**A Bibliography for the Future**

*By Stephen Weldon, Associate Editor HSS*

**Introduction**

The *Isis Bibliography* has come a long way since 1913, and the changes I have made over the past year have brought new functionality to the Explore service ([isiscb.org/explore](http://isiscb.org/explore)), our open access discovery search engine, that now allow me and my staff to work entirely online. This new curation system has far-reaching implications for scholars around the world, and it is already providing new possibilities for collaboration, collection, and discovery.

**Introducing the Contributing Editors**

This year, I started a new project by appointing Contributing Editors to the *IsisCB*. The Contributing Editorships are designed to encourage fellow professional historians, especially those early in their careers, to contribute their historiographical and bibliographical skills to help me locate and curate material that my staff and I could not easily find on our own. I ask each editor to serve for two years, and then decide if they would like to continue. Each one agrees to devote a few hours each month to locating and collecting citations. Working with these scholars makes the *Bibliography* a much more collaborative and global enterprise, creating a richer and more comprehensive resource.

Let me introduce the three scholars whom I have appointed so far:

Francesco Luzzini is working with me to collect citations to works written in Italian. Luzzini is an affiliate scholar at the Max Planck Institute for the History of Science in Berlin (MPIWG) as well as a research scholar at the Museum of Sciences in

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*IsisCB* staff (left to right): Younes Mahdavi, Cody Williams, and Jon Self, at the University of Oklahoma Libraries Special Collections.
Trento, Italy. His work focuses on the Earth sciences, natural philosophy, and medicine in Europe from the 17th to the 19th centuries. In recent years, he has been a Research Fellow at the Linda Hall Library in Kansas City and a Postdoctoral Fellow at the University of Oklahoma Libraries where he was preparing a critical edition of Antonio Vallisneri’s manuscript *Primi Itineris Specimen*, which should be published by Edition Open Sources by the time you read this article.

Helge Wendt is an *IsisCB* Contributing Editor for German language entries. He is currently a Research Fellow at the Max Planck Institute for the History of Science in Berlin, working on a project called “Globalization of Knowledge.” His main research focuses on the global history of coal, the history of Christian missions, and the history and historiography of globalization. Wendt’s book on the global history of colonial missions, *Die missionarische Gesellschaft. Mikrostrukturen einer kolonialen Globalisierung*, was published in 2011. He is also the editor of *The Globalization of Knowledge in the Iberian Colonial World (1500–1900)*, which was published by Edition Open Access in 2016.

Didi van Trijp has joined the Contributing Editorial team as the Dutch language editor. She is a third-year PhD student at Leiden University, having taken a Master’s degree from Utrecht University in 2015, where she was a manuscript assistant for *Isis* under the editorship of Floris Cohen. Her historical research is on the European study of the underwater world in oceans, seas, rivers, and streams over the long 18th century. Specifically, she is interested in the development of ichthyology, which, at the time, included not only fish but also more exotic creatures like mermaids. She studies the cultures of natural history, as well as collecting practices and construction of classification schemes.

As a group we try to meet via video conference every month or two in order to go over problems and talk about different issues, such as finding citations, following protocols, determining what is in the scope of the *Bibliography*, and discussing how to tag and classify entries. I hope to build these efforts into a vibrant and active part of the history of science community over the next few years. Indeed, I see this project as creating an international network of scholars who are able to share their
knowledge while performing a valuable service to the discipline.

As payment for their work, the Contributing Editors are recognized as active members of the *Isis* Bibliography editorial team, and they are listed in the printed bibliography, as well as online. In addition, each Contributing Editor also receives a complimentary subscription to the journal *Isis* for the years that he or she is working on the project.

**Collaborating with SHOT**

In addition to starting the Contributing Editor program, I am also establishing the means to collaborate with editors of other bibliographies in the hope that we can incorporate material from their work into the *Isis*CB database. I have begun this process by working closely with Bruce Seely at Michigan Tech to help him collect citations for the Society for the History of Technology (SHOT) bibliography. This is not a new collaboration, as Seely took over the SHOT bibliography from Suzanne Moon, the editor of *Technology and Culture*, after she restarted the project a few years ago. Seely, like Moon before him, is working directly with *Isis*CB technology, and his entries are going to be imported directly into the Explore database.

Seely is bringing with him another collaboration, a group of librarians at the Deutsches Museum who are collecting primarily German language materials in the history of technology. Unlike the Contributing Editors, he is entirely in charge of his bibliographical entries, and the two of us talk regularly about how to make sure our two projects work in parallel. So, for example, we are dividing up the journals that we cover so that we do not duplicate work. This is a great benefit for us, because it frees up time for me and my staff to do more imaginative searching for history of science materials located in out-of-the-way sources that are harder to find.

**Using Zotero for Input**

The main requirement for Contributing Editors and owners of collaborating bibliographies is that they be willing to learn and use Zotero, the open source citation management tool created by a team of programmers and researchers at the Roy Rosenzweig Center for History and New Media (CHNM) at George Mason University. CHNM is one of the premier digital humanities programs in the country and is based in the Department of History and Art History at GMU, which makes their tools especially appropriate for historians to use.

By using Zotero, I am able to collaborate widely because Zotero simplifies the collection of entries from online citations around the web and enforces a standard bibliographical record format. It also enables people to create shared libraries where everyone can see and modify each other’s entries. This makes it possible for me and my staff to supervise and manage work created by anyone else. Once my staff is satisfied that the entries are ready to be ingested, we can process them using the Explore ingest system, which reconfigures them to be compatible with the Explore database.

**PDF and Database Linking**

We have also redesigned the PDFs that are used for the printed CB. Starting with the 2016 issue, the PDFs of all new printed *Bibliographies* will include links to the *Isis*CB Explore page of each entry. This means that if you are looking at a citation in the PDF, you can click on the hyperlink and be taken directly to it in Explore, where you can then read the full abstract, follow links to similar entries, find other works by the same author, and launch a deeper search.

For a long time, I have sought ways to exploit the different characteristics of the print and electronic versions of the bibliography, and the new dynamic PDFs are an attempt to experiment with merging the two formats. The traditional print publication, for example, has an almost newsletter-like readability that makes it more useful than the online version for activities where narrow subject searches are not desirable. However, to be able to move between those two environments might allow users to get an even more satisfying experience.
Daily Updates
Another major development this past year, one that is immediately visible to users, is continuous updating: additions and changes are made to user data in real time as they are edited in the curation interface. This is an important by-product of adopting a fully online curation system. Now it is possible to see all of the new entries via links at the bottom of the Explore home page. Those lists will show you citations, as well as authorities (new authors and new subject keywords). Users can now see what we have been working on at the IsisCB office, check out the items that are being discovered by the Contributing Editors, and follow the citations and subject matter being added to the SHOT bibliography.

IsisCB Advisory Board
This year, I added two new members to the IsisCB Advisory Board: Thomas Darragh and Michael Barany. I created this board when I started as the Society Bibliographer in 2002. Since then, I have relied heavily on the help and advice of this group.

My current board members include Emanuela Appetiti (The Huntington Library), Michael Barany (Dartmouth College), Thomas Darragh (Central Michigan University), Márcia H. M. Ferraz (Pontificia Universidade Católica de São Paolo), Daniel Goldstein (University of California, Davis), Richard L. Kremer (Dartmouth College), Birute Railiene (Wroblewski Library of the Lithuanian Academy of Sciences), Sylwester Ratowt (University of North Georgia), Karen Reeds (Princeton Research Forum), Robin E. Rider (University of Wisconsin--Madison). Past members of my advisory board are Toby Appel (Yale University), Clark A. Elliott (Belmont, Massachusetts), Joy Harvey (Somerville, Massachusetts), and Henry Lowood (Stanford University Libraries).

Nearly all of the board members, past and present, have been trained in history of science or an allied discipline, even if some of them also currently define themselves as librarians. In this respect, as much as this project can be described as a library resource, it is not a product of the library and information science discipline. The Isis Bibliography continues to stand out as a creation of our own discipline, controlled and governed by our scholarly community.

Conclusion
All of the changes that I implemented last year are meant to break down the barrier between curation and research. The more I can demystify the bibliography and make the process of building it open and accessible, the more I hope scholars and researchers in the field will see themselves as part of the endeavor and will be willing to participate in making this a better, richer, and more worthwhile resource.

If you use the CB, I would very much like to hear from you. You’re invited to participate with me and the growing number of scholars who are connected with the project. Tell us about your work and the resources you have discovered. Contact me at stephenpweldon@gmail.com if you want to volunteer on a regular basis and be part of the Contributing Editorial team. Or let me know if you would like to offer periodic help in specific areas.

As I continue to develop the Isis Bibliography for the 21st-century information environment, I remain guided by my belief that this is a community project. As active historians, we are all bibliographers to one extent or another, and I encourage all scholars who are vested in this work to participate in it.
“I’m German. I like order.”

Jens Kuhn, workshop participant “The Future of Systematics in Data-Centric Biology”

Ernst Mayr would probably love the reference to the “German tendency to order” in the comment made by virologist Jens Kuhn at a recent workshop that I attended; but he would also likely be rolling in his grave if he knew that a virologist had uttered it, especially in the way of offering taxonomic prescriptives. Viruses do not exactly conform to our understanding of basic biological principles, let alone lend themselves to classic Linnaean taxonomy, whatever we actually mean by that. But then again, neither do bacteria, or fungi or myriad other groups that are now posing special challenges to systematists, students of the diversity of life on Earth. Indeed, it would not just be the invitation list that included bacteriologists, mycologists as well as virologists that would have upset Mayr; it would also be the fact that most everything that he fought to establish is now being challenged by systematists employing new molecular technologies. In short, the emphasis on field collections stored in museum-like repositories, most everything he endorsed in books like his 1942 Systematics and the Origin of Species, or his 1969 Principles of Systematic Zoology, or even his 1982 The Growth of Biological Thought, placing systematics and evolutionary biology firmly at the center of modern biology, is actively being challenged by systematists today employing new molecular technologies. In short, the emphasis on animals, especially birds (Mayr’s preferred group), and even plants has given way to the systematic study of a staggering diversity of organisms whose biological properties pose new and at times irresolvable
taxonomic problems; it isn’t just the difficulty of gaining coherence across these many groups, but also the very special challenges posed by naming or establishing standard “type specimens” in groups that are not even capable of being stored in standard museums or herbaria.

This much was apparent at the first international workshop held at the Marine Biological Laboratory at Woods Hole, Massachusetts in October as part of a project funded by the James S. McDonnell Foundation and led by McDonnell Fellow Kate MacCord. The project is titled “Putting history and philosophy of science to work with the life sciences”; and the event did just that. Organized by Beckett Sterner, Nico Franz, and David Remsen, it brought systematists working on a range of biological groups, many of which were long thought to be intractable for taxonomic study, together with historians and philosophers of science. The goal was to share historical and philosophical insights in order to gain some understanding of the complex problems, conceptual, practical and disciplinary, faced by taxonomists today as they become inundated by data. The kick-off lecture by Staffan Müller-Wille on Linnaeus was especially successful in setting the tone of the workshop. The lecture did not just serve as an introduction to the “great man”; it actually demonstrated the conceptual challenges that Linnaeus faced, as well as how he worked with containers and index cards in creating his famous classification scheme. Remarkably, it also served as an introductory lesson on the basics of the philosophy of taxonomy; some of the workshop participants had never actually trained in the area and were intrigued by Linnaeus’s employment of “nested hierarchy.” Other discussions led to equally surprising statements, at least for systematists, including someone who challenged the need for Darwin—and this is but a tip of the iceberg of startling comments made at this workshop. The systematics of the microbial world, especially, is shaking up our accepted beliefs in the history and philosophy of biology, that much. My overall sense is that scientists at the workshop benefited from the comments of historians and philosophers, and historians and philosophers were similarly challenged by systematists who served to undercut some cherished assumptions; and I was left thinking that although Mayr would be displeased with some of the specific remarks, the invitation list, and directions taken by molecular systematics, he would have been delighted with the transformative potential of bringing together history, philosophy, and science in a way that challenged received notions of systematics. Indeed, I think he might have learned a thing or two.

Betty Smocovitis is Professor of the History of Science in the Departments of Biology and History at the University of Florida. She was one of the historians at the workshop on “Systematics and the Future of Data-Centric Biology.”

Plan Ahead
Future HSS Meetings
Joint meeting with PSA
Utrecht, The Netherlands:
Summer 2019
In the last week of July 2017, about a thousand historians of science, technology, and medicine gathered in the Brazilian city of Rio de Janeiro to attend the 25th International Congress of History of Science and Technology (ICHST). This is the largest and longest-standing international event of the profession, having first taken place in 1929, in Paris. For a long time it was named the International Congress of History of Science, with Technology being accorded pride of place in the event’s title in the 2009 Budapest edition. Up until the 1977 Edinburgh congress, it was held on a triennial basis (with a bitter interregnum between 1937 and 1947, due to the deteriorating conditions that led to World War II and its subsequent unfolding). Since then, it has become a quadrennial affair. Despite its long history, the Congress had occurred outside of Europe only six times up until now: Jerusalem, 1953; Ithaca, New York, 1962; Tokyo, 1974; Berkeley, California 1985; Mexico City, 2001; and Beijing, 2005. In 2017 it was held for the first time in a South American country, hosted by the Brazilian Society for the History of Science (SBHC, in the Portuguese acronym).

The origins of the ICHST coincide with those of the International Academy of History of Science, which took its first steps in 1928, during the International Congress of Historical Sciences in Oslo. Led by Aldo Mieli, a now legendary group of scholars, including the likes of George Sarton, Charles Singer, Abel Rey, Karl Sudhoff, and Henry Sigerist, constituted a committee that was to put up the first congress of history of science in the following year, going on to formally found the Academy in 1932. This happened after the successful second congress, held in London the year before. The London edition would also acquire enduring fame, mostly due to the lively discussions brought about by Soviet scholar Boris Hessen’s thesis on “the social roots of Newton’s Principia,” which was presented there.

In the aftermath of the war, the new institutional framework of international relations started to be designed and put
to work. UNESCO was founded in late 1945, and it immediately started to look for partnerships with previously existing international federations of scientific and learned societies. One of the main players was the International Council of Scientific Unions (ICSU, now simply International Council for Science), which existed since 1931. It was Joseph Needham and Armando Cortesão who, acting in the name of UNESCO, brokered an agreement between the ICSU and the Academy in order to found a federation of national history of science societies that would join the former and operate under the auspices of UNESCO. The Academy itself could not do the job, since it was mainly an association of individuals, not countries, but was to remain a counseling body to the newly formed International Union for the History of Science, which officially came into being in 1947, taking over the (re)organization of the international congresses.

Separate developments led to the establishment, in 1949, of a similar federation of national philosophy of science associations, the International Union of Philosophy of Science. In 1956, a merger between the history of science union and the younger philosophy of science one was agreed upon, and the International Union of History and Philosophy of Science was born. The parent bodies took, from then on, the names Division of History of Science and Division of Logic, Methodology, and Philosophy of Science. Both groups would later incorporate Technology in their titles.

Thus, it is the DHST and its former avatars that have been organizing the ICHST since 1947. In order to do so, the DHST partners with the national history of science societies or committees that make it up, of which there

Continued on Page 9
are nowadays over 40. The Brazilian Society, SBHC, presented its successful bid to host the 25th ICHST in the General Assembly of the DHST that took place during the previous congress, held in Manchester in July 2013. From then on, a huge effort was put up by the SBHC and the DHST to lead the way to the 2017 Rio de Janeiro congress. A Local Organizing Committee (LOC) was formed in late 2014, under the leadership of Luiz Carlos Soares, professor of history of science at the Federal Fluminense University and the Federal University of Rio the Janeiro, as well as past president of the SBHC. He was joined by two dozen historians of science, technology, and medicine from a number of Brazilian universities and specialized research institutions (the field has been growing in the country in the last two decades). Two other presidents of the SBHC also served in the LOC: Márcia Regina Barros da Silva (University of São Paulo; SBHC president 2014-2016), and Christina Barboza (Museum of Astronomy and Related Sciences, Rio de Janeiro; SBHC president 2016-2018). The crucial and thorny matter of finances fell upon Gisele Sanglard (from the Oswaldo Cruz Foundation in Rio, and SBHC treasurer since 2012). The LOC worked in continuous coordination with the DHST officers, above all with then president Efthymios Nikolaidis (National Hellenic Research Foundation, Greece), president-elect Michael Osborne (Oregon State University, USA), and secretary-general Catherine Jami (CNRS, France).

An International Program Committee (IPC) was also assembled along with the LOC. Chaired by Ronald L. Numbers (University of Wisconsin-Madison, USA), the IPC was formed by 29 scholars from more than a dozen countries. Its main responsibilities were threefold. The first one was evaluating proposals of symposia to be held in the ICHST. For a long time, it has been established practice that the bulk of papers to be delivered in the congress should be part of thematic symposia proposed by scholars from at least two different countries and approved beforehand by the IPC. A symposium proposal must state a clear-cut question or theme to be tackled by its participants, who should also be tentatively named in the proposal. Besides spontaneous proposals from the worldwide community of historians of science and technology, the DHST mandates that the thematic commissions it sponsors also organize symposia. These commissions include the Scientific Instruments Commission; the Commission on the History of Physics; the Commission on Women and Gender in Science, Technology and Medicine; and ten others at present. (There are also other bodies, such as the International Commission of History of Mathematics, and the Commission on the History and Philosophy of Computing, that are co-sponsored by the DHST and different organizations, which are also expected to hold symposia during the ICHST.) In the end, the IPC approved around 110 such symposia, covering a broad variety of themes.

The second task of the IPC was the evaluation of paper abstracts that were submitted outside of any of the aforementioned thematic or commission symposia, the so-called stand-alone papers. Almost 400 such abstracts were proposed, and about 300 were accepted by the IPC for presentation. They were subsequently gathered in 50 thematic clusters, ranging from “Chinese, Indian, and Islamic Classical Medical Traditions” to “Materials and Military Technology in the Modern Era,” passing through “Neuroscience in the Twentieth Century,” “Women and Gender,” and much more.

Finally, the IPC was also responsible for approving the LOC’s proposals of plenary lectures and panels, which occurred on each of the seven days of the Congress. From the opening speech of Marcos Cueto (Oswaldo Cruz Foundation, Rio de Janeiro), titled “Trajectories and Challenges of History of Science in Latin America,” to the closing
25th International Congress of History of Science and Technology, cont.

lecture by Olival Freire Junior (Federal University of Bahia, Brazil) on “Scientific Exchanges between the US and Brazil in the 20th Century: Cultural Diplomacy and Transnational Movements,” there were also plenary talks by Naomi Oreskes (Harvard University, USA) on “Truth, Trust and the Methodological Fetishism,” Sujit Sivasundaram (University of Cambridge, UK) on “Islanding in the History of Science,” and Alan E. Shapiro (University of Minnesota, USA) on “Newton’s Methods in His Optical Investigations,” besides multiple-speaker panels on “Science, Technology, and Medicine between the Global and the Local” (incidentally, this was also the congress general theme, proposed by the LOC back in 2014), and “The ICHST and the Future of History of Science, Technology and Medicine Studies in the Global South.” This varied array of themes and speakers testifies to the growing diversity of the field, and was one of the highlights of the Rio congress.

In the end, besides the plenary activities, the quality and importance of the Congress are to be found ultimately in the almost one thousand papers that were presented within the symposia or in the stand-alone clusters. The Manchester ICHST of 2013 had raised the expectations of the international community, with its record-setting attendance of about 1,800 scholars. The 25th ICHST fell short of this mark, gathering exactly 981 participants. Nevertheless, the tougher conditions of the world economy, including generalized funding shortages for research, together with the fact that usually the bulk of attendees come from European countries (whose travel to Brazil may be quite expensive these days), render this figure all the more remarkable. There were, in total, 58 countries from six continents represented in Rio, and the Congress provided an opportunity for the DHST to re-establish contacts with national committees and societies that had been distant for years, and to invite countries that had never been represented in the organization, such as Tanzania and Uruguay.

The Rio Congress was also the occasion for a number of prize award ceremonies in several fields of the profession, such as the Kenneth O. May Prize of the International Commission on the History of Mathematics and the International Committee on the History of Technology best article and best book prizes. Also, it was the fourth time that the DHST
awarded its Prize for Young Scholars, of which the 2017 winners were Mario Cams, for his PhD dissertation “Companions in Geography: Maps, Instruments and the Mapping of Qing China (c. 1685-1735)” (University of Leuven), Andrew Stuhl, for “Empires on Ice: Science, Nature, and the Making of the Modern Arctic” (University of Wisconsin-Madison, USA), Elena Serrano Jerez, for “Science for Women in the Spanish Enlightenment (1753-1808)” (Autonomous University of Barcelona), Layne Karafantis, for “Under Control: Constructing the Nerve Centers of the Cold War” (Johns Hopkins University), Andreas Sommer, for “Crossing the Boundaries of Mind and Body: Psychical Research and the Origins of Modern Psychology” (University College London), and Amir-Mohammad Gamini, for “Qutb al-Din Shīrāzī and his Role in the Science of Hay’a” (Iranian Institute of Philosophy), who also received the Ihsanoglu Prize for best contribution to the history of science in an Islamic society. With one single exception, all awardees were present and had the opportunity to deliver plenary talks on their work. The range of themes once again reflects the vitality of present-day research in the history of science and technology.

Combining funding from the registration fees with grants from Brazilian federal agencies and research institutions, the LOC was able to honor all of its commitments, despite a steep devaluation of the Brazilian currency that had taken place since 2015. More than thirty students and young scholars from abroad received full support for accommodation expenses, not to mention the invited speakers and prize winners. It is important to note that the ICHST has been the main source of funds for the activities of the DHST in the years between each congress, which include the sponsorship of its commissions and the seed money for the next edition (which will take place in Prague in 2021).

The city and the venue of the congress itself were also high points of the 25th ICHST. Rio de Janeiro is a former capital of Brazil, with a history dating back to a sixteenth-century Portuguese settlement. Besides its famed natural wonders, the city boasts a large number of cultural and scientific institutions. Congress participants had the opportunity to visit the nineteenth century Botanical Garden, the Brazilian National Library (whose collections trace their origins to the Royal Library of the kings of Portugal), the country’s first Natural History Museum and Astronomical Observatory, the fine collection of scientific instruments of the Museum of Astronomy and Related Sciences, and the premises of Oswaldo Cruz Foundation, a world-renowned center for research on tropical diseases and public health. The main congress venue was a centenary building of the Federal University of Rio de Janeiro, one of the oldest and largest research universities in Brazil.

Nevertheless, Rio is also a city with undeniable, deep contrasts. It carries the weight of a long colonial past, of having been one of the main hubs of the Atlantic slave trade for centuries, and of successive waves of authoritarian modernization projects. But for the same reasons, it has been, and still is, a stage for all kinds of social struggles and intellectual vigor. Connecting Brazil to itself and to the world, it embodies, in its very fabric, the intersection of historical scales that was suggested by the theme of the Congress, all the way from the local to the global.
In May 2011, only a couple of months after the Fukushima accident, *The Guardian* reported an interesting incident. Furious parents in the Fukushima area filled up a black bag with radioactive playground earth and delivered it to education officials in protest of certain moves to weaken nuclear safety standards in schools in the area. Three years later, CBS News reported that Fukushima parents were still too scared to let their kids play outside. It was around the same time that the International Atomic Energy Agency (IAEA) was bringing together some of the world’s foremost experts and speakers on radiation protection in its headquarters in Vienna to discuss nuclear safety after Fukushima. But what do these incidents have to do with history of science?

Arguably, radiation protection is the next frontier in nuclear sciences. It has become evident that aspects of nuclear power production and even the use of radiation in medicine have been harmful to humans and the environment. In response, scientists have proposed technical radiation standards in order to reduce the harmful effects of radiation exposure and politicians have often adopted them in their convenience, as in the Fukushima case. But none of them has questioned the history behind the implementation of these standards. Moreover, they have neglected societal concerns as well as the powerful role of international organizations and diplomacy in shaping radiation protection standards.

Indeed, the history of radiation protection is more than just a story of scientific cooperation at an international level that required—and still does—interstate relations and assumed rigid national boundaries. It asks for a broader conception of international relations, science diplomacy, and circulation of knowledge, materials, and expertise, all pointing to international organizations such as the IAEA. Established in 1957, the IAEA has become the most influential player in implementing dosimetric methods worldwide and in establishing protocols of practice in medicine and industry. It is the only United Nations body with specific statutory responsibilities for radiation protection and safety in all sectors. IAEA meets these responsibilities through the exchange of scientific and technical information, the circulation of materials and personnel, and also through highly sensitive political and diplomatic negotiations.

An obvious question arises: How did the IAEA, a diplomatic and political international organization, come to dominate scientific institutions with a long tradition in radiation protection? This is the central question I am going to address in the next five years, funded by an European Research Council (ERC) consolidator grant of 2 million euros and supported by a group of young doctoral and post-doctoral students. The project is titled “Living with Radiation: The History of Radiation Protection and the International Atomic Energy Agency.”

Since 2007 the European Union has supported excellent researchers in Europe through what has been known as the European Research Council grants. Operating on a “bottom-up” basis, without predetermined thematic calls, ERC grants range from 1.5 to 2.5 million euros, depending on the applicants’ experience since completing their PhD research, and are awarded for a period of 5 years. The basic idea and overall aim behind this EU initiative is to provide excellent research conditions allowing an independent researcher to develop innovative ideas and to identify promising
A Diplomatic Turn in History of Science, cont.

areas of research, and the ERC program has been set forward both as a European response to the US eminence in science and technology and as a way to promote Europe to a global player in the latest research. Given the shortage of academic jobs in history of science within the EU, new forms of insecure employment under short-duration contracts, and a wider gap between tenure-track positions and short-lived junior professorships, academics depend increasingly on external funding, EU’s Horizon 2020 (H2020) being the most popular of all. Yet, as the EU’s FET (Future and Emerging Technologies) Advisory Group recognizes, humanities in general have not been well integrated into the H2020 program, and there have been several areas within H2020 where humanities are not even present. ERC grants remain among the few, if not the only ones, that provide almost equal opportunities to researchers in the physical, engineering, and life sciences and those in the humanities. It is one of these grants that will enable me to advocate a diplomatic turn in history of science, arguing that the concept of techno-scientific diplomacy should become central in our narratives as we analyze postwar science.

Diplomacy has historically been a malleable social practice and diplomats have been political actors with professional identities in constant transition. Yet, only recently have diplomatic historians, embracing international history, shifted their focus from intergovernmental relations to study the professionals whose mission it has been to shape them. Stemming from the history of science, my approach helps to adopt an even broader conception of the diplomat, one that combines attention to political, military and economic intervention with recognition of the role played by science/technical experts and international organizations. It actually turns our attention to global techno-scientific diplomacy as a means to understand historical processes in science and technology, thereby dramatically affecting our understanding of the latter.

It is indicative that despite the importance of international organizations for the development of postwar science there is no work on the history of radiation protection in relation to the development of the IAEA. It is time that we address what we usually treat as a strictly techno-scientific issue—how best to protect us from ionized radiation—in a groundbreaking way. Using methods from history, philosophy, and sociology of science, all within the context of international history, in this project I combine attention to state actors, technical experts, diplomatic negotiations, technical assistance, and circulation of scientific devices on a global level through international organizations.

The main objectives of the project are, first, to retrace the international history of radiation protection after World War II, focusing especially on the “Technical Assistance Programs” of the IAEA known today as the “Technical Cooperation Program”; second, to investigate the role of the IAEA in sponsoring knowledge production in the field of radiation protection in competition and/or collaboration with other regulatory agencies; and third, to analyze the standardization of instruments, objects, procedures, and technical vocabulary as the main strategy used by the IAEA for guiding radiation protection worldwide.

The project is highly interdisciplinary in that it brings together expertise from history, sociology, and philosophy of science, international history, and diplomatic history. My hope is that the project will also result in a major travelling museum exhibition on the history of radiation protection in order to reach a wider audience and raise awareness of radiation protection as a social and public concern.

Historians of science have recently recognized the power of exhibitions in engaging the public in the production of knowledge. Nevertheless,
they have the potential to do something more. They make political statements and become sites for the visualization of different social futures. For example, in 1930, the U.S. Food and Drug Administration assembled a collection of products that illustrated shortcomings in the 1906 Federal Food and Drug Act, which prohibited interstate commerce in adulterated and misbranded food and drugs. The FDA exemplified the state of affairs in the marketplace with an exhibition titled “The American Chamber of Horrors,” which also included several radium products of the time. The exhibition shocked the public and played a key role in reshaping drug provisions in the proposed law and passing the Food, Drug, and Cosmetic Act on 25 June 1938. I hope that as I use this public research money, I can reach out to a wide group of people and provide an answer to how we can avoid limiting our kids’ access to their playgrounds in the future.

The Naturhistorisches Museum in Vienna, one of the most prestigious museums in Europe, and the Marie Curie Museum in Paris, one of the most relevant to the project, have already agreed to host the exhibition. In addition, the Center for History of Physics of the American Institute for Physics (AIP) will provide its long-lasting expertise and help us create an online counterpart. I would like to welcome and invite the whole community of historians of science to our five-year journey.

Acknowledgments. Writing a research proposal is never a solitary process. Martin Kush and Ellen Balka were those wonderful colleagues and close friends who read and reread my ERC draft several times, commending, correcting, and suggesting different wording and different pathways. Gary Downey spent an entire morning in the midst of a hectic schedule to remind me that we have to put our feet where our hearts want to be. Aristides Baltas took me in hand throughout the whole process and insisted that excellence means to be the self you imagine. The staff from the Department of Research Services and Career Development of the University of Vienna and Ylva Huber from the Austrian FFG helped enormously by reviewing the proposal and offering advice on technical matters. I would like to thank a number of our colleagues who agreed to contribute to the project in the next five years: Ellen Balka, Simon Fraser University; Geoffrey Bowker, University of California, Irvine; Angela Creager, Princeton University; Paul Frame, Oak Ridge University; Greg Good, Center for History of Physics/AIP; Jacob Hamblin, Oregon State University; Akira Iriye, Harvard University; Ilona Kickbusch, WHO adviser; Martin Kusch, Vienna University; Erez Manela, Harvard University; Johann Marton, Vienna University; Christopher Soares, National Institute of Standards and Technology, and Thomas Weiss, CUNY-University Intellectual History Project. To Spiros, Katerina, and Nikolas Flevaris I owe my sanity having gone through such a tough process.

Maria Rentetzi is Associate Professor of History and Sociology of Science and Technology at the National Technical University of Athens. The host institution at the time of her ERC Consolidator Grant application was the University of Vienna.
Since the Marriott Corporation recently purchased Starwood Hotels and HSS has been using Starwood properties, members should know that this past November, Marriott launched a new sustainability and social impact initiative called **Serve 360: Doing Good in Every Direction.**

Inspired by the United Nations’ Sustainable Development Goals and also Marriott’s own 2025 Sustainability and Social Impact Goals, Serve 360 is cardinally defined, using initials that mirror the points of the compass: Nurture, Sustain, Empower, Welcome.

The goals take the form of specific, measurable accomplishments. For example, under the welcome initiative, the company has committed to training 80 percent of its associates in recognizing and fighting human trafficking by the end of 2018, and 100 percent by the end of 2025. It has also committed to working with human rights organizations to fight forced labor and exploitation in the 126 countries where Marriott operates.

Marriott’s empower goal includes a commitment to establish global gender parity in leadership positions within the company by 2019. Externally, the company aims to invest at least $5 million to expand hospitality and business education programs for youth, women, people with disabilities, veterans, and refugees.

To nurture the communities Marriott operates in, company employees will contribute more than 15 million volunteer hours by 2025, and by 2022, 80 percent of its hotels will participate in community service activities. To achieve its sustainability goals, the company aims to reduce its environmental footprint by reducing water use by 15 percent, carbon use by 30 percent, landfill waste by 45 percent, and reduce food waste by 50 percent. It is also trying to achieve a minimum of 30 percent renewable energy use, all by 2025.
Member News

David F. Channell’s (The University of Texas at Dallas) new book, *A History of Technoscience: Erasing the Boundaries between Science and Technology*, was published by Routledge in May of 2017.

Oxford University Press has recently published a second, revised edition of the survey textbook that Ruth Schwartz Cowan (University of Pennsylvania, Emerita) first published in 1997: *A Social History of American Technology*. Cowan undertook this revision with the assistance of Matthew H. Hersch, of Harvard. Together they have updated the chapters on automobiles, on aerospace, and on information technologies; they have also added an entirely new chapter on biotechnology.

Dr. Cowan retired from the University of Pennsylvania in 2012, but has been busy, not just with the revisions of the textbook but also with the sesquicentennial history of the National Academy of Sciences, a collaboration with Dan Kevles and Peter Westwick. She has, however, decided that she no longer wants to write the history of American women engineers that she and her late husband, Neil M. Cowan, began working on in the 1980s (with grant support from both NSF and the Sloan Foundation), and so has made arrangements to donate all of the research materials (which includes the tapes of several dozen interviews that they conducted) to the Chemical Heritage Foundation.

Surekha Davies’s (Western Connecticut State University) *Renaissance Ethnography and the Invention of the Human: New Worlds, Maps, and Monsters* (Cambridge University Press, 2016), has won the 2016 Morris D. Forkosch Prize for the best first book in intellectual history, awarded by the *Journal of the History of Ideas*, as well as the 2017 Roland H. Bainton Prize in History/Theology, awarded by the Sixteenth Century Society & Conference.

Time and Time Again—*Determination of Longitude at Sea in the 17th Century* by Richard de Grijs (Peking University) was recently published in November 2017 by the Institute of Physics Publishing Ltd., Bristol (UK).

Mott Greene (University of Puget Sound, Emeritus, University of Washington) received the Mary C. Rabbitt Award from the History and Philosophy of Geology Division of the Geological Society of America in 2016, and in 2017 received the Sue Tyler Friedman Medal from the Geological Society of London, for his biography of Alfred Wegener. In 2017 he was also elected a Fellow of the Geological Society of America.

Terence Keel (University of California, Santa Barbara) has received the 2017 Harold J. Plous Award. This is one of the university’s most prestigious faculty honors, given annually to an assistant professor from the humanities, social sciences, or natural sciences who has demonstrated exceptional achievement in research, teaching, and service. It was established in 1957 to honor the memory of Harold J. Plous, an assistant professor of economics. Terence has also been awarded tenure. He will deliver the Plous Lecture in the spring of 2018. Before becoming a faculty member at UCSB in 2012, he completed both his Master of Theological Studies and his PhD in religious studies at Harvard University. An interdisciplinary historian, he works on racism and its connections to modern science, religion, and political power. His book, *Divine Variation: How Christian Thought Became Racial Science*, is forthcoming from Stanford University Press.

Greg Macklem (University of Notre Dame) has taken the position as Math Content Director for Advanced Placement programs in the Center for STEM Education. The Center conducts and applies research to improve STEM teaching and learning for all students, especially students from underrepresented populations in Catholic schools.

Laura Meneghello’s (Universität Siegen) first book, a biography of Jacob Moleschott (1822-1893), was published in November 2017: Jacob Moleschott—A Transnational Biography. Science, Politics, and Popularization in Nineteenth-Century Europe. Bielefeld: transcript, 2017. Dr. Meneghello received her PhD in Modern History from Giessen University, where she held a DFG-scholarship from the International Graduate Centre for the Study of Culture (GCSC). She is now a postdoctoral research and teaching assistant at the Chair of Modern European History of Knowledge and Communication of the University of Siegen. Further information about the book is available online.

Jahnavi Phalkey has been named the Founding Director of Science Gallery Bengaluru. Formerly based at King’s College London, Dr. Phalkey brings a wealth of experience developed at King’s College London, Imperial College London, Georgia Tech, Science Museum London, Deutsches Museum, and other cardinal institutions to the role. Science Gallery Bengaluru is a new gallery space that will produce art/science exhibitions and events that nurture a creative and critical appreciation of science and its relationship to nature and culture in Indian public life. The Gallery, which will open in 2018, is the first Asian member of the Global Science Gallery Network. It will strive to engage young adults at the interface between science and the arts, drawing on the intellectual capital of three of India’s leading research institutions: Indian Institute of Science, National Centre for Biological Science, and Srishti Institute of Art, Design, and Technology, which offer complementary areas of expertise. Read more about Science Gallery Bengaluru, Jahnavi Phalkey, and her plans for the future online. Dr. Phalkey penned the introduction to an Isis Focus piece on “Science, History, and Modern India,” in June 2013.

Greg Priest (Stanford University) recently published an article in the Journal of the History of Ideas, October 2017: “Charles Darwin’s Theory of Moral Sentiments, What Darwin’s Ethics Really Owes to Adam Smith.” Mr. Priest is an ABD student at Stanford, focusing on Darwin’s use of diagrams as tools to develop theories about the natural world.

This past November, Megan Raby’s (University of Texas at Austin) book, American Tropics: The Caribbean Roots of Biodiversity Science, was published by Chapel Hill: University of North Carolina Press. For more information, please click here.

Lissa Roberts (Univeristy of Twente) and Simon Werrett (University College London) have recently co-edited a volume that is now available through open access. Compound Histories: Materials, Governance, and Production, 1760-1840 explores the intertwined realms of production, governance, and materials, placing chemists and chemistry at the center of processes most closely identified with the construction of the modern world.

David Schwartz’s biography of Enrico Fermi, The Last Man Who Knew Everything: The Life and Times of Enrico Fermi, Father of the Nuclear Age was published by Basic Books this past December. The publication date fell close to the 75th anniversary of the first nuclear chain reaction, located under the stands of Stagg Field at the University of Chicago.
Jeffrey I. Seeman (University of Richmond, Virginia) has won the 2017 HIST Award of the Division of the History of Chemistry of the American Chemical Society. This award is the successor to the Dexter Award (1956-2001) and the Sydney M. Edelstein Award (2002-2009), also administered by the Division of the History of Chemistry (HIST) of the American Chemical Society. The HIST Award will be presented to Professor Seeman at the 2018 spring national meeting of the American Chemical Society in New Orleans on Tuesday, March 20, 2018. Additional information about the award can be found on the HIST website.

Virginia Trimble (University of California, Irvine) has been elected to the Council of the American Physical Society to represent the Forum on the History of Physics.

Alex Wellerstein (Stevens Institute of Technology) was named the inaugural David and GG Farber Faculty Fellow in Science and Technology Studies by the Stevens Institute of Technology. The fellowship was created “to recognize and support faculty in the College of Arts and Letters who study and raise public awareness about the social impacts of scientific and technological development.”

Welcome Ryan! HSS’s New Society Coordinator

We welcome Ryan Feigenbaum to the Society’s Coordinator position. Ryan, who succeeds Greg Macklem who was HSS Coordinator for almost seven years, should feel right at home here at the University of Notre Dame, where the HSS Executive Office is located. He earned his Bachelor’s Degree in philosophy from DePaul University in Chicago and then completed his PhD in philosophy at Villanova University near Philadelphia (May 2017), both good Catholic schools. He will also fit in nicely with the history of science community, having written his dissertation on “The Epistemic Foundations of German Biology, 1790-1802.” Here, and in his other work, he drew heavily on our community’s research. He has also taught or served as a graduate assistant in a wide variety of courses, from “The Philosophy of Food, Sustainability, Place,” to the “Philosophy of Sex and Love,” to introductory courses in philosophy.

In addition to his educational background in HPS (and his memberships in HSS and ISHPSSB), he brings broad experience to the Coordinator’s position. He was a Mellon Research Fellow at the New York Botanical Garden, where he created a beautiful website on botany and poetry, titled Poetic Botany: Art and Science of the Eighteenth-Century Vegetable World. He was co-chair of Villanova’s Philosophy Graduate Student Union, co-founder of the Pennsylvania Circle of Ancient Philosophy, was a visiting scholar at the University of Sydney, where he helped with conference organization, and his work in environmental philosophy is in an area of increasing concern for the Executive Office.

But what sets Ryan apart from many in the HPS world, and will be of particular value to the HSS, is his expertise in digital scholarship. In addition to the digital exhibition mentioned above, he is also certified in several areas of digital humanities, with training in computationally-driven text analysis and GIS (Geographic Information System). His web development skills include HTML, CSS, and content management systems (CMS) like WordPress, which is the framework for the HSS website. He is also experienced in digital media production, with expertise in videography, photography, and the Adobe software suite. As the transition from the print

Member News, cont.

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world to the digital world accelerates, Ryan will help us stay astride of this movement.

He will be the first to affirm that he arrived during a challenging time, mere weeks before the annual audit and the annual conference. Not only did he survive these Herculean labors, he thrived and is busily helping us plan for the future. Please do not hesitate to drop Ryan a line of welcome at ryan@hssonline.org.

HSS and Programs in Toronto

The graduate students at Arizona State University penned a nice overview of the ASU faculty, students, and alumni who participated in the 2017 annual meeting. Personal experience suggests that deans and university administrators like to see their institutions represented at international meetings—everyone is encouraged to tout their programs.

THATCamp HSS 2017

By Charles H. Pence (Louisiana State University)

For the fourth time, the annual HSS meeting (in Toronto in November 2017) included an opportunity for scholars interested in digital approaches to the history of science to meet up, collaborate, and learn from one another. The 2017 version of THATCamp HSS was organized by Kate Sheppard (Missouri University of Science and Technology), Danielle Picard (Vanderbilt University), and Stephen Weldon (University of Oklahoma).

“The Humanities and Technology Camp,” or THATCamp for short, is a unique variety of conference—an “unconference,” as the moniker goes—in which no agenda is set in advance and participants work together to craft sessions based on demand and interest. The focus of these meetings, found worldwide, is collaborative learning, with free-form discussion, idea sharing, and problem solving. Attendees with experience in particular technologies or techniques might lead a small working group to improve or enhance them, or form a breakout session for others interested in hearing about their work. Or the group as a whole might discover that we all have a shared interest or problem to solve and focus on it together.

The Toronto Camp saw three major topics of interest quickly rise to the surface. First, while many of us had research interests in digital approaches to history of science, finding a way in which to incorporate these methods into pedagogy is a persistently difficult problem for many of us to solve. To offer us one example, Kate described a solution she used for one of her classes. The educational arm of Wikipedia, the Wiki Education Foundation, has built an assignment aimed at using university students to edit Wikipedia articles. Kate used this assignment in one of her courses: the history of science in Latin America. The benefits are significant and numerous. Students learn how to write, cite, and avoid plagiarism, and are integrated into a broader community of Wikipedia editors, in part by taking a series of training courses on editing that has already been designed by the Wiki Education Foundation. Students select an article with a sizable “content gap,” and fill it by adding three to five hundred words of new material, as a large portion of their final grade.

We then transitioned into an open discussion, focused on other ways in which one might duplicate Wiki-style websites at your own institution, particularly with an eye toward providers that offer hosting for educational computing resources.
Our second main topic embraced the role of Linked Data in digital history research. Linked Data is a collection of technologies that can allow resources on the web—of practically any sort, from bibliographic entries, to descriptions of topic or content areas, to databases of correspondence or collections in museums or libraries—to be connected together. For example, in an ideal world, one might be able to query a list of concepts pertaining to the history of nineteenth-century botany from Wikipedia, cross-reference those concepts through a collection of scientific correspondence to determine a set of letters that make reference to botany in that time period, and then filter that list of letters using a biographical database to determine which authors or recipients were women working in continental Europe.

Of course, we live fairly far from this ideal world, and a number of us were interested in sharing current problems, hurdles, and future directions for Linked Data in digital history of science. Stephen, who in addition to being one of our organizers is editor of the *Isis Current Bibliography* (*IsisCB*), described the ways in which his project has worked to deploy Linked Data. The biggest challenge is in figuring out how we can connect multiple systems—a problem reinforced by Alison Pearn (Cambridge, Darwin Correspondence Project), who is currently working on a team developing a new project, called ΣPSILON designed to unify and allow for comprehensive research across the disparate collections of nineteenth-century scientific correspondence that are currently being published (such as those of Darwin, Henslow, Hooker, Faraday, and Tyndall). This requires, for example, that we be able to pick out authors and identify them as the same person across multiple letters, in multiple databases, prepared by multiple curators: are all of these “Henslow”s the same Henslow? This is precisely the kind of challenge that Linked Data should be able to help us solve, if we can manage the technical complexities involved.

We then broke for lunch, which came with two brief keynote presentations. I gave the first one. Since THATCamps tend to focus on digital tools and applications, I tried to encourage the group to think more holistically about the ways in which digital methods can form part of our traditional scholarship—both being driven by and driving our research questions. Digital analyses work best when the need for them arises organically from your current research program—focus on that first, and let the tools and data follow.

The second keynote was by John Stewart (University of Oklahoma), who discussed his work on open note-taking, inspired by work on open laboratory notebooks in chemistry. Shared archival notes, transcriptions, wikis, or blog posts can have an impact not only on our own work, but can assist other scholars and garner credit for work that does not merit formal publication. John has even had success engaging undergraduates in creating open notes, by publishing a website on which they contribute textual annotations on their primary source course materials to a database visible by the entire class, allowing the group to learn collaboratively.

After lunch, one small group broke away to learn about building Wordpress sites to encourage public collaboration, while the bulk of the group continued with the theme of John’s keynote, discussing ways in which we might manage the voluminous notes that most of us seem to accrue in the digital age. This discussion primarily focused on inventorying tools that one might use to solve different kinds of note-taking problems. Reference managers such as Zotero can be incredibly helpful, as can (for larger projects like archival collections) library/museum online exhibit software, the most popular of which is Omeka. A newer project, Hypothesis, allows any page on the web to be annotated, commented upon, and discussed, publicly or privately. Finally, more traditional note-taking systems such as Evernote or DEVONthink.
can powerfully organize notes, documents, and research projects.

Of course, while these were our topics of discussion at this year’s THATCamp, the beauty of the unconference format is that any one of these might or might not make another appearance next year! If spending a day discussing digital technologies in the history of science sounds like something you are interested in, we encourage you to be on the lookout for next year’s THATCamp HSS. Session proposals are welcomed when you register—so if you have an idea for something that you’ve done that you would like to share, or something that you know nothing about that you’d like to understand better, float the idea as a proposal and others might have the same interest. On behalf of the organizers, we hope to see many of you next year in Seattle!

Until then, see hss2017.THATCamp.org, follow us on Twitter: @THATCampHSS, and look out for registration for THATCamp Seattle when you register for the HSS general meeting next year.
This was the title of our session¹ at the Annual HSS Meeting in Atlanta, GA., (November 3-6, 2016) a session meant to celebrate our colleague Marilyn Bailey Ogilvie’s 80th birthday, as well as explore her career as a leading historian of women in science who began her professional life prior to the affirmative action legislation, (1972), or at a time such lives were still highly improbable for women.

I’m happy to report that the session was well attended, despite parallel sessions. Moreover, our session turned out to be a major success by any other criteria, such as an impressive diversity of colleagues: junior and senior, women and men, US & foreign based, and especially an amazingly rich discussion by both new and veteran colleagues. The session even achieved the ultimate accolade of being talked about in the “corridors of professional gossip.” Still, the rationale for

¹ The session, which concluded with a response by Marilyn B. Ogilvie to each and all the speakers, featured Marilyn’s key collaborator Joy Harvey (as in Ogilvie & Harvey 1999) & her son Stevie Harvey, a NYC-based Egyptologist, who read the bulk of her text and otherwise ensured Joy’s presence at the HSS Meeting under heroic conditions of recovery from a stroke two years earlier; Kerry Magruder, Marilyn’s successor as director of the History of Science Collection at the University of Oklahoma; Sally Gregory Kohlstedt of the University of Minnesota, a former HSS President and herself a contributor to the history of women in science, among other fields; Ruby Heap of the University of Ottawa, a leading historian of Canadian women in science; and Pnina G. Abir-Am, who organized the session, is the recipient of the first HSS’s award for “outstanding research essay” in the history of women in science, and served twice as co-editor of Marilyn’s own essays. (in Uneasy Careers…1987 and Creative Couples in the Sciences, 1996) Margaret Walsh Rossiter, a former Editor of HSS, author of a trilogy on Women Scientists in America, (1982, 1995, 2012) and recipient of HSS’s dual award for best book in the history of science, as well as the best book in the history of women in science, chaired this session. (See attached photo of most of the speakers.)
such a session was not that obvious to some and the session’s fortunes remained uncertain for a long time, to some extent until its very unfolding. Therefore, the following reflections should be of some interest.

Beyond the obvious milestone of celebrating a colleague’s 80th birthday, the session’s rationale included the following: A) to reflect on the changing role of the biographical genre, of which Marilyn has been a major exponent—in the historiography science, and especially in that of women in science. Whereas outright exclusion of women as topics, as well as authors, has become rare four decades after affirmative action, still the topic of the history of women in science remains marginalized. Our session in 2016 reflected a surprising mainstreaming effect.

Yet another aim of this session was (B) to showcase the diversity of contributions to the history of women in science. When another HSS session (2007 in Washington DC) marked the 25th anniversary of Margaret W. Rossiter’s 1st groundbreaking volume of *Women Scientists in America* in 2007, we highlighted the institutional approach that Rossiter’s pioneering book and its later two companion volumes had so successfully pursued. By contrast, Marilyn’s scholarship reminds us that the biographical approach remains not only a big favorite with the general public but also has plenty of justification within the scholarly realm. Focusing the bulk of her effort from one biographical dictionary (1986) to another, (1999, in collaboration with Joy Harvey, see below) Marilyn had the good foresight to grasp that the cumulative impact of biographical dictionaries does not occur in the realm of knowledge only, but also in that of power. By its sheer existence, the genre of the biographical dictionary refutes the long persisting belief that there were always very few women in science (and hence it is fine not to know about them, let alone research them).

Yet another aim (C) was to learn from the specificities of Marilyn’s own career, which again are not widely known, to what extent her career patterns shed light on wider factors enabling and constraining scholarship on the history of women in science. As is the case with most women scholars, indeed most scholars per se, contributions to a new field such as the history of women in science, especially when done by new categories of contributors such as woman historians of science, tend to be easily overlooked. It was thus the burden of our session to convey to HSS at large that many gems can be found well beyond the societal obsession with celebrities and its related academic obsession with professional “stars,” whether those “stars” are self-propelled or engineered by patronage. Marilyn’s unfolding career as scientist, science teacher, science educator, and eventually archivist, curator, historian of science, HSS activist, and mentor to younger colleagues, illuminates the winding road to scholarship for women, as well as the art of survival in academia, often on its fringes, but eventually at its center; the recent naming of a research room in Marilyn’s name at the University of Oklahoma is a first of its kind for a woman historian of science, and possibly for men too. Becoming finally acquainted with the unexpected opportunities of a colleague’s career is illuminating not only for those of us who have enjoyed her collegiality for decades but also for junior colleagues who may find both inspiration and practical wisdom in the diverse choices that Marilyn made throughout her increasingly well-recognized career.

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2 As recently as 2015, upon reviewing a collection on innovative “outsiders” to science, which included no case studies of women scientists (only 2 out of close to 20 authors were women, but their topics did not include women scientists) I was castigated for pointing out these unfortunate aspects of the volume’s composition. A mid-career colleague was more upset that this exclusion by gender was exposed in a major journal such as *Isis* than that it was an outdated form of historiography; instead, this scholar tried to justify the exclusion of case studies on women by lashing at the reviewer’s alleged “lack of understanding.”

3 On the historiography of women in science as a new field see my “The 25th anniversary of Uneasy Careers...”, *HSS Newsletter, April 2013.*
The session began with Sally Gregory Kohlstedt’s attempt to capture the professional context in the history of science in the 1970s, when the affirmative action legislation of 1972 encouraged women to pursue graduate education and academic careers beyond the previous confines of women’s colleges. As Sally, a founder of the first HSS Committee on Women in Science and main instigator for a HSS Prize recognizing contributions to the history of women in science (starting in 1987, or three decades ago!) reminded us, Marilyn faced a profession which, as befits its hybrid origins in science and in history, was slower than general history in recognizing women historians of science and their contributions; still, the history of science is better than science, which, in some fields to this day, has not fixed the many instances in which women scientists were deprived of their credit as discoverers, [e.g. a AAAS session on RNA splicing], not to mention discrimination in less lofty career aspects such as lab space, wage gaps, prize nomination, etc.

Joy D. Harvey described her collaboration with Marilyn on their joint biographical dictionary, a treasure for all those who research or teach the history of women in science. Their project was not only a labor of love but also an immense public serve to historians of science everywhere, and required that Joy drive to Norman, Oklahoma from Boston, Massachusetts. This long drive (1,700 miles/2,736 kilometers) is in itself a feat! Ruby Heap conveyed for us her passion for the lives of women scientists and engineers in Canada, especially those who were both scholars and science policy makers; Ruby also highlighted the impact of the early U.S. historians of women in science on stimulating new scholarship on Canadian women scientists. Kerry Magruder detailed Marilyn’s diverse contributions at the University of Oklahoma, especially her key role in building the history of science collection by deciding which rare books to acquire. Kerry’s superb slides acquainted us with both the professional and social dimensions of Marilyn’s career. My paper/presentation focused on Marilyn’s early scholarship on collaborative couples in science, included in Uneasy Careers… (1987). Thanks to Karen M. Reeds’ foresight, a session on creative couples at HSS-1989-Gainesville, Florida eventually became the volume Creative Couples in the Sciences (1996). My goal was to emphasize Marilyn’s superb collegiality as Marilyn was among the first to contribute a paper and encourage my efforts in bringing together a critical mass of women historians of science in Uneasy Careers….

I concluded by reminding all of Marilyn’s outstanding presentation of her forthcoming biography of the ornithologist Marjorie Nice Morse at the 2015 Prague Meeting of the International Commission on Women in the History of Science, Technology & Medicine.

In addition, I wanted to draw attention to what I perceive as the most outstanding feature of Marilyn’s scholarship, namely the sheer diversity of genres with which she had experimented in attempting to capture the richness of women’s lives in science. Ranging from collective biographical studies—the most read genre by the general public—which Marilyn pioneered at the level of dictionary, (Ogilvie 1986, Ogilvie & Harvey 1999) to studies of collaborative couples (Ogilvie 1987, 1996), to popularizations of woman icons of science such as Mme Curie (Ogilvie 2004), to disciplinary and institutional studies at the mainstream of the history of science as a field. Now in her 81st year, and close to completing her biography of Marjorie Nice Morse, Marilyn remains a key contributor this topic organized at the HSS Annual Meeting in Gainesville, in 1989. Marilyn was of course the first speaker in that session.
to the consolidation of the history of women in science as a vibrant and increasingly mainstream field within the history of science. The session concluded with a standing ovation, which reflected how much Marilyn’s career has meant to us. She was pleasantly surprised.

A Gathering to Remember Sam Schwebert (11/11)

By Snait Gissis

The above title was the one-line announcement in the general program of the HSS in Toronto.

A nice and spacey room was allotted for the gathering, and a special table was set up where all of Sam’s books, authored and edited, were exhibited (at the end of the session attendees were invited to take whichever books they wanted, and they did).

David Kaiser opened with a beautiful short speech about Sam’s work. I added a few sentences about the role of “the survivor’s question” in the way Sam shaped himself and his life morally, the significance he attributed to being Jewish, and how he viewed the recent history of Israel as the deepest tragedy of his life. Then it was open to people to come forth and talk, and they did—from all age groups, marking the different stages of Sam’s life as a historian of science. These included Diane Paul, Gar Allen, Bernie Lightman, David Kahan, Katie Park, Heidi Voskuhl, Al Martinez, Karl Hall, Olival Freire, Alexei Kojevnikov (who flew specially from a Chicago conference), Jessica Wang, and many more. They told stories, some of them serious, others humorous. The common threads running through all were Sam’s generosity, care and concern for people, his continued attempt to forge cooperation among communities, his readiness to share his vast knowledge and his insights, his support for young people—enduring yet relentless in demanding that they stretch themselves as much as they could, his deep and genuine intellectual curiosity, and his modesty.

He touched people in myriad ways. The day after the session many of the participants told me how glad they were of this opportunity to get together and voice these memories collectively.

I feel that this unassuming, straightforward and simple gathering fitted with the way Sam lived.
In Memoriam: Frederick B. Churchill

Frederick B. Churchill
14 December 1932 — 22 July 2017
(By Paul Farber)

Fred’s research focused on German life sciences in the nineteenth century, in particular cytology and embryology. In separate articles he examined in meticulous detail a range of topics that related to heredity, generation, and development. Each is a scholarly gem that was valued by his peers. Fred’s research culminated in a magisterial biography of August Weismann that charted the work of this major scientist and placed it in the broader context of the development of modern theories in the life sciences. In so doing, Fred demonstrated the connections among natural history, theories of heredity, development, and evolution. His work on Weismann, furthermore, described the institutional settings in which the research on biology took place, as well as the personal challenges that Weismann overcame. The book was a synthesis on a grand scale and is a major contribution to the field.

Like the individuals he studied, Fred had a keen love of nature, and was an avid birdwatcher. His love of nature provided him with empathy for the scientists he studied, and an appreciation for the complexity that they were trying to unravel.

While at Indiana, Fred supervised numerous dissertations and educated a generation of historians of the life sciences. They, in turn, started careers and educated others, so that Fred’s impact on the field is extremely wide. Although some of his students pursued research on the history of German biology, others explored different national traditions. Common to his students’ work, however, has been an appreciation of complex interactions among nature, ideas, institutions, and individuals. His students cherish memories of Fred’s nurturing style of mentorship which held them to high standards of scholarship. His keen sense of humor enhanced a personality, the memory of which will not be lost.

In 1979, Fred had the good fortune to marry Sandra Smith, who brought to the marriage two children, John Smith and Brendan Smith, and an extended family from which Fred derived enormous pleasure. A celebration of Fred’s life was held on 7 October 2017 at the Unitarian Universalist Church in Bloomington, Indiana.
In Memoriam: Roger L. Williams

Roger L. Williams
22 June 1923 — 4 July 2017
(By John F. Freeman; Laramie, Wyoming)

Roger L. Williams, a long-time member and supporter of HSS, died on 4 July 2017 at age 94 after a brief illness. A graduate of Greeley High School (Colorado), he began college at Colorado College, interrupting his studies to volunteer in the U.S. Army. He served in the European theater as a supply sergeant during World War II and the subsequent occupation (1943-46). After graduating from Colorado College, he entered the University of Michigan, earning a PhD (1951) in history under the direction of Prince André Lobanov-Rostovsky, an expert on Russia-Asia relations during the nineteenth century. Among his early teaching positions, Roger taught at Minnesota State College at Mankato, in the humanities division at the Massachusetts Institute of Technology, the history department at Michigan State University, and as associate professor and head of the history department at Antioch College. In 1965 Roger was recruited by the University of California, Santa Barbara, to be professor of history and, eventually, served as department head. His graduate students, who now live and work throughout the United States and Canada, fondly recall his gifts as advisor and mentor. When pressed to become UCSB chancellor, instead he chose teaching and research by returning to familiar surroundings and to fly-fishing in Wyoming.

As professor and department head at the University of Wyoming (1971-88), Roger built the department into the region’s leading history department. He was recognized by the university trustees as University of Wyoming’s first Distinguished Professor. In retirement, Roger became an associate of the Rocky Mountain Herbarium. Through his cousin Richmond, who worked at Columbia, Roger became acquainted with Jacques Barzun; the two became life-long friends, sharing similar views on European civilization, on history as literature and as part of the humanities, and on the role of education in a liberal democracy. Barzun encouraged Roger to write cultural history, which he began with Gaslight and Shadow: The World of Napoleon III (1957), followed by eight books on the period. In honor of his intellectual mentor, Roger established and endowed the Barzun Prize in Cultural History, given annually since 1993 by the American Philosophical Society.

Fascinated since childhood by the natural sciences, Roger taught himself taxonomy while preparing Aven Nelson of Wyoming (1984), the biography of the preeminent botanist of the Rocky Mountain region. Roger deftly underpinned that biography with insights about Wyoming and its university, exhibiting the attributes that make for a truly seminal teacher. Two more books followed on the botanical history of the Rocky Mountain region. After retirement, Roger continued research in French history, publishing a trilogy of books on botany and botanists in the eighteenth and nineteenth centuries. Acknowledging the increasing difficulties of publishing academic books, Roger wrote several essays on the legacy of French liberalism for The Journal of the Historical Society, as well as botanical essays for Brittanica, Taxon, and, most recently, Huntia. Four days before his death, Roger was at his desk writing an essay, “Louis de Vilmorin, agronome savant (1816-60).” He left his estate to the Wyoming Community Foundation, which annually will distribute earnings from the endowment to the American Philosophical Society, The Nature Conservancy-Wyoming, and for community foundation grant making within the state.
Call for an Editor-in-Chief for the Biographical Encyclopedia of Astronomers

By Thomas Hockey

My publisher, Springer, recently approached me about a potential third edition of the Biographical Encyclopedia of Astronomers (BEA). (The American Astronomical Society/History of Astronomy Division’s awarding the BEA 2nd edition with the AAS/HAD Osterbrock Prize may have played a part in their decision.) Yet I believe that it is time for me to retire to Editor-in-Chief Emeritus. Should Springer decide to proceed, my role will be to recommend to Springer a new Editor-in-Chief and advise him or her the best I can.

For instance, it will be up to the new Editor-in-Chief to bring to the project a new board of editors and establish a royalties distribution—to be approved by Springer. (Some of the crack editors from editions 1 and 2 may wish to continue.) The Editor-in-Chief also commissions article authors and has the last say on writing style, adherence to guidelines, and content. The BEA is published in English.

There should be approximately 200 new entries to add to those 1,800 already in the 2nd edition. There are still some figures from past centuries whom it would be beneficial to include; however, as the birth date limit for BEA 2 was 1920, there will be many persons born in the 1920s yet to add. The topics of new articles are up to the Editor-in-Chief. The number of portraits should be increased by approximately ten percent.

I would imagine that the 3rd edition would be published in 2021 or sooner; thus staffing should commence relatively soon. Ideally, interested parties will be able to discuss the project with a Springer representative and me at January’s AAS/HAD meeting. For instance, it could then be decided whether the BEA III is to be paper bound, or e-subscription only.

If there is interest in this rewarding but long-term position, please e-mail me for specifics, at the address below.

Thomas Hockey, Editor-in-Chief, the Biographical Encyclopedia of Astronomers
hockey@uni.edu

Call for Submissions: Human Arenas

Human Arenas, an interdisciplinary journal of psychology, culture, and meaning is now online and ready to accept submissions. The first issue will be available in March/April 2018. HSS members are especially invited to submit your valuable contributions and to experiment with the new formats of academic writing the journal is developing.

The Cowles Foundation for Research in Economics, at Yale University, seeks a person with interest and expertise in Economics and History for a postdoctoral position. The appointment will begin in July of 2018 and continue until June of 2019. The primary duties of the postdoctoral associate will be to research and write a history of the Cowles Foundation and its relationship to the discipline of Economics. In doing so, the researcher will draw upon published materials, the Cowles archives, and archival materials at other locations. Under appropriate circumstances, the Cowles Foundation will support the publication of the results of the research by a major university press. The position will include a competitive salary and benefits as well as research funds. We will begin to review applications in December with a decision to be made early in the spring semester for a person to start in the fall of 2018.

Yale University is an Affirmative Action/Equal Opportunity Employer. Yale values diversity among its students, staff, and faculty and strongly welcomes applications from women, persons with disabilities, protected veterans and underrepresented minorities. Applicants should submit a letter of application, C.V., and three letters of recommendation to https://econjobmarket.org/postings.php?posid=4883
December 2017 HPS&ST Note

The December HPS&ST Note is now available.

CONTENTS

- Introduction
- HPS&ST Conference at Zhejiang Normal University China
- Philosophy Publications Archive: New Site for Downloadable Papers
- 4th Latin American Conference of the International History, Philosophy and Science Teaching Group (IHPST-LA), September 3 to 5, 2018, Federal University of ABC, UFABC, Santo André, Brazil
- The International Committee for the History of Technology’s 45th Symposium, 17 to 21 July 2018, Saint-Étienne, France
- ICOHTEC Prizes for Outstanding Books and Articles in the History of Technology
- History, Philosophy, and Science Teaching: New Perspectives
- Rounded Globe, Downloadable Open-Access Books
- Opinion Page: Mario Bunge, “In Defense of Scientism”
- Recent HPS&ST Research Articles
- Recent HPS&ST Related Books
- Seeking an Assistant Editor
- Coming HPS&ST Related Conferences

Contributions to the Note (publications, thematic issues, conferences, Opinion Page, etc.) are welcome and should be sent to the editor: Michael R. Matthews, UNSW, m.matthews@unsw.edu.au.

Those who wish to subscribe to the list to receive the monthly Note should send a message to: hpsst-list-subscribe@lists.unsw.edu.au. There is no need for subject header or any message; the email itself suffices for addition to the hpsst-list.

East Asian Science, Technology and Society: an International Journal, Volume 11, Number 4 Published

The table of contents for East Asian Science, Technology and Society: an International Journal Volume 11, Number 4, December 2017 has been released. Please visit the website for more information.

The Othmer Library of the Chemical Heritage Foundation Acquires the Library of the Late Allen G. Debus, Noted Historian of Early Alchemy and Medicine

The Chemical Heritage Foundation (CHF) is pleased to announce the acquisition of the library of the noted historian of early alchemy and medicine Allen G. Debus (1926–2009), thanks to the generosity of his widow, Brunilda L. Debus. The collection of approximately 800 titles includes over 300 rare books and important secondary and reference works on the history of early medical chemistry. As is to be expected, the largest number—120—date from the 17th century, which was Professor Debus’ specialty, with an additional twenty-three from the 16th century. CHF will be honoring Professor Debus and his library with
News from the Profession, cont.

a special event at its facility in Philadelphia on Friday, 15 June 2018. Several historians of science will speak on Professor Debus’s work and his influence, including Dr. Ku-Ming Chang (a former student of Professor Debus, now at the Academica Sinica in Taipei (R.O.C.)), Dr. Margaret Garber (California State University, Fullerton), and Dr. Lawrence Principe (Johns Hopkins University). CHF will also offer a closer look at the significance of his collection from CHF’s Curator of Rare Books and Manuscripts, Dr. James Voelkel, and general remarks about Professor Debus himself, with members of his family taking part.

As is to be expected from a scholar who focused on Paracelsus and medical chemistry, the collection is strong in these areas, with six titles by Paracelsus and two or more each by authors such as Jean Béguin, Nicaise Le Fèvre, Antoine Deidier, Daniel Sennert, and Petrus Severinus. There are an exceptional number of works of Joseph Du Chesne, a.k.a. Quercetanus, on whom Professor Debus wrote the entry in the Dictionary of Scientific Biography and who featured strongly in his book, The French Paracelsans. The collection is also strong in the works of the physician and natural philosopher Robert Fludd. Surprisingly, about two thirds of the collection do not duplicate works already held in the Othmer Library. Often, the overlap seems miraculous. For instance, the Allen G. Debus Collection includes a first edition Musaeum Hermeticum (1625), whereas the Othmer Library only held the second, 1678 edition. Alternately, the Othmer Library held the first edition of Whitelocke Bulstrode’s An Essay of Transmigration, in Defence of Pythagoras: or, a Discourse of Natural Philosophy (1692), and the Allen G. Debus Collection includes a second edition (1717). In two cases, CHF has otherwise identical titles that differ only in the publisher’s imprints. Of great value especially are works in the Allen G. Debus Collection by important authors in the Othmer Library collections that CHF did not already hold, for instance two works by Isaac Newton, his The Chronology of Antient Kingdoms Amended (1728) and Observations upon the Prophecies of Daniel, and the Apocalypse of St. John (1733), and American alchemist George Starkey’s Des hochgelahrten Philalethae drey schöne und auserlesene Tractätlein von Verwandelung der Metallen (1675). A dedicated book collector and expert in the subject like Professor Debus creates a collection that is far more than the sum of the individual volumes it contains. The Othmer Library is very fortunate to have received whole such a wonderful resource and looks forward to sharing the Allen G. Debus collection with researchers today and in the future.

Fellowships in Aerospace History

The Fellowships in Aerospace History are offered annually by the National Aeronautics Space Administration (NASA) to support significant scholarly research projects in aerospace history. These fellowships grant the opportunity to engage in significant and sustained advanced research in all aspects of the history of aerospace from the earliest human interest in flight to the present, including cultural and intellectual history, economic history, history of law and public policy, and the history of science, engineering, and management. NASA provides funds to the American Historical Association, the History of Science Society, and the Society for the History of Technology to allow each association to award a fellowship. Applications will be entered into consideration for all three fellowships.

Eligibility

Applicants must possess a PhD in history or in a closely related field, or be enrolled as a student (having completed all coursework) in a doctoral degree-granting program. Preference will be given to scholars at early stages in their careers. Stipends may be awarded only to US citizens or permanent residents.
**Fellowship Term**
The fellowship term is for a period of at least six months, but not more than nine months, and should commence no later than January 2019. The fellow will be expected to devote the term entirely to the proposed research project. Residency is not required, but office space may be provided by the Kluge Center at the Library of Congress upon request for a minimum of three months. Fellows are encouraged to take advantage of resources at the National Archives, the National Academies of Science, the Library of Congress, the Smithsonian Air and Space Museum, NASA Headquarters, and other collections in the Washington, DC, area.

**Other Requirements**
The fellow will be expected to write a report and present a public lecture on the fellowship experience. If the fellow is in residency in Washington, DC, a presentation at NASA headquarters is encouraged. The fellow shall provide to the NASA History Office a copy of any publications that might emerge from the research undertaken during the fellowship year.

**Stipend**
The stipend is $21,250 for a six- to nine-month fellowship, which includes travel expenses. The fellowship income is classified as stipendiary—there are no provisions for paying fringe benefits or withholding taxes—and will be disbursed in equal payments over the term of the fellowship. Funds may not be used to support tuition or fees. A fellow may not hold other major fellowships or grants during the fellowship term, except sabbatical and supplemental grants from their own institutions, and small grants from other sources for specific research expenses. Sources of anticipated support must be listed in the application form.

**To Apply**
Click here for the application. The applicant must submit a completed application including a specific and detailed research proposal that will be the basis of the fellow’s research during the term. Completed applications are due April 1, and should include:

- Applicant’s CV
- A proposal of not more than 10 pages (double-spaced)
  1. describing your qualifications for a fellowship
  2. detailing briefly the research project you propose to undertake
  3. relating your anticipated experiences as a fellow to your goals
  4. indicating clearly why NASA is the appropriate place to conduct the proposed research
- Optional: No more than 10 pages of any additional writings (material cannot be returned)
- At least two and not more than four letters of recommendation that address the historical competence of the applicant, his/her ability to apply historical concepts and methods to aerospace science, technology, management or policy, and his/her ability to communicate both orally and in writing

**Deadline, Submission Information, and Notification**
The HSS has partnered with AHA and Interfolio to manage our fellowship application process. Applying through Interfolio is FREE for applicants. When submitting an application, if you don’t already have an account with Interfolio, you will be asked to set up an account and create a password, but you will NOT be charged any fee to create the account. Applications must be submitted through Interfolio by April 1 each year. Mailed, e-mailed, or faxed applications will not be accepted. Names of the winners will be announced in June.

Please contact info@hssonline.org with any questions.
American Historical Association Prizes

The following titles, which were honored by the American Historical Association at its 2017 conference, may be of interest to HSS members:

The George Louis Beer Prize in European international history since 1895
Erik Linstrum (University of Virginia) for *Ruling Minds: Psychology in the British Empire* (Harvard Univ. Press, 2016)

The Albert J. Beveridge Award on the history of the United States, Latin America, or Canada, from 1492 to the present
David A. Chang (University of Minnesota) for *The World and All the Things upon It: Native Hawaiian Geographies of Exploration* (Univ. of Minnesota Press, 2016)

Michele Aldrich Award

The History and Philosophy of Geology Division of the Geological Society of America is pleased to announce a new student research award.

The Michele Aldrich History and Philosophy of Geology Student Research Award will provide up to US $4,000 with supporting budget for travel/archival research in the history and philosophy of geology. The application deadline is 1 February 2018. Information, web links, and a “Steps to Success” PDF guide can be found on the award website. Students and recent graduates are eligible.