do not share it. Swinbank says that history was part of the PoS package "right from the initial lunch conversation." Indeed, it was one of the "starting points" for the whole

PoS project. Taylor says the study of the history of science "should be encouraged" in PoS, and instructed his own students to seek out reliable sources (including HPS academics) for their research projects. And the PoS course-book gives equal weight to history, ethics and philosophy, and includes a section on evaluating sources.

The report suggests that PoS's emphasis on class discussions may be to blame. Historians rely on empirical knowledge in a way that ethicists and philosophers do not, and class discussions alone do not generate empirical knowledge. As the report puts it: "It is hard to say anything about whether or not Newton's published work was original and revolutionary without knowing a great deal about both Newton's published work and the scientific context in which he wrote." PoS is sometimes championed for teaching skills rather than facts. If the IoE report is right, PoS reminds us that it is hard to learn the skills of history without learning some of its facts.

The teaching style of PoS may only be part of the explanation for its treatment of history. One observer of PoS suggested to me that the PoS team consulted historians mainly as a "diplomatic move": as a result, "the entire curriculum is geared towards points of philosophical interest." And insofar as PoS deals with history, it deals with the least interesting parts of history: "the curriculum does not include many of the topics in history of science that really get our undergraduates interested (and can thus taken an engaged critical view on them): politics, technology, gender, warfare, media, imperialism, and race." Given this neglect of the human and less metaphysical side of science, it is "not surprising that the history of science options are not widely pursued by PoS students."

Whether or not these accusations are just, there is clearly a mismatch between the history's proposed role in PoS and its popularity in practice. A related problem is the course's teaching burden. An interdisciplinary course requires interdisciplinary teachers, and few teachers are trained in the history, ethics and philosophy of science as well as in science itself. So far, PoS teachers have mainly been found in science departments, Taylor says, with some help from teachers with backgrounds in ethics of

## History of Science Society Newsletter

philosophy, such as religious education specialists. Dr. Ralph Levinson, a co-author of the IoE report and Senior Lecturer in the IoE Faculty of Culture and Pedagogy, agrees that science teachers have been the largest single source of teachers of PoS.

According to the IoE report, the lack of trained philosophers teaching the course may explain why relatively few students took up research projects in philosophy. Could the same apply to the history component? Levinson thinks so, noting that few historians have taught the course. Teachers have attended PoS training sessions and got advice from HPS academics; nevertheless, Levinson says, few are HPS specialists and most have been “learning on the job.”

The “amateur” aspect of PoS can be a virtue, however. “The secret about PoS,” Levinson says, “is that enthusiasts are doing it...that’s why it works: teachers enjoy doing it and students enjoy taking it. And I think that is the way to go.” According to Levinson, PoS remains an “outsider” in the UK curriculum. In credit terms it is equivalent to half an A-level, but is not itself an A-level or an AS-level, the standard qualifications for students in the final and penultimate years at UK secondary schools. This too has its advantages: “if you put [PoS] in the statutory curriculum,” Levinson says, “it will kill it.”

Does this mean that for PoS there is a trade-off between popularity and quality? Levinson hesitates, then says “yes.” “Once it gets too big...the national curriculum authorities will get their murky hands on it.” A middle position may be best for the course, he says, so that “it doesn’t get big, but it is not small enough to collapse.”

Whatever the limits on the course’s growth, Taylor and his team have worked hard—and effectively, in Levinson’s view—to extend the course to new schools, teachers, and students. It has also caught the eye of overseas educators: some Australian schools have expressed an interest in taking on the course, for example.

The big challenge is to get the word out, Swinbank says. “We frequently find that, once they know about PoS, all these groups [teachers, students, and HE admissions tutors] are very enthusiastic - but because [PoS] is

slightly out of the mainstream of what goes on in schools and colleges, it can get overlooked.” The academic community can help by “listing [PoS] in prospectuses and on websites as a desirable entry qualification for their courses - and indicating how PoS helps student prepare for degree-level work.”

Where will PoS be in another 10 years time? Swinbank hopes “that the notion of students developing researching and communication skills becomes part of the mainstream of education post-16.” Taylor looks forward to seeing “a community of schools committed to this approach, sharing experience and expertise with other schools.” Historians of science can perhaps wish them every success in expanding PoS, and hope that the history of science component expands with it.

### References:

1. See the articles by Michelle Klosterman (in the January 2009 newsletter, <http://www.hssonline.org/publications/Newsletter2009/JanuaryKlosterman.html>) and by Greg Macklem and Erik Peterson (in the April 2009 newsletter, [http://www.hssonline.org/publications/Newsletter2009/April\\_education.html](http://www.hssonline.org/publications/Newsletter2009/April_education.html)).
2. Perspectives on Science project team. (2008). *Summary document*. Retrieved from: [www1.edexcel.org.uk/Project/POS-Briefing.doc](http://www1.edexcel.org.uk/Project/POS-Briefing.doc).
3. Levinson, R., Hand, M., and Amos, R. (2008). *A Research Study of the Perspectives on Science AS-level Course*. London Institute of Education.

### Further information:

- Dr. John Taylor, Director of Perspectives on Science, can be contacted at [jlt@rugbyschool.net](mailto:jlt@rugbyschool.net).
- The Edexcel specification for the Extended Project Qualification, along with an exemplar Perspectives on Science project, can be found at <http://www.edexcel.com/quals/project/level3/Pages/default.aspx>.

## Adventures in Romantic Science: Richard Holmes on passion, teamwork, and the neglected art of Biography.

*An interview by Michael Bycroft*

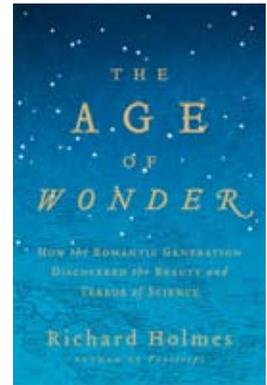
When *Age of Wonder* won the prestigious Royal Society Prize for Science Books in September last year, it was a victory not just for good writing and for the author Richard Holmes, but also for the history of science. *Age of Wonder*, a series of portraits of the men and women of science in the Romantic era, is only the fourth book on history to win the 22-year old prize. [1] This is a step in a new direction for Holmes, a literary biographer known more for his work on Shelley and Coleridge than on Davy and Herschel. But we should not be surprised to see those four Romantic figures in the same book, says Holmes. And there is plenty more to write about this daring and bountiful period for science, and plenty of ways to write about it.

### The dark and wonderful world of Romantic scientists

*Q: You have said that your “books on Shelley and Coleridge are all about people who had hope in the world. Now come [in Age of Wonder] the scientists and the discovery of a new kind of hope.” [2] Is it this—the sense of hope shared by Romantic scientists and artists—that prompted you to shift from literary biography to history of science? Are there other reasons for the shift?*

*A:* Yes, one of the glories of the Romantic period for me is its sense of hope and energy, of wider possibilities, of a better world. I also hate the stultifying idea of the Two Cultures—arts and sciences—supposedly dividing us. The Romantics didn't believe in such a division. In fact the specific thing that set me off was the friendship between the poet Coleridge (whose biography I had written) and the chemist Humphry Davy. It is a fascinating story, ranging from their inhaling of nitrous oxide gas together, to discussing the hardest metaphysical questions about the nature of scientific knowledge and its role in society.

As Coleridge said, “Science being necessarily performed with the passion of Hope, it is Poetical.” I was also usefully provoked after a lecture I gave at the British Academy in 1999, when Professor Lewis Wolpert sprang up from the front row and said that Coleridge's great poem “The Ancient Mariner” had nothing whatsoever to do with science. He was wrong, as it happens, but it set me thinking—for ten years.



*Q: There is a darker, less hopeful side to Romantic poets. Is there also a darker, less hopeful side to Romantic scientists that you wanted to explore in this book?*

*A:* Yes, there certainly is. William Herschel's astronomy first raised the question of a huge, meaningless universe, with no cosmic Creator, and in which every galaxy was destined to “wither and die.” Davy's chemistry showed that a great discovery like anaesthetics could be lost for a generation, at immense cost in human suffering; and that a great technical invention like the miner's safety lamp could finally end up being used to exploit the very men it was designed to safeguard. (They were sent deeper into the mines). The advances in medicine and surgery began to challenge the notion of human individuality or spirit, and produced that parable of scientific hubris and menace still universally known by the name of Dr Frankenstein. (Mary Shelley's great novel of 1818 was actually entitled: Frankenstein, or The Modern Prometheus, and initially it only sold 500 copies). You can find the same questions being asked in the poetry of Byron, Keats, and Shelley. For example in Byron's haunting poem “Darkness.”

## History of Science Society Newsletter

*Q: You write in Age of Wonder that you aim to “present scientific passion, so much of which is summed up in that child-like, but infinitely complex word, wonder.” [3] Did you aim to present the methods of scientists as well as “passion” behind their work?*

A: Yes, and these methods are not at all childlike. They were original, daring and often highly dangerous. To start with, the principles of close observation, accurate measurement, and precise experiment pioneered by the scientists—incidentally not defined as “scientists” until 1831—are intellectually gripping in themselves. But there’s the physical equipment they used, and often invented—like Herschel’s homemade reflectors, or Davy’s voltaic batteries, or Banks’s exquisite anthropological (as well as botanical) drawings, or Blanchard’s balloon canopies and barometers. Then there’s the story of their actual experiments, explorations and discoveries, which make thrilling narratives in themselves, and are as riveting to write about as detective stories (or indeed as love stories, which they often are in their own way). Mungo Park’s heroic solo exploration of the river Niger, his psychological (or spiritual) survival when he was robbed and left to die, abandoned and alone, is as moving as any Romantic poem. (Indeed Robert Southey tried to turn it into one, but it’s better in Park’s own prose Travels.)

### Historians and Romantic science

*Q: Did you use any other writers on the history of science, or works in the field, as models for this book? If so, what/who were they?*

A: Not really, I felt I was trying to do something quite new in this form of group biography. Indeed it was a long and lonely business. Nonetheless there were books which deeply encouraged me, and which I admire greatly: James Gleick on Newton, Lisa Jardine on 17th century science in *Ingenious Pursuits*, and Jenny Uglow on the 18th century Lunar Men. There were also certain radio and television programs which inspired me by the way complex ideas could be discussed and clarified: Melvyn Bragg’s *In Our Time*, and Sir David Attenborough’s revelatory

nature and environment programs, for instance. By contrast, there were many biographical films or biopics—about Darwin or Stephen Hawking, for example—which warned me how not to do it.

*Q: You write in Age of Wonder that “We need not only a new history of science, but a more enlarged and imaginative biographical writing about individual scientists.” [4] Do you have some individual scientists in mind who deserve more biographical attention?*

A: I think the biography of scientists is only just starting. For example, Mike Jay’s biography of the 18th century doctor Thomas Beddoes, or Graham Farmelo’s of the physicist Paul Dirac, or Georgina Ferry’s of the molecular biologist Max Perutz. Or from a different angle, the biography of a scientific idea (which is a different kind of group biography) like Simon Singh’s Fermat’s *Last Theorem* or Manjit Kumar’s *Quantum*. Most of all there is the need for fuller biographies of women in science, especially during the early modern period: the Duchess of Newcastle, Emilie du Chatelet, Mary Anning, Mary Somerville, Caroline Herschel, Jane Marcet, for example.

*Q: Did you think that science during the Romantic period has been given insufficient attention by historians? If so, why might this be?*

A: First, because many scientists still believe that Romantic writers all hated and distrusted science like William Blake: “Newton and Locke, sheathed in dismal Steel” etc. See for example Richard Dawkins’s *Unweaving the Rainbow*, which appears to make this mistaken assumption. Second, because there’s been an historic gap, a sort of intellectual black hole, between the death of Newton (1724) and the departure of the young Charles Darwin aboard the Beagle, bound for the Galapagos (1831). And third, because this is the period of the German naturphilosophie, a powerful and attractive kind of popular science mysticism, which spread across Europe and is still the source of much contemporary “alternative” science and some glorious mumbo-jumbo too. Science historians are nervous of that.

**Continued next page**

Continued from previous page

### Scientific biography: Sidetracks, foot-steps, lateral stories and vertical foot-notes

*Q: You have described biography as a union of fiction and fact, “without benefit of clergy.” [5] Did your previous experience of marrying fact and fiction (in your works of literary biography) make it easier for you to marry Romantic science with Romantic art (in this book)?*

A: No, I felt I was starting from scratch. It’s not so much “marrying” fact and fiction, as using fictional techniques to get across facts and present them in a revealing way. I’ve written a whole paper on this, but I will give you just two examples, and in highly compressed form. One is the use of Joseph Banks as a kind of Greek chorus throughout the book. The second is the method of starting each scientific life in the middle, when something significant has already happened, and only going back to the childhood later—to see how he or she got to that significant place. If you look in the book, you will see how these work. A third would be the use of “vertical footnotes” to open up “lateral stories,” but you’ll have to work that one out for yourself.

*Q: “Empathy is the most powerful, the most necessary, and the most deceptive, of all biographical emotions.” [6] As a writer, did you find it harder to empathize with the scientists in this history than with the writers? If this was a problem for you, how did you overcome it?*

A: I’m not sure about this. The question of “empathy”—and in what sense it really exists, as opposed to “sympathy”—is a difficult one for all biographers. (I hedged my bets there in *Sidetracks* by calling it an “emotion,” but I now find that someone has written a whole MA Dissertation on “empathy” in my books, starting with *Footsteps*.) I suppose there can be a problem about understanding the inner life of scientists, who may not be so naturally inclined to confide their thoughts to letters, journals or diaries as professional writers. (They may not have the time, apart from anything

else.) Biographers might call this “a lack of interiority.” On the other hand, scientists tend to have a natural gift for explaining things, including the way they have approached and solved (or failed to solve, potentially just as interesting) particular scientific problems. There is a great and growing interest in the informal Notebooks of scientists—for example the Notebooks of Leonardo, Newton and Charles Darwin have all been published and are classics—just like the Notebooks of Coleridge. I found the Endeavour Journal of Joseph Banks, the laboratory Notebooks of Humphry Davy, and the astronomical Journals of Caroline Herschel, extraordinarily vivid and revealing.

*Q: “My urge was to go directly to the original materials—and most especially to the places—for myself.” [7] What were the “original materials” that shed light on the inner lives of the scientists in this book?*

A: See the long answer above. I would also include places and objects, like Davy’s laboratory equipment at the Royal Institution, Herschel’s house in Bath (now a museum) and his telescopes (at the Whipple Museum), the John Hunter collection at the Royal College of Surgeons, or Montgolfier’s balloons at the Musée de l’Air at Le Bourget.

*Q: There is a fashion, in history of science writing, for biographies about non-human subjects, whether equations ( $E = mc^2$ ) or entities (quarks, flies, electrons). Can you imagine writing this kind of biography, or is the human element indispensable for you?*

A: No, the human heart is indispensable. Samuel Johnson said he could “write the life of a broomstick,” but I couldn’t.; Mind you Shelley wrote the life of a single cloud in a long poem of that name, and it is scientifically impressive (the evaporation cycle) as well as biographically beautiful.

*Q: Since writing this book you have hinted at the importance of team-work and co-operation in science. One theme of Age of Wonder is the Romantic enthusiasm for the “solitary scientific ‘genius’”: would this enthusiasm make it difficult to re-write Romantic*

## History of Science Society Newsletter

*science as a story of teamwork?*

A: In the Preface, I called the book “a relay race of scientific stories.” I hope there is the sense of “a great collaborative project” running throughout it. Yet these men and women were indeed people of “solitary genius,” and more important, lived in a culture that encouraged them to think of themselves as such. (Nowadays, one might hazard the suggestion that scientists are encouraged by the culture to think of themselves as “popular celebrities,” though blessedly many of them refuse to do so.) Nonetheless there are great partnerships and rivalries (rivalry producing a different form of teamwork, see James Watson’s *The Double Helix*) at this time. Difficult to think of William Herschel without his sister Caroline Herschel, Davy without his young assistant Michael Faraday, Banks without the faithful Daniel Solander, or rebellious William Lawrence without his surgical patron John Abernethy (or either without...Dr Frankenstein).

### Present success and future plans

*Q: The Age of Wonder has reached a much larger readership than typical histories of science. Why do you think this is? Is it because of the history of science in the book, or in spite of it?*

A: Yes, it’s surprising, and also a larger readership than my literary biographies—and even more so in America. (I was particularly amazed to get a fan letter from NASA.) I think we are probably entering a golden age of popular science writing, anyway, for quite complex reasons... But it has struck me that in lectures, and in the signing queue afterwards, my readers seem more evenly balanced between men and women, and definitely younger than before. But then that’s probably because I’m definitely older than before.

*Q: Do you have plans for another book? If so, do you plan to write again on the Romantic period? On science?*

A: In a word—Aha!

### References

1. The number of winning history books depends on how one counts, of course. I count David Bodanis’ *Electric Universe: How Electricity Switched on the Modern World* (2006 winner), Jared Diamond’s *Guns, Germs and Steel* (1998), and Arno Karlen’s *Plague’s Progress* (1996) as the only winning books that focus mainly on history.
2. Nicholas Wroe. (2008). “Following his footsteps.” *Guardian*, Sep 27 08. Retrieved from <http://www.guardian.co.uk/books/2008/sep/27/biography1>.
3. Holmes, R. (2009). *Age of Wonder*. London: Harper Press, p. 15.
4. *Ibid.*, p. 468.
5. Holmes, R. (2003). *Biography: Inventing the Truth, in The Art of Literary Biography*, John Batchelor (ed.), Oxford: Oxford University Press, p. 15.
6. Holmes, R. (2001). *Sidetracks: Explorations of a Romantic Biographer*. Vintage, p. 136.
7. Holmes, R. (1996). *Footsteps: Adventures of a Romantic Biographer*. Vintage, p. 136.

## What's In A Session?

### Lessons from the HSS Meeting in Phoenix, Arizona, 19-22 Nov 2009

by Pnina G. Abir-Am, Brandeis University & Scientific Legacies, [pninaga@brandeis.edu](mailto:pninaga@brandeis.edu)

The HSS Annual Meeting in Phoenix was one of the best HSS meetings, in the opinion of my colleagues at breakfast on its last day.[1] Besides regular attractions, such as opportunities for personal discussions with colleagues from other parts of the country, I had a few highlights of my own. Below, I am trying to extract useful lessons for future HSS Meetings from my experience with the session I had organized. Possibly, on a future occasion, I might also comment on other experiences of public interest, such as sharing advice on publishers, clarifying the status of ongoing job searches, and “diving” into the Grand Canyon with a French helicopter.[2]

I organized a “special session” out of concern that a recent book’s transnational perspective might not be sufficiently noticed, given the long prevalence of nationally defined research interests. “Meet the Author: *American Hegemony and the Reconstruction of Science in Europe after WW2* by John Krige (The MIT Press, 2006)” featured five speakers including the author, who holds the Kranzberg Chair at Georgia Tech and who bravely responded to four potential critics in front of what turned out to be a rather large audience. Having previously worked on European science institutions, (he shared the Alexandre Koyré Medal for 2009 awarded to the European Space Agency History Project—see the HSS Newsletter October 2009) Krige argued for the merit of concepts from diplomatic history, such as “American hegemony,” which he put to great use in his effort to explain the reconstruction of science in key European countries, from a transnational perspective. Chairperson Mary Jo Nye of Oregon State University, a former HSS President, introduced the speakers in captivating detail, while graciously clarifying a belated change in the list of speakers.[3]

Zuoyue Wang (California State Polytechnic Univer-

sity at Pomona), Naomi Oreskes (University of California at San Diego), and Bruno Strasser (Yale University) strove to conform to a tight schedule under Mary Jo Nye’s watchful eye, while highlighting the comparability of trans-atlantic and trans-pacific traffic in scientists, the limitations of the linear model in framing science policy during the Cold War, and the role of international organizations in resisting American hegemony, respectively. Finally, I discussed the book’s fresh look at the role of philanthropic foundations in the confrontation between communism and anti-communism during the Cold War.

The session, held in a room large enough to have hosted a reception the preceding evening, was well attended and included a lively Q&A, with queries from Allan Needell, Robert Bud, (Science Museum/London) and Daniel Kevles. (Yale University). The new Editor-in-Chief of *Centaurus*, Ida Stamhuis (Free University of Amsterdam), indicated interest in converting our session into a special issue of that journal. Following good feedback from additional colleagues, I began to reflect on our session for some lessons for the future.

The first lesson was that our format was filling a special need for public discussion of different, complementary viewpoints. Since even award-winning books are highlighted by a brief citation only, such a “special session”—half as short as a regular one—helps the attendees become acquainted in a nutshell both with the book (the author’s response included musings on things that could be done differently) but also with how such a book can be viewed from the vantage of different “expertises.” The second lesson was that a paradigm change is currently taking place toward a greater emphasis on transnational history.[4] If so, we need more such sessions to remind us that in the early 1990s, when the late Elizabeth

## History of Science Society Newsletter

Crawford of CNRS/ Strasbourg, and a small band of survivors on the margins of national histories, first entertained the idea of a transnational history of science, they had to assemble that pioneering act beyond “the polar circle.”[5] Evidently, HSS was ready to offer a warm welcome, and not just because of the Phoenix climate.

The last lesson pertained to balancing research lines at HSS Annual Meetings, given its policy of allowing attendees to present a paper in one session only. Some colleagues were glad that I did not forget to “return” to topics other than “women in science,” which compelled my attention at HSS Meetings in 2005 & 2007. This balancing remains a big challenge for me in 2010 when HSS meets in Montreal. Should I submit a proposal to discuss my new book[6], which solves problems in the history of DNA structure first adumbrated in my colloquium at the University of Montreal? or should I focus on how I “predicted” the 2009 Nobel to a woman chemist, the first in half a century, even though I am not an expert on comets, which may have a similarly low frequency?[7]

### Notes

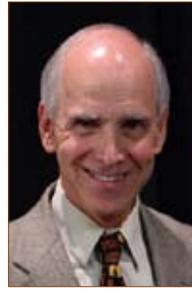
1. The lack of HSS run tours to Phoenix’s Botanical Garden and to Arizona State University’s Center for Biology & Society, come to mind as oversights in an otherwise smooth meeting. But the Heard Museum had a great guide, and I even found, on my own, the wing named after our HSS colleague Joy Harvey. Breakfast companions included Marsha Richmond (Wayne State University), Betty Smocovitis (University of Florida), Hamilton Cravens (Iowa State University), and Luis Campos (Drew University).
2. See photos of the Maverick helicopter and a bend in the Colorado River as seen from the air. I am glad to exchange notes regarding ongoing job searches.
3. Ron Doel of Florida State University, held up by a conference in Russia, was replaced by Allan Needell of the National Museum of Air and Space, who participated from the floor.
4. E.g. the *Palgrave Dictionary of Transnational History*, 2009, Eds. Akira Iriye and Pierre-Yves Saunier, to which many of us contributed but could not afford to buy, even at a 75% author discount! I wrote the entry on “Life and Physical Sciences.”
5. My reference was to *Denationalizing Science*, (1992/3) edited by E. Crawford, Terry Shinn, and Sverker Sorlin, (Kluwer, 1993) which was based on a conference held in Abisko, Sweden, located beyond the polar circle. I wrote the chapter on transnational objectivity in molecular biology.
6. *DNA at 50: History or Memory? A New Account of the Discovery of a 20th Century Icon*.
7. My “prediction” refers to a project that I began two years prior to the 2009 Nobel, entitled “The first Nobel to an Israeli Woman Scientist? Ada Yonath and the Ribosome.”

## History of Science Society Newsletter

### 2009 Prize Winners



**Sarton Medal:**  
**John E. Murdoch**, Professor,  
Harvard University



**Joseph H Hazen Education Prize:**  
**Frederick Gregory**, Professor,  
University of Florida



**Pfizer Award:**  
**Harold J. Cook**, Director of the Wellcome Trust Centre for the History of Medicine and professor at University College London. *Matters of Exchange: Commerce, Medicine, and Science in the Dutch Golden Age*, Yale University Press, 2007



**Margaret W. Rossiter History of Women in Science Prize:**  
**Monica H. Green**, Professor, Arizona State University. *Making Women's Medicine Masculine. The Rise of Male Authority in Pre-Modern Gynaecology*. Oxford University Press Press, 2008



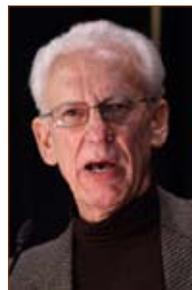
**Watson Davis and Helen Miles Davis Prize:**  
**Charles Seife**, Associate Professor, The Arthur L. Carter Journalism Institute at New York University. *Sun in a Bottle: The Strange History of Fusion and the Science of Wishful Thinking*, Viking Adult, 2008



**Nathan Reingold Prize:**  
**Rachel N. Mason Dentinger**, University of Minnesota. *Molecularizing Plant Compounds, Evolutionizing Insect-Plant Relationships: Gottfried S. Fraenkel and the physiological study of insect feeding in the 1950s*.



**HSS/NASA Space History Fellowship**  
**Matthew Hersch**, Ph.D. Candidate, University of Pennsylvania



**Distinguished Lecture**  
**M. Norton Wise**, Professor, University of California, Los Angeles *Science as Historical Narrative*



**Price/Webster:**  
**Angela N. H. Creager**, Professor, Princeton University, and  
**Gregory J. Morgan**, Associate Professor, Stevens Institute of Technology. "After the Double Helix: Rosalind Franklin's Research on Tobacco mosaic virus" (*Isis*, June 2008, 99:239-272)

### 2009 History of Science Society Annual Meeting Survey

*by Matthew White, HSS Office*

Those of us who worked at the 2009 History of Science Society meeting this past November in Phoenix, have no doubt that this was one of the HSS's most successful conferences ever. Whether a paid staff member or a volunteer, we heard more compliments and positive reports from members who attended than anyone can remember. Things are never perfect, of course, and we did receive complaints about the conference, as well as suggestions for future improvements, but on balance, we received not just an overwhelming number of compliments compared to complaints, but also a noticeable increase in the number and passion of rave reviews this year over previous years.

Although the personal feedback is important, the HSS realizes that we need a rigorous analysis on which to build better meetings in the future. So in order to gauge the opinions and thoughts of the 594 attendees of the 2009 Annual Meeting we invited all registrants to complete our annual survey. We are gratified that 191 people responded (32%) to this call and would like to share the results.

We asked respondents to rank general aspects of the conference on a scale that included very unsatisfactory, unsatisfactory, neutral, satisfactory, and very satisfactory. By far the least popular aspect of the conference was the city of Phoenix itself. Of those surveyed, 28% reported being neutral about Phoenix and 31% responded that the city was unsatisfactory or very unsatisfactory. The most common complaint was a lack of grocery stores, pharmacies, and restaurants near the hotel. This was also a common complaint heard at the conference itself. Though many were dissatisfied with the local options for food and shopping, some respondents did report being pleased with local restaurants and bars.

Conversely, the Hyatt Regency, the conference hotel, scored very well, with over 84% of respondents being satisfied or very satisfied with the hotel. This also corresponds to the verbal feedback we received at the meeting itself and meshes with the experiences of HSS staff and volunteers. The hotel staff was helpful and responded quickly to requests.

The disparity between the responses to the city and to the hotel is illustrative of how difficult it can be to find the perfect site for a meeting the size of HSS. The Executive Office and the Committee on Meetings and Programs weigh many variables, including location, airport service, travel costs, convenience, amenities, and expense. Locations that excel in one or more areas do not always please in other areas, but these surveys will continue to help us track which variables are most important to attendees.

As for the other aspects of the conference ranked in this opening section of the survey, most respondents reported being satisfied or very satisfied: session rooms (72% satisfied or better), A/V support (80%), book exhibit (65%), and the program (88%). Respondents were especially pleased with the registration process, both in advance of the meeting and onsite. The former earned 90% satisfactory or above, the latter earned 81%, and both earned only 3% unsatisfactory or below, the lowest disapproval of all surveyed facets of the meeting. Other than the city, no aspect of the meeting earned disapproval ratings in double digits. The HSS executive office was especially pleased with the high approval of the registration process as it reflects years of honing our online processing, as well as a team of friendly and helpful volunteers on-site.

**Continued next page**

## History of Science Society Newsletter

### Continued from previous page

In addition to the general logistics of the meeting, the HSS also wanted to gauge the interest and response to specific parts of the program. Only 38% attended the co-plenary sessions on Thursday night. The other 62% reported that they were busy socializing with colleagues and friends, both formally and informally, or that they did not arrive early enough to attend.

This year 63% of respondents attended the Awards Ceremony and/or the Distinguished Lecture on Friday evening. Of those who attended many liked the “In Memoriam” slide presentation and others enjoyed the lecture and awards presentations. However, some people thought we should offer more of an opportunity for prizewinners to speak and thank those who helped them win, as long as those remarks are brief. The virtue of brevity in any such remarks were very important to all respondents. M. Norton Wise gave the Distinguished Lecture following the Awards Ceremony and 61% judged it satisfactory or better. The respondents found the content challenging, however, they were split on whether the subject was a positive development or not. The biggest complaint registered for the evening was the lack of food at the reception, and it seems many people were unaware of the cash bar.

The Poster Sessions on Saturday afternoon were popular, although respondents were not as enthusiastic about them as other aspects of the program. Though disapproval was under 10%, more people were neutral or merely satisfied with the length, location, and topics of the posters than with every other aspect of the program. Respondents were fairly unanimous that the posters were not up long enough and were difficult to find. Though a few people had complaints as to the content, most of the suggestions involved logistics. This suggests that we need to keep the posters up longer and work harder to make sure everyone can enjoy them.

The participation rates in programs directed at graduate and early career historians of science were relatively low, but this is to be expected of targeted programs. Of those responding, only 17% attended

the First Time Attendee Reception on Thursday night and only 2% participated in the Mentorship program. Of those participating in the Reception, 67% were satisfied or very satisfied and the biggest reason for not going was scheduling conflicts. The most cited reason for not participating in the Mentorship Program was a lack of knowledge of the program's existence and difficulty matching mentor with mentee. Both reasons suggest avenues for improvement for future meetings.

By the far the single most popular event at the 2009 HSS Annual Meeting was the Saturday evening dinner at the Heard Museum. Some 78% of respondents attended the event (a curious number since our own records showed closer to 70% attending), compared to the 16% who attended last year's dinner. Every aspect of the event, from the quality of the food and the beverages to the length to the venue, was rated satisfactory or very satisfactory by 75% of attendees, a full 20 – 30 point increase over previous years. The use of a venue outside the conference hotel was something of a risk, considering the logistics of transportation and planning. However, since 92% of respondents considered the venue as satisfactory or very satisfactory the risk paid off. Likewise, 87% of respondents judged the accessibility of the event as satisfactory or above, which means that our fears of logistics were either unfounded or properly mitigated or both. Some respondents suggested we offer more vegetarian choices, lower the price of drinks, provide more seating and lighting, and expand the time the museum galleries were open for tours. Initially we heard from attendees who did not approve of the inclusion of the price of the dinner in the registration fee, but there was a noticeable decrease in these complaints after the event. However, these few complaints aside, the experiment of having the society dinner at a nearby cultural attraction was a resounding success and full credit for this success goes to the Local Arrangements Committee and the many volunteers at the museum and the light rail stations. The overwhelming approval of the event will be noted as plans for meetings in 2010 and beyond take shape.

### To Attend or Not to Attend?

For the first time, the HSS surveyed members who did not attend the annual meeting to find out why they did not come and to ascertain what we might do to encourage their attendance in the future. Since we had asked attendees what obstacles they had overcome to attend, we wanted to ask those who could not make it to the conference the same question. We sent the survey link to all HSS members who did not attend and received 209 responses (ca. 10% response rate). Whether considering attendees (65%) or non-attendees (54%), costs presented the biggest obstacle to attending the annual meeting. The related issue of obtaining funding was a problem for 41% of attendees and 29% of non-attendees, and 41% of attendees and 29% of non-attendees also cited the travel time to Phoenix as a real or potential problem with attending the conference. Other obstacles, both for attendees and non-attendees, were conflicts with other meetings, difficulty covering classes, and family-care issues. 31% of non-attendees reported that they do not consider HSS to be their primary professional society and many commented that they did not find the program to be interesting or directly valuable to their work. This latter group included people who reported affiliations with museum, business, and other professionals. This seems to suggest that a small yet significant number of HSS members do not self-identify as historians of science and may possibly be professionals in other fields who are interested in our research. Another popular comment from non-attendees is the placement of the HSS meeting in the calendar, being too close to U.S. Thanksgiving or other important dates. Of those who did not come in 2009, 87% have attended 2 or fewer HSS annual meetings in the last 5 years, suggesting a sizeable portion of our members rarely come to meetings, thus challenging us to find ways to encourage their participation. More disappointingly, of the 37% of the respondents who are a student, independent scholar, or recent Ph.D., a full 57% were not aware that the HSS has NSF funded travel grants to help participants defray costs of attendance. This, too, suggests strategies to encourage participation in the future.



### D. Kim Foundation for the History of Science and Technology in East Asia

*Back row from left to right: Stuart W. Leslie, Dong-Won Kim, Front row from left to right: Shigehisa Kuriyama, Christopher Cullen, Takehiko Hashimoto*

The D. Kim Foundation for the History of Science and Technology in East Asia is pleased to announce several annual fellowship awards and grants for 2010-2011.

Established in 2008 the D. Kim Foundation is dedicated to furthering the study of the history of science and technology in East Asia since the start of the 20th century.

The Foundation provides fellowships and grants to encourage and to support graduate students and young scholars in the field. The Foundation also promotes the exchange and contact of people between the East and West, between old and young, or from different fields.

1. For more information, see [www.dkimfoundation.org](http://www.dkimfoundation.org)

### HSS EMPLOYMENT SURVEY REPORT, 2008-2009

*by Jacqueline Wernimont, Harvey Mudd College*

This analysis reports on the 2008-2009 History of Science Society (HSS) Employment Survey. This year's survey collected data concerning jobs and post-doctoral fellowships commencing in the fall of 2009. The HSS office sent out approximately 100 invitations to participate in the online survey. The invitations were sent to the job search committee contacts and/or human resources administrators listed in job calls. We have collected data regarding thirty-three of these positions or grant opportunities. We would like to thank all of the respondents for their assistance in helping HSS track current employment trends.

The quality of the data has a significant impact on the kind of conclusions that can be drawn from this analysis. While a response rate of roughly one-third has been common over the last five years of the survey, it remains low enough to make strong conclusions impossible. The survey was offered as an online survey this year, in the hopes that this format would yield a higher response rate. We do not yet see an impact from this change. While every effort was made to capture accurate information regarding job postings, there is also the possibility that invitations were not sent out to every committee considering hiring in H/P STM. Consequently, the conclusions of this analysis must remain somewhat provisional. Of the thirty-four responses received, two were eliminated from analysis because they indicated that they were doctoral fellowship opportunities, rather than post-doctoral or career opportunities.

In order to explore other avenues of data collection, we also collected information on jobs for which we had no response but for which press releases and departmental or program websites identified the new hire or post-doctoral fellow. This data is far more limited, in that we were not able to identify the number total applicants for these positions, nor the importance of

training in the History (and/or Philosophy) of Science, Technology, and/or Medicine in the job selection process. This approach was disproportionately successful with post-doctoral fellowship opportunities. The ability to garner accurate information regarding tenure-track job offers and temporary non-fellowship positions is limited by the kind of information dissemination associated with those job opportunities. We were able to collect data on seven positions through these alternative means. Therefore, this report covers a total of thirty-eight filled searches relating or potentially relating to H/P STM.

Cancellation of searches was of particular concern this year. We have report of one cancelled search and anecdotal data regarding at least one other cancelled search. We are unable to determine at this point how many, if any, of the unreported searches were not completed.

Among the searches for which we have data 39% (12) were reported as "newly created or redefined positions," 30% (10) were "replacement positions," and 27% (9) were reported as "fellowship or grant opportunities." We do not have this data on the seven positions that were not self-reported. While the responses suggest a high proportion of tenure-track or non-fellowship positions, when respondents were asked directly regarding the temporary or permanent status of the position, only six were reported as tenure-track positions and one was a non-tenure-track but not temporary position. The remaining 24 positions, nearly 77% of the positions, were reported as "temporary." For the seven other jobs we are able to determine the temporary/permanent status based on the job call. Six of these seven positions were listed as post-doctoral fellowships, meaning that 30 of the 38 positions (79%) for which we have information were temporary positions.

## History of Science Society Newsletter

Of the 30 positions for which we have data regarding desired areas of expertise, 19 listed H/P STM as the primary area of expertise desired, 6 listed it as a possible area of expertise, and 5 listed it as a desired secondary area of expertise. Of the 19 positions for which H/P STM was a primary area of expertise, 17 required a Ph.D. or equivalent at the time of starting the position. In the general pool, 26 (84%) of the positions required a Ph.D. or equivalent at the time of starting the position.

Permanent positions, both tenure-track and non-tenure track, were rare in this year's survey and some individuals indicated that their institution did not allow for the reporting of gender or minority status. Given the very small dataset that we have, generalizations regarding these two important areas are impossible. Of the 5 permanent jobs that reported the gender of the successful candidate, 4 of the 5 went to women. None of the permanent jobs were reported as filled by a minority candidate, but only three of the institutions reported on this topic.

Within the somewhat larger set of temporary or post-doctoral positions we see what appears to be gender parity; of those that reported gender status, eleven went to male scholars and twelve to female scholars. Only one third of the respondents for temporary positions felt able to report on the minority status of their candidate and, of those, two reported that their candidate was of a recognized minority status. It is clear that in order for minority status data to be useful, we need to find ways to improve upon the numbers of reporting institutions or find alternative access to such data.

Unlike in previous years, with respect to the gender distribution of applicants to the temporary and permanent positions, we did not note a consistent trend in either direction. In many cases institutions reported equal or near equal numbers of male and female applicants. On the other hand there were particular jobs where the distribution of applicants was unequal; one permanent but non-tenure track job had three times as many female applicants as male applicants

and one international position received 72 % of their over fifty applications from men. The number of applicants for individual job or fellowship opportunities ranged from a low of 6 to a high of 59.

This year's responses spoke yet again to the importance of online media for the advertising of positions and fellowship opportunities. 82% of those who responded regarding advertising media indicated that they posted to one or more online resource. While a small number used online media only to advertise their position, most used online resources in conjunction with advertising in print media.

Several individuals who responded to the survey and a few who did not complete the survey but contacted us via email indicated that they did not feel that the positions listed should be included in an "employment" survey. This seemed to be a particular issue for institutions and organizations that offer post-doctoral fellowships of various types. Given the high proportion of employment opportunities this year that were temporary and/or post-doctoral fellowship, it may be worth considering how to respond to this concern in the field. Another comment suggested that the survey should enable respondents to report on multiple fellowships that all fall under the same heading (such as the National Science Foundation fellowships or those at the Max Planck Institutes).

We wish to continue to improve the annual survey and to optimize our data collection. At the same time, we are concerned to maintain a level of consistency that will enable comparisons over time. There is a sense among many that the employment landscape continues to shift, and indeed the high proportion of temporary positions this year seems to continue a trend seen in previous surveys from this decade where the proportion of permanent positions has gone from a high of 43% in 2002-3 to the 21% reported this year. That said, the first employment report in 1972 also commented on the relatively low

**Continued next page**

## History of Science Society Newsletter

### Continued from previous page

numbers of permanent academic positions available to historians of science. Obviously many things have changed since the early seventies, but the suggestion at that time that we can do more to think about the variety of career options available to historians of science may be as relevant today as it was then.

We welcome input regarding the survey and future improvements. Please send suggestions to: Jacqueline Wernimont, Harvey Mudd College, 301 Platt Blvd, Claremont, Ca 91711 or, via email: Jacqueline\_Wernimont@hmc.edu. I would like to express my appreciation to Robert J. Malone, Marsha Richmond, Roger Turner, and the HSS Women's Caucus and Graduate and Early Career Caucus for their support of the survey and assistance assembling the questionnaire and contacting respondents

[Note: The survey data is available in the online version of this article.]

### 2010 Election Slate

The slate for the 2010 elections appears below. Our thanks to the 2010 nominating committee for their work in putting together the list of nominees: (Liba Taub and Paul Lucier (co chairs), John Beatty, Deborah Harkness, Pam Long). We also wish to thank the nominees for agreeing to be nominated. A society is only as strong as the officers who consent to serve, and the HSS is fortunate to have so many talented people who are willing to help the Society. The election itself will take place in April and will be conducted electronically. Those who wish to receive a paper ballot should contact the HSS office: PO Box 117360, University of Florida, Gainesville, FL 32611

All HSS members are reminded that they may nominate members for elected positions. The statutory language is as follows:

I. 9. Ballots: The Nominating Committee, consisting of two members of the Council and three other members of the Society, shall prepare a ballot to be sent to each member of the Society at least two months before the annual meeting.... For the

Council, the ballot shall contain the names of ten candidates proposed by the Nominating Committee together with the names of other candidates nominated by petitions signed by at least fifteen members of the Society....

Nominating petitions, together with the agreement of the person nominated, must reach the chair of the Nominating Committee within two months after publication of the list of nominees.

### For Council

(10 nominees. Members will choose 5.)

- Antonio Barrera-Osorio
- Soraya de Chadarevian
- Alexei Kojevnikov
- John Krige
- Tara Nummedal
- Brian Ogilvie
- Maria Portuondo
- Michael Reidy
- Jutta Schickore
- Betty Smocovitis

### For Nominating Committee At Large

(6 nominees. Members will choose 3.)

- Ken Alder
- Greg Good
- Florence Hsia
- Gwen Kay
- Robert Richards
- Jeremy Vetter

### For Nominating Committee from Council

(4 nominees. Members will choose 2.)

- John Carson
- Deborah Coen
- Mi Gyung Kim (Mimi)
- Judy Johns Schloegel