VOLUME 55, NUMBER 2

HISTORY OF SCIENCE SOCIETY

Newsletter

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Letter from the President

Soraya de Chadarevian

Dear HSS community,

These are challenging times for many of us, and sometimes it is not easy to discern the way ahead – or, for that matter, write a presidential letter. The question of what HSS can do to respond to these challenges is foremost on my mind. Science, technology, and medicine are implicated in many ways – from changes in funding schemes and the role of science in policy and politics to new ways of waging wars and flirting with environmental disasters. Future historians will pore over this period, but what can we do now to confront these multiple crises? How can we come out of them stronger? I hope that we can address these and other questions together when we meet in Edinburgh.

Letter from the President (cont.)

Currently, most of our efforts are focused on getting the HSS/ESHS meeting, co-hosted by the BSHS in Edinburgh, off the ground. This will be a truly joint meeting with a common opening plenary and a common reception, including an unmissable ceilidh, at the National Museum of Scotland. My hope is that these shared spaces will lead to many meaningful exchanges and lasting new connections between members of these sibling societies.

On a related note, I am delighted to announce that Lynn Nyhart has been awarded the Sarton Medal for 2026. This is the most prestigious award of the History of Science Society and honors a scholar for lifetime scholarly achievement. HSS has also awarded Gwen Kay the Outstanding Service Award. She has served as Treasurer for the Society from 2017-2024 and has dedicated a huge amount of time and care to keep the Society's finances in balance. I extend my heartfelt congratulations to both. The ceremony for both awards will take place at the Edinburgh meeting. All other HSS prize winners will be announced on the same occasion.

Besides all the planning that goes into the Edinburgh meeting, HSS had a substantive presence at the AAAS meeting in Phoenix in February, where Jacob Hamblin gave the Sarton Lecture on "America's Cold War Science Experiment" to a full audience. The lecture grappled with the legacies of and the current challenges to the Cold War science infrastructure, which generated a lively discussion. HSS also sponsored a well-attended session on "AI's Potential Through a Historical Lens," co-organized by Jonathan Coopersmith and Barbara Hahn, that led to an interesting discussion on what history can contribute to current policy debates around AI. You can read more on HSS's long-standing engagement with AAAS in the article by Jane Maienschein and Betty Smocovitis in this newsletter. They encourage HSS members to join Section L, the History and Philosophy of Science section, and engage with AAAS as an important forum to interact with scientists and provide historical expertise to science-policy making.

You will all have seen the announcements for the new **HSS Dissertation Travel Grant, for the support of research trips**, generously funded by a donation of longstanding HSS member Sally Gregory Kohlstedt, and the **Mary Terrall Fund**, set up by friends and colleagues in Mary's honor, which provides support for scholars who experience a temporary moment of financial precarity. While federal funding opportunities continue to be threatened and departmental funds are more difficult to get hold of, HSS is happy to be able to offer these new grant opportunities.

Letter from the President (cont.)

The new Osiris editorial team started their five-year term in January. The editors are Prakash Kumar (Penn State), Courtney Thompson (Mississippi State), Hugh Cagle (University of Utah), and Monica Azzolini (Università' di Bologna). HSS thanks both the outgoing team, including Elaine Leong, Myrna Perez Sheldon, and Ahmed Ragab, and the incoming team for their dedication and commitment.

Finally, I look forward to attending the ACLS regional gathering that will take place at UCLA at the end of March. ACLS has been making a strong case for the support of the Humanities, including filing a case to restore the National Endowment for the Humanities' (NEH) previous function and funding and fostering connections between different societies for higher resilience.

For sure, together we are stronger.

If you have concerns or ideas about what HSS can be doing to help our members, we are keen to hear them. Thank you for being part of HSS.

Soraya de Chadarevian
HSS President

Sarton Medalist Announcement

HSS is pleased to announce the 2026 Sarton Medalist, Lynn Nyhart.

Nyhart is Emeritus Professor in the Department of History at the University of Wisconsin, having previously served as the Robert E. Kohler Professor of History of Science. She has published or edited several books and volumes and written numerous articles in the history and philosophy of biology, including Biology Takes Form: Animal Morphology and the German Universities, 1800-1900, Modern Nature: The Rise of the Biological Perspective in Germany, and most recently Biological Individuality: Integrating Scientific, Philosophical, and Historical Perspectives.

Nyhart's work is preeminent in the history of biology. Her first book, Biology Takes Form: Animal Morphology and the German Universities, 1800-1900, masterfully charted the intellectual, economic, and institutional influences of morphology on the life sciences in the nineteenth century. Her later book, Modern Nature: The Rise of the Biological Perspective in Germany won the Susan Abrams Prize and recovered a tradition of ecological thinking that complicated our understanding of natural history as a practice of classification. Her scholarship has become foundational for the history of biology and is widely read by students in the field. Moreover, she has long created space for collaboration between historians, philosophers, and biologists, culminating in her interdisciplinary volume Biological Individuality: Integrating Scientific, Philosophical, and Historical Perspectives.

Nyhart has a long record of service to her home institution and the history of science as a professional field. She has served as the Chair of her department at the University of Wisconsin twice, and has held leadership positions in the University's Gender and Women's Studies Program and the Institute for Research in the Humanities. Within HSS, she has served as President, organized the conference program, run the nominations committee, and has served on multiple editorial boards and fellowship review panels. She has mentored and influenced countless students and junior scholars who now are leading scholars in the history of science.

Her careful scholarship, long record of service, and interdisciplinary organizing efforts make her a model for future historians of science and a highly deserving recipient of the Sarton Medal.

Outstanding Service Award Announcement

We are overjoyed to announce that Gwen Kay, former Treasurer of the History of Science Society, is the recipient of the 2026 Outstanding Service Award. Gwen's commitment to the Society and its mission exemplifies the dedicated service to our community that this award was established to recognize.Gwen served as Treasurer of the Society for four terms, from 2017 to 2024. The Society Treasurer is a demanding position. Not only does the Treasurer deal with everyday financial matters, but they must plan and design the annual budget, meet with the Financial Committee to discuss the contents of the budget, work closely with the Executive Office on operational expenditures, participate in the many meetings and decision-making processes of the Executive Committee, and prepare the documents for the annual external audit.

To be sure, all elected positions of the History of Science Society demand a significant amount of labor. What distinguishes Gwen's contributions are her effective and compassionate steering of the Society's finances during the turbulent years of 2020-2024.

Through the early months of the COVID-19 pandemic, the summer of Black Lives Matter protests, and the 2020 U.S. presidential election, everything felt brittle. Gwen's guiding hand steadied the Society. She patiently explained complex budget matters and decisions, ensuring that members felt fully-informed. Gwen worked to make resources available for urgent expenses without compromising the Society's long-term financial stability, including the creation of a hardship fund to address members' emergency needs. Gwen found ways to fund the rapidly changing needs of the Society's publications as well, providing support that allowed its journals to maintain their quality and meet publication deadlines when so many others faltered. She demonstrated a true commitment to the values of our community, fostering its inclusivity and nurturing members' professional growth in adverse circumstances.

The Society's operational continuity has been possible because of Gwen's steadfast dedication. Through unexpected personnel transitions in 2021, Gwen calmly stepped up to devote significant time to onboarding the new Executive Director and Vice-President. From 2022-2023, there were many complex and ambitious projects, including the HSS Centennial events and the planning of the 2024 HSS Centennial Meeting in Mérida, Mexico. Gwen took all this in stride, balancing the exceptional nature of the Centennial with fiscal responsibility.

Outstanding Service Award Announcement (cont.)

In addition to her role as Treasurer and a member of the Executive Committee, Gwen has also provided counsel to the Development Committee, twice served on the Pauly Prize subcommittee, and continues to serve on the Financial Committee. In her last year as Treasurer, she kindly mentored the new Treasurer, Emily Hamilton, who successfully assumed responsibilities in a smooth transition.

Gwen's dedication and steady financial guidance made it possible for the History of Science Society to thrive these last many years. Gwen has always been a pleasure to work with; she is a model of collegiality and collaborative leadership. She is generous, wise, even-tempered, and creative in solving problems. She will inspire her successors with her example of conscientious service. And she leaves the Society a legacy of sound financial management that prioritizes the needs of the members. We can imagine no one more deserving of this award.

The History of Science at the AAAS

By Jane Maienschein and Betty Smocovitis

Jane Maienschein newly appointed as historian and advisor to AAAS.

We both have been elected to the American Association for the Advancement of Science (AAAS) Board of Directors, Jane serving 2022-2025 and Betty 2023-2026. Starting in 2026, Jane has also been appointed to a new position as Historian and Advisor for AAAS.

We feel privileged to serve in these roles as we learn so much about the organization, its purpose, its many activities, and about the role that science itself plays in society more generally. Though it is based in Washington, DC, the organization has become more international in scope, including membership from all over the world. It is at the forefront of science diplomacy and other efforts to build bridges between international agencies and organizations. The Board itself consists of a diverse group of wonderfully talented people. We have been gratified at how often they explicitly invite and always welcome our historical perspectives and insights. Sudip Parikh, the CEO of the AAAS, has been especially keen on history of science.

The History of Science at the AAAS (cont.)

When Jane first joined, the Board was updating its mission and vision statements, following a several-year effort by a committee on which Betty served to modernize the governance and goals of the organization.

Jane Maienschein, Sudip Parikh (CEO of AAAS) and Betty Smocovitis at the President's Reception, Arizona, 2026.

Founded in 1848, and originally modelled after the British Association for the Advancement of Science that was founded in 1831, the organization has evolved, now playing a more international role in the advancement of science. As it stands now, the organization's mission is to: "Advance science, engineering, and innovation throughout the world for the benefit of all." Its vision statement says that the AAAS is: "A boldly inclusive, mobilized, and global scientific community that ignites, enables, and celebrates scientific excellence and science-informed decisions and actions." Not all historians are entirely comfortable about "advancing" all science. Most of us in fact see ourselves as critics when needed. But, having been part of the AAAS organization for a very long time, we believe that emphasis on the "benefit to all" to be sincere and infused throughout the organization. The AAAS views inclusivity as a foundational value. Here, we point to areas where our organizations intersect and complement each other, with opportunities for the Society and individual members.

The History of Science at the AAAS (cont.)

The History of Science Society has been an affiliate of the AAAS for decades, having joined to promote shared interests. Starting in 1960, the HSS has also co-sponsored the George Sarton Memorial Lecture at the annual AAAS meeting. René Dubos presented “Science and the Public” at that first event, and the roster of speakers is available here. We each attended our first AAAS meetings while graduate students with our fathers and we both have many vivid memories of the Sarton Lecture. Jane attended her first AAAS meeting in 1977, and heard Jane Oppenheimer’s Sarton Lecture on “A Biologist Looks at History.” She was inspired to learn more about the AAAS as well as about the speaker, whose talk was attended by hundreds with a flock of reporters swarming Oppenheimer afterwards. When Jane had the privilege of presenting the lecture in 1996, she had the same experience. Betty was lucky enough to attend Derek de Solla Price’s famous “Sealing wax and string: a philosophy of the experimenter’s role in the genesis of high technology” in 1983, and recalls being struck by the lecture and the enthusiasm of hundreds of audience members. The recent 2025 lecture by Peter Galison, Harvard University, on "Visualizing Space/Time/Matter: Physics, Film, and History" continued this tradition that provides HSS with a valuable forum to reach out to a diverse audience of scientists, science educators, and writers, offering the diverse attendants at the AAAS meeting the opportunity to appreciate the importance of history.

Peter Galison delivering the Sarton Lecture at the 2025 AAAS meeting in Boston, Massachusetts

The History of Science at the AAAS (cont.)

The 2026 lecture titled “America’s Cold War Science Experiment” delivered by Oregon State University’s Jacob Darwin Hamblin, drew a lively audience keen on learning more about the political context of science, and especially about science as a form of “soft power.”

Jacob Darwin Hamblin Delivering the Sarton Lecture at the 2026 AAAS Meeting in Phoenix, Arizona

Yet another connection between HSS and AAAS comes in the work of the AAAS’s Section L, the History and Philosophy of Science (there are twenty-four sections in the organization largely following disciplinary categories). Each section is run by a set of elected officers, whose primary task is to manage the section, making sure that our voices are heard in policies endorsed by AAAS. HSS member Susan Lindee serves as the current section chair. HSS Secretary and Smithsonian Institution Air and Space Museum Curator Matt Shindell began his experience in Washington, D.C. as an AAAS intern and recently served as a section L officer. The sections also organize symposia for the annual meeting along with the important task of nominating and electing AAAS Fellows. Members of both HSS and the Philosophy of Science Association have held leadership positions in Section L, and many members have been elected. In addition, many historians of science have been elected as AAAS Fellows (see current Fellows here, and historic fellows here, including George Sarton elected in 1921). Eligibility requires membership in AAAS, with a number of organizations now offering institutional memberships (Information can be found here as well as discounts offered for students and digital memberships).

The History of Science at the AAAS (cont.)

AAAS publishes Science magazine and the Science family of journals. They offer a free daily digest, which offers informative updates, news, and provocative discussions, and to which anybody can subscribe. Science Advances includes historical articles on a wide range of topics. And the modest number of book reviews often include history and philosophy of science topics, which the editors regard as holding wide interest. Here again there are many opportunities for our community to reach international communities of scientists, policy makers, and others interested in science and its history and contexts.We invite readers to think of possible policy pieces, letters to the editor, or contributions to the family of journals.

Historians of science have also played many critical roles with AAAS over the decades. Keith Benson headed a History Committee to plan events for the AAAS 150th anniversary in 1998. That led to a volume by Sally Gregory Kohlstedt, Michael Sokal, and Bruce Lewenstein, each of whom had played leadership roles in HSS and the AAAS, that was titled The Establishment of Science in America: 150 Years of the American Association for the Advancement of Science (Rutgers University Press, 1999). “They did not require us to produce a laudatory book, so there are plenty of warts here," says Lewenstein in an interview about the book at Cornell University. "Yes, we also wrote about the good things. But basically we were allowed to say what we thought had happened in the association, and that's important. It helps the book get beyond that dull institutional history." (See David Brand, “Lively book by three noted historians of science traces 150 years of AAAS history with 'plenty of warts',” Cornell Chronicle February 17, 2000).

Celebrating the Ties between HSS and AAAS after Jacob Darwin Hamblin’s Sarton Lecture (J.P. Gutierrez, Betty Smocovitis, Soraya de Chadarevian, Matthew Shindell, Richard Creath, Jane Maienschein and Jake Hamblin).

The History of Science at the AAAS (cont.)

Others have worked with the AAAS's excellent programs in science education, religion and science, law and society, ethics and science, SciLine, and other efforts to help inform the press and an increasingly diverse public about science. HSS members including James Fleming have served as AAAS Science and Technology Policy Fellows, working on Capitol Hill in Washington, DC. Such activities have also proven transformative and crucial in wider political contexts, and are needed now, more than ever, given the recent challenges facing the scientific community.

We close by encouraging you to join us in this collaborative and interdisciplinary work. There are many committees (and subcommittees) as well as leadership roles that need our help as historians of science. Scientific organizations such as the AAAS need historians of science to provide historical perspectives and the valuable context to important policy-making decisions today.

How to Revolutionize Your Survey Course in the History of Science

Jörg Matthias Determann

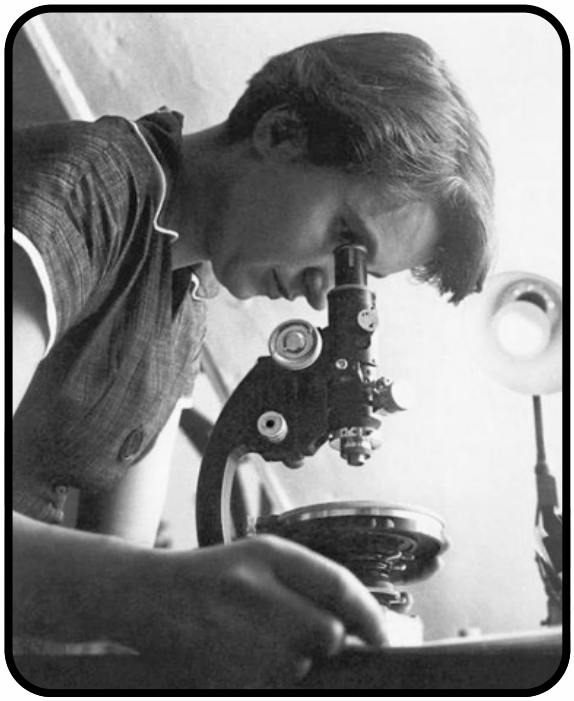
During the academic year 2025/2026, I set out to teach a course that I thought would have been regularly offered at my university: HIST 393 Revolutions in Science II. The description in our Undergraduate Bulletin probably sounds familiar to historians of science at many colleges: “A survey of the history of science from 1800 to the present, focusing on the development of scientific ideas, practices and institutions in Western society.” This three-credit semester-long course is also cross-listed as a Science, Technology and Society (SCTS) class, thus serving students beyond the Department of History. With over 29,000 students enrolled across Virginia Commonwealth University (VCU), I assumed that at least one section of such a general history of science course would fill up almost every year.

To my surprise, what I thought was a regular offering had been rarely on the books in recent years. My colleagues in the Department of History explained to me that they had thought of revising this survey class before placing it on the schedule again. With the title “Revolutions in Science,” it engaged with a long-standing historiographical framework, that of Thomas Kuhn’s paradigms. Although Kuhn’s book The Structure of Scientific Revolutions was over sixty years old, my colleagues thought that students could still learn from it and from the literature that built on it. More problematic were the contents that pulled on the outdated “Plato to NATO” model. Indeed, HIST 393 is the continuation of HIST 392 Revolutions in Science I, which offers “a survey of the history of science from the ancient Greeks to 1800.”

Because the formal curricular approval processes at VCU, like those at comparable institutions, can be lengthy and bureaucratic, I kept the course name and description. Nonetheless, after fruitful exchanges with my colleagues, I thus re-envisioned the contents. In my version of the course, “Revolutions in Science” covered not just the emergence of new scientific ideas and models, but also social transformations. Such “social revolutions” and “inclusion revolutions” comprise histories of activism and struggles over access, representation, and justice. I thus gave special emphasis to histories of women, people of color, those with non-Western origins, queer people, and disabled people in the history of science. This included the biographies of Nobel laureates like Marie Curie and Abdus Salam as well as those whose groundbreaking scientific contributions or social activism went unrecognized in their lifetimes. The first page of my syllabus contained a photograph of the chemist Rosalind Franklin who received her awards and honors posthumously.

How to Revolutionize Your Survey Course in the History of Science (cont.)

A focus on “scientific ideas, practices and institutions” remained part of the official course description, so I did not and could not turn this survey into pure social history. Students thus continued to learn about the emergence of major theories and models in the life and physical sciences. At the beginning of my class, we studied the development of Charles Darwin’s evolutionary theory and its global reception. Next, we explored Albert Einstein’s theory of relativity and the invention of the atomic bomb. After that, we traced the story of genetics from Gregor Mendel to the Human Genome Project. I expected course participants from any major to learn the scientific concepts in all these revolutions, assigning them historical research papers as primary sources.



Nevertheless, while students learned about key thinkers, I tried to situate them within changing social and political structures. For Charles Darwin, this meant the context of Victorian society and the British Empire. For Albert Einstein, we examined the rise of fascism and antisemitism in the first half of the twentieth century. We also investigated how the mass media had created the myth of the lone genius at a time when “Big Science” emerged. In telling the history of genetics, we analyzed the multiple factors that led to the underappreciation of Rosalind Franklin compared with her male collaborators.

There may be limits when it comes to reframing revolutions in science as social revolutions. Working at an American university, I am well aware of the heightened political sensitivity of discussions of gender and race. At the same time, my classroom was far more diverse than in Darwin’s, Einstein’s, or Franklin’s times. In the face of restrictions on the promotion of diversity and inclusion, we historians can nonetheless include a greater representation of women and minorities in our courses. Demographic changes in science and higher education, of course, are never the result of a few great men and their ideas alone.

Jörg Matthias Determann teaches history at Virginia Commonwealth University in Qatar. He is the author of *Diversity, Equity, and Inclusion in Astronomy: A Modern History* (Springer, 2023). He thanks Jeanne Vaz for commenting on a previous version of this essay. He is further grateful to Sam Franz for helpful edits and to Summer Bateiha, Karen Rader and John Powers for valuable exchanges about pedagogy.

New *Osiris* Editors & Call for Submissions

***Osiris* is pleased to announce a new set of primary editors.** Monica Azzolini (University of Bologna), Hugh Cagle (University of Utah), Prakash Kumar (Penn State), and Courtney Thompson (Mississippi State University) will serve as editors for the next five years.

Founded in 1936 by George Sarton, and relaunched by the History of Science Society in 1985, *Osiris* is an annual thematic journal that highlights research on significant themes in the history of science. *Osiris* is one of the five publications of the History of Science Society (the other four being *Isis*, the *Isis Current Bibliography*, the *HSS Newsletter*, and the online HSS Portal).

***Osiris* invites expressions of interest and volume proposals for Volume 45 (projected publication year 2030).**

Osiris aims to connect the history of science with other areas of historical and interdisciplinary scholarship. Volumes of the journal are designed to explore how, where, and why science, broadly construed, draws upon and contributes to society, culture, and politics. The journal's editors and board members strongly encourage proposals that engage with and examine broad themes while aiming for diversity across time and space. The editors are equally interested in receiving proposals that assess the state of the history of science as a field, in both established and emerging areas of scholarship. They also welcome proposals that experiment with format and style. Recent volumes have addressed animal mobilities; disability and the history of science; and algorithmic cultures.

Pre-proposal:

Please send a 1-page expression of interest which includes a pitch of your idea and a list of potential collaborators by June 26, 2026 to osiris@hssonline.org. *Osiris* editors will be available to meet in July with those who have submitted expressions of interest, at the HSS meeting in Edinburgh or virtually. The *Osiris* editors are committed to provide feedback on these pre-proposals to make them competitive for the final round of selection.

New *Osiris* Editors & Call for Submissions

Full-volume proposal:

The closing date for the submission of full-volume proposals is November 13, 2026.

Your proposal should include the following items:

- A description of the topic and its significance (approximately 1500 words), especially highlighting the importance of the proposed volume to the history of science, broadly construed.
- A list of 12 to 15 contributors and essay title + succinct description (~ 150 words) of each contributor's individual essay
- A one-page c.v. of the guest editor(s).

The proposal and all supporting materials should be submitted as a single PDF to osiris@hssonline.org with "Osiris vol. 45 Proposal" in the title.

The guest editor(s) and their contributors must be prepared to meet the *Osiris* publication schedule. Volume 45 will go to press—after refereeing, authors' revisions, and copy-editing—in 2029. The general timeline for this process from the start is as follows:

Proposal Deadline: November 2026
Proposal Acceptance: January 2027
First Drafts for Editorial Review due: January 2028
Editorial Review to Authors: March 2028
Revised Drafts for External Review due: July 2028
External Reviews to Authors: December 2028
Final Drafts due: September 2029
Copyediting: October 2029 – February 2030
Author Corrections: March 2030
Page Proofs: March 2030
Final Corrections: April 2030
Publication: May 2030

The guest editor(s) should choose contributors who are aware of this production timeline and are able to submit their completed essays for editorial review by January 2028.

The final announcement of the next volume of *Osiris* will be made by January 2027.

Interview with Arnold Thackray

By Jeffrey L. Sturchio

This interview is published in two parts. The second part will appear in the July edition of the *HSS Newsletter*.

Arnold Thackray's career in the history of science began with his fellowship at Churchill College, Cambridge, in 1965. After a year at Harvard, he joined the faculty of the University of Pennsylvania in 1968, where he became the founding chairman of the Department of History & Sociology of Science, the editor of Isis, reviver of George Sarton's Osiris and developer of the HSS Newsletter, then the founding president and CEO of the Chemical Heritage Foundation (now the Science History Institute), founder and president of the Life Sciences Foundation, and co-founder and principal of Science History Consultants.

Thackray is the author or editor of over ten books and numerous published articles and essays. Thackray's memoir, Making Science History: A Personal Perspective from Alamogordo to AI, is being published by the American Philosophical Society Press this spring. For an anthology of Professor Thackray's work published in honor of his 80th birthday, see Science: Has Its Present Past a Future? Selected Essays by Arnold Thackray, edited by J. L. Sturchio and B.V. Lewenstein (Ithaca, NY: Seavoss Associates Publishing, 2022).

Jeffrey Sturchio: HSS Newsletter readers will be interested to learn about the origins and early development of the Department of History & Sociology of Science at the University of Pennsylvania. Let's start there, with what you found when you arrived in Philadelphia and what you saw as the possibilities.

Arnold Thackray: It was William Wordsworth who said of the French Revolution: "Bliss was it in that dawn to be alive, but to be young was very heaven." And so it was of the history of science in the late 1960s. Opportunity was everywhere, thanks to the Baby Boom arriving in American colleges and Harvard president James Bryant Conant's campaign to make the history of science into a living undergraduate experience. I was quite unfamiliar with American life, having entered the field through the British context of a very ambivalent reception of this particular specialist field.

Interview with Arnold Thackray (cont.)

In the fall of 1967, I began nine months at Harvard seeing the game as played professionally. I. Bernard Cohen had become a very confused Harvard undergraduate in 1933, staying on as assistant to Sarton on graduation in 1937. He finally obtained his PhD in 1947, the same year he became managing editor of Isis, later becoming its editor-in-chief. By the time I arrived in Cambridge, Massachusetts, from the other Cambridge, it was already 30 years beyond the moment when Cohen had begun his Harvard apprenticeship. Thomas S. Kuhn and a host of other post-docs, first at Harvard, then elsewhere, had articulated a real discipline where teaching undergraduates was the fundamental fuel of disciplinary growth.

After World War II, major universities were all setting up departments and programs. By 1967, Derek Price at Yale would publish a guide that listed no less than 29 graduate programs in the history of science and medicine. Penn was a clear anomaly. Although Philadelphia was, after all, the home of the United States as a political body and Penn was the home of chemistry in North America, with its first professorship, and while the city and the university could both boast all sorts of firsts, in relation to the history of science, they were simply confused laggards.

I was hired by Penn because of a windfall grant engineered by the American Philosophical Society, itself the oldest learned society in North America, to embrace activity in the history of science and medicine and to become a significant force in this field through an alliance with Penn and Bryn Mawr (a major, long-established women's college in a nearby suburb, newly contemplating graduate education). Together, the three would forge a different, new, exciting future. That was the theory. In practice, there was total disarray.

The University of Pennsylvania, when compared with the host of other institutions that come to mind, from Harvard to Berkeley, did not install a full-time president until well into the 20th century. What this meant, for an institution founded in the 18th century, is that it had a well-established and apparently endless series of independent fiefdoms, united, as they say, by a touching loyalty to a common central heating plant! Such was life at Penn.

The history of science prior to World War II had everywhere been run by elderly scientists grown bored with academic research, who turned instead to antiquarian pursuits. Penn offered a prime example. Edgar Fahs Smith, a distinguished chemistry department chair, then university provost from 1911 to 1920, had in his later years created the world's leading collection in the history of chemistry. In the best Philadelphia style, the Smith Collection was still present and correct in 1967, but it had just gone bankrupt. Chymia, published from the collection and the world's only academic journal in the field, had also just ceased publication. Nobody thought to tell this incoming bright-eyed and bushy-tailed assistant professor that the realities he thought he was coming to had just vanished.

Interview with Arnold Thackray (cont.)

The realities were stark, but the national and international demand in the English-speaking world for academic historians of science was at its height, as evidenced by the way that while still a Churchill College resident, I received a transatlantic telephone call inviting me to join the faculty at Johns Hopkins. I would also receive an invitation from the leading historian of science in Australia to come and set up shop at the Australian National University, while the University of St. Andrews in Scotland (which had one of the only other significant chemistry collections), had offered me a tenured lectureship.

The Penn offer seemed the most attractive: a guaranteed five-year stint as an assistant professor, the keys to the Smith Collection, with Philadelphia itself, allegedly full of resources and talent, as the context. In operating practice, the discipline was flourishing everywhere in the United States, except at Penn! The one real promise was that Penn had hired Tom Kuhn's first and most favored student, John Heilbron, three years earlier. Yet even as I arrived, Heilbron left to go back to Berkeley and join Kuhn's own expanding enterprise.

Mine was a strange initiation: one way round, everything was there, yet another way round, nothing was there. Physically, the department did not really exist. It was an exercise on paper. The History and Philosophy of Science had been named as a department by then for well over a decade, but there just was no content to it. I didn't even have a faculty office on campus.

JS: You did have a couple of colleagues, though, when you arrived?

AT: It was disconcerting to find that John Heilbron had left. Philip George, a research biophysical chemist, was pinch-hitting as interim chair. The two actual faculty were Russell McCormmach (who soon left for Johns Hopkins) and John Bennett, who was finally let go after six unfruitful years. Because of Penn's balkanized nature, there was never any question of teaching undergraduates. However, from my naive youthful perspective, they distracted from a research focus, so if they weren't present, that was quite okay.

The subject was buoyant everywhere else: membership of the History of Science Society was growing, as was attendance at its annual meeting. The first such meeting I went to, just after Christmas 1967, was actually in Toronto, showing a growing North American reach. I was stunned that 200 people were present and parallel sessions were happening. In England, it was a miracle if you had 20 people get together for a meeting! Being in the United States was like playing tennis at Wimbledon. In England, you were playing in the local park. And if you are a professional tennis player, Wimbledon is infinitely more interesting. Appropriately, I found myself besieged by invitations to visit and give talks.

Interview with Arnold Thackray (cont.)

Over the 25 years from 1945 to 1970, the discipline itself has a new structure and narrative, looking for and finding in Conant's formulations the perfect approach: a highly intellectual focus to the key concepts of an alleged 17th-century scientific revolution, as yet almost wholly unexplored. The manuscript remains were available in agreeable European libraries, scattered from Paris and Pisa to Copenhagen and Oxford. Lifetimes looking at manuscripts would be a new approach, but the stuff was there.

The necessary accompanying miracle was engineered at the start of the 1950s by the person who would later enable the start of Penn's real activity, Richard Shryock at the American Philosophical Society. He organized the meeting at which the newly-established National Science Foundation registered its interest in the social sciences. The brilliant answer of the physicists and chemists who dominated NSF thinking was "oh, we know what social science is – it is the history and philosophy of science itself!" Funding for the field thus became the first venture of the NSF into social science waters.

Thanks to Shryock, NSF called on leading scholars of "HPS" at places like Harvard, Wisconsin, and so on, to meet at APS in Philadelphia and decide how NSF money should be used. The answer, amazingly, was "research grants for faculty to go to Paris and Pisa and Copenhagen and Cambridge and study the great minds from Copernicus to Darwin." What was not to like? The decision reinforced the ethos of the new field. Alexandre Koyré was by then regularly spending half of each year at the Institute for Advanced Study in Princeton pontificating to American colleagues on how science was "essentially theoria, a search for the truth." That mantra and NSF money supplied the fuel as the discipline lit up. Universities assisted the bonfire by recruiting faculty and advanced students, and everyone began having a good time.

Penn missed out! In actuality, it was not a university but rather a cluster of a dozen or more fiercely independent schools, each pursuing its own version of reality. The Dean of the College, who was in charge of undergraduate males, told me when I inquired that the subject was not suitable for undergraduates. Truly, there was a strange set of things to begin to understand. What I did not yet realize, but began to grasp empirically, was that I am really–as I later formulated it–a builder, not a maintenance man. And Penn was an interesting construction site because, metaphorically, piles of concrete and bricks and cement and timber were everywhere, once you saw and could figure out how to use them. The puzzle was in understanding the opportunity.

While Britain had an organized, classified social structure, America was a melting pot. Who knows what was bubbling in the pot? It was a time of radical change and in contrast to today, the subject was growing at a rapid rate. Undergraduates were pouring in. Additional teachers were needed. And if you were in the inner intellectual circles, life was good because there was always a possibility of an alternative offer from another university if your home base wasn't showing due appreciation of you.

Interview with Arnold Thackray (cont.)

JS: You did get an offer to go back to Harvard, didn't you?

AT: Yes. That was absolutely typical of the Harvard department. Let me sketch the background. George Sarton became a cultured Belgian refugee during World War I. The Widener Library was newly opened, with plenty of rooms in the basement. Sarton simply camped there. President Conant, aware of him in the 1930s, regularized his position with a lecturer's appointment. Returning from World War II sobered by his central role in the creation and use of the atomic bomb, Conant found his new calling.

The group of postdocs he recruited to help him as his teaching assistants included mainly physicists and chemists, like Thomas Kuhn and Leonard Nash. Bernard Cohen was somewhere on the fringes. History of science took off at Harvard. And in those days, what Harvard did today, the rest of academe did tomorrow. So the history of science flourished and was expanding and hot.

Harvard, like most programs at the time, didn't have an historian of chemistry. After all, chemistry was only invented by Lavoisier and Dalton, so if you're focused on 1500 to 1800, there isn't too much to talk about. The thinking was maybe one day we'll get somebody in that field, but not right now. I first met Cohen in 1965, when he showed up in Cambridge because of his interest in Newton and the Newton manuscripts. Since I was actually working on those manuscripts, I knew plenty that Bernard Cohen didn't. In my brash young way, I was eager to correct him.

Harvard itself was looking for another faculty member. They had Arabic science, medieval science, and Conant and Everett Mendelson in scientific revolution studies up through 1800. Cohen decided he wanted to bring me back to Harvard, following my first stint there. It took him a couple of years to work through the institutional machinations to make me an offer of a permanent position. By then I had been at Penn for more than a year, and was very aware that I was up against all sorts of bureaucratic obstacles and challenges when trying to take action. But there's nothing like walking into the Office of the Dean or of the Provost and saying "By the way, I've received this letter from Harvard offering me an associate professorship. What should I do?"

Suddenly, by the first of July 1970, I had essentially obtained tenure and became the chair of my own department at Penn. I had permission to hire, and the university, incidentally and accidentally and wonderfully, was in process of itself hiring a new president with the express mission of making one university out of its mob of independent schools of everything you've ever thought of. In the end, it only took the university two centuries after its foundation to create a Faculty of Arts and Sciences!

Interview with Arnold Thackray (cont.)

The new vogue became to connect places like the engineering school and the medical school and the business school to the arts and sciences. I quickly understood that my subject was a natural area for linkages. It connected medicine and history and business and the sciences. The experience of my Manchester youth, living in the world created by the Industrial Revolution, clearly showed that the techno-sciences connected with the world in complicated ways. I was finding my feet and resisting the classic view of the affiliation of history and philosophy of science for a new view of the social history of science, technology, and medicine.

There was also an attempt to lure me back to Churchill College, Cambridge, but by then I was aware that playing tennis at Wimbledon was just more fun!

JS: The offer from Harvard gave you the leverage for promotion to tenure at Penn. Then in 1970, Philip George going to Persia offered the opportunity for you to become chair of the department. Can you tell us about your developing ideas of what the department would do? In the fall of 1969 you gave a talk at the conference on historical and philosophical perspectives of science in Minneapolis. "Science: has its present past a future?" opened with the observation that "to judge from the pages of Isis, the atom has not yet been split." That was just the beginning of your manifesto about a new way of articulating the history of science.

AT: The thing that only becomes apparent when one leaves is that growing up in Manchester gives you a certain view of history.

The Industrial Revolution was a huge, complex event, transforming village life, rural ways and small-scale activity like handloom weaving into "grim Satanic mills" and multitudes of factory slaves. It was real and profound. In the center of Manchester, in the principal city square, the statue of John Dalton (1766–1844) of chemical atomic theory fame, would come to stand. He exemplified the grassroots of science and technology as teachable, transmittable, important events. That was all there in my background. I perceived Philadelphia, America's historically leading industrial city, as fundamentally similar.

Benjamin Disraeli would famously say “what Manchester thinks today, London thinks tomorrow." Manchester had been built on entrepreneurship. Philadelphia was in a similar position in the American pantheon. “This is where the Revolution took place. This is where the first medical school on the continent was established. This is where Benjamin Rush became the first professor of chemistry in North America. This is where the first business school was founded. And, you know, this is history."

Interview with Arnold Thackray (cont.)

So it was natural to begin to think of a new approach to the history of science focused on the modern era and the social impact of science. This is what lay behind the decision to change our department's name from History & Philosophy of Science to History & Sociology of Science. I also had an implicit awareness of entrepreneurship. My father had ended his career as the last man standing at a Manchester textile machinery company. He saw entrepreneurship in reverse, and the decay of that earlier impulse.

Thinking entrepreneurially about the constellation of American history of science departments turning out a flood of "scientific ideas" people, focused on the European origins of modern science—that was a market satisfied. It was no good trying to compete with Harvard and all the rest of them. The other thing that struck me as bizarre was how none was much interested in anything American, and certainly not in the Atomic Bomb. After all, who had made that bomb, and what made the USA world-dominant if not its technoscience leadership?

I very deliberately said "Number one, my own field is late 18th-century, hence I'll be the ancient historian of this department. Number two, America does exist and is central, so attention to the history of science in America has to be part of the deal. And number three, somewhere in all of this there are connections to engineering, technology, business, and medicine. So even though the answer that the present past does not have a future was correct, of course it went over like a lead balloon in Minneapolis. But since I was the youngest person speaking at the conference and the least known in the room, it certainly did stir things up!

JS: To pick up on one of the things you said, the Penn program had its origins through a Macy Foundation grant, which was in part for the history of medicine. Overtures to the medical school were one of the first elements of the program you began to develop. And then the engineers became important when one of your first major hires was Tom Hughes for the history of technology.

AT: On the Penn campus, the engineers were delighted that someone from some non-engineering school was interested in what they did. ENIAC, the world's first electronic computer, was right there, and John Brainerd, an elderly Penn professor, was one of the people who actually worked on that project. He provided a natural entree to the engineers. And because of the university-wide effort stirred up by Martin Myerson, the new president, to implement the idea of one university, the dean of the medical school was also happy that a department in Arts and Sciences actually wanted to talk with him. And so it was.

One way round, it was easy once you decided to do this thing, which in 1968 was off the charts. No one was previously talking about integrating the University. Rather it was "me in my small comer, and you in yours."

Interview with Arnold Thackray (cont.)

JS: Then another element fell into place. You mentioned earlier that the Dean of the College for Men warned you away from undergraduates because the history of science wasn't a suitable subject for their young minds. By 1973, with Myerson having created the Faculty of Arts and Sciences, you were able to establish an undergraduate major. Wasn't that an important milestone in the early stages of the department's history?

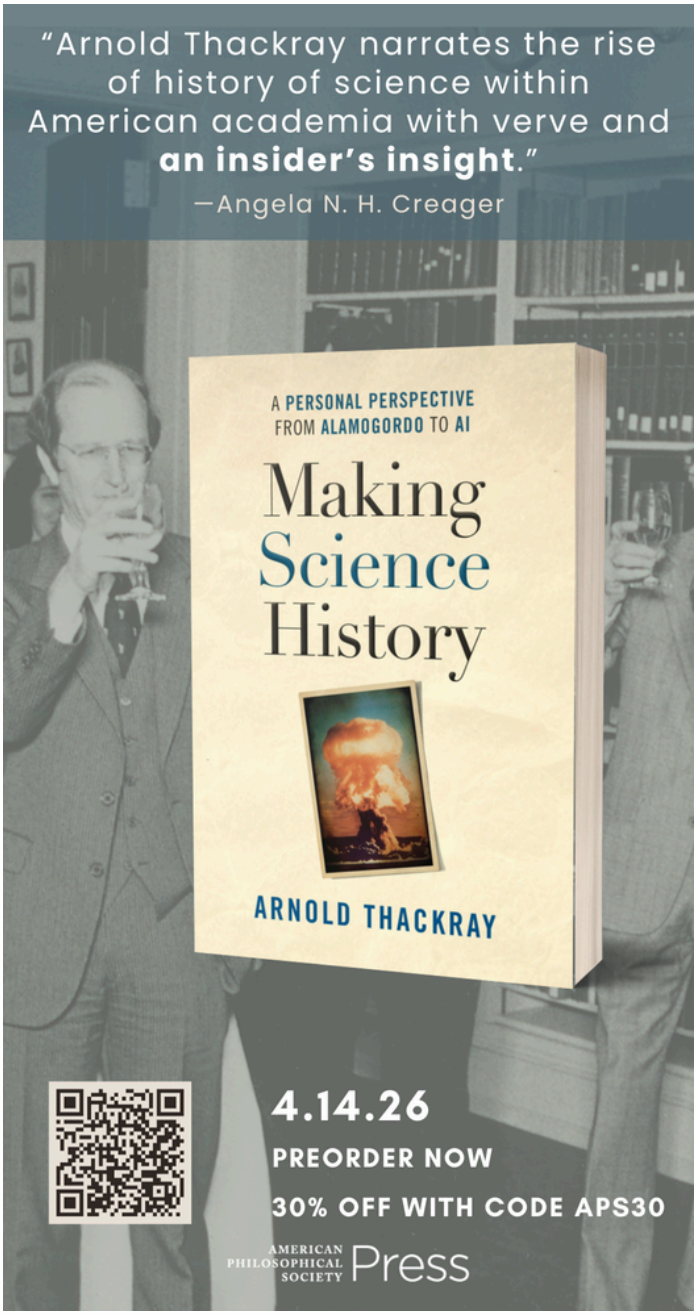
AT: Absolutely. By then, I had understood that deans and administrators, in some fundamental sense, don't know what they're doing. They cannot possibly be expert in all their subjects, but they can easily watch two quite different indicators. One is: does anybody else want this faculty member? And what sort of grants, awards, and fellowships has he or she had? And oh, dread: actual offers from other places? The other indicator is the sheer arithmetic of undergraduate numbers, since tuition revenue is a powerful driver of what you can and cannot do.

This all led to my awareness of the need for a strong undergraduate major. Harvard had its thing in "history and science". Other places had all sorts of variations. Undergraduate majors, in the long term, were an important success factor for history of science programs. If you look at the Penn program over the 25-year period from 1970, by 1995 we had a very robust undergraduate major. So the deans were basically happy. Those two things are the real drivers of change. So as a faculty member, if you want progress, the questions to ask are either: is your undergraduate enrollment doing something impressive, or does somewhere else desire you?

The second part of this interview will be published in the July edition of the HSS Newsletter.

Interview with Arnold Thackray (cont.)

Jeffrey L. Sturchio has known Arnold Thackray for more than 50 years, first as a PhD student in the Department of History & Sociology of Science, then as Associate Director and Acting Director at the Center for the History of Chemistry from 1984 to 1988, and since as colleague, collaborator, and friend. After nearly 20 years at Merck & Co., Inc., beginning as the company's historian and archivist in 1989 and eventually becoming Vice President of Corporate Responsibility and President of The Merck Company Foundation, Dr. Sturchio was President & CEO of the Global Health Council, then Chairman and CEO of Rabin Martin, a global health strategy firm. He is currently the Chairman of Friends of the Global Fight Against AIDS, TB, and Malaria; Chairman of the International Society for Urban Health; and a Board member of the American Institute of the History of Pharmacy, the Consortium for History of Science, Technology, and Medicine, and the Science History Institute. He also serves as a visiting scholar at the Institute for Applied Economics, Global Health, and the Study of Business Enterprise at Johns Hopkins University and a senior associate at the Global Health Policy Center of the Center for Strategic and International Studies.



Member News

Bert Hansen published “Research on Trichina (1885): An Unusual French Painting by Stanislas Torrents," Bulletin de l'Académie vétérinaire de France, 2025.

Carola Sachse published *Science and Diplomacy: The Max Planck Society in International Politics (1945-2000)*, Göttingen: Vandenhoeck & Ruprecht 2025.

Pnina Abir-Am has been elected as an AAAS Fellow. She completed her service as Section L's Member-at-Large in March 2026. She continues to work with students on her research projects as part of Brandeis University-WSRC's Scholar-Student Partnership.

History of Science Society Newsletter

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News, announcements, and job/fellowship/prize listings and feature story pitches can be submitted here or emailed to samfranz@sas.upenn.edu.