

Newsletter

of the History of Science Society

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January 2020

A New Year's Greeting for 2020

by Jan Golinski, new President of the HSS

As I begin my two-year term as president of the History of Science Society, I have been thinking about how much I owe the Society and what it has meant to me. At a pivotal time in the Society's history—as it approaches its centennial in 2024—it is worth reminding ourselves why we value it so much. For me, and I am sure for many others, this has been a vital professional affiliation. I think of the Society as a community, membership of which has defined my identity as a historian of science. As we know, communities of all kinds are today under stress from the forces of globalization and technological change, which often seem disorienting or threatening. The Society has been considering how to respond to these forces for a while now. The strategic planning process was initiated by Lynn Nyhart during her presidency and completed by Lynn, her successor Angela Creager, and Executive Director Jay Malone in 2014. The plan aims to take advantage of the forces of change by diversifying our membership, broadening our international range, and disseminating our work through new forms of publication.

Although new media connect us in unprecedented ways, there is no substitute for physical meetings to create a genuine sense of community. In July, we held our first annual meeting outside North America. Our hosts



Outgoing HSS President Bernie Lightman (right) anointing our new President, Jan Golinski with the Sacred Sceptre

in Utrecht were the Descartes Center, where *Isis* was housed from 2014-2019. The meeting was remarkably successful, attracting almost 800 attendees, 44% of whom reported they had never previously attended an HSS conference, and 35% of whom were not previously members of the Society. The meetings planned for the next two years, in New Orleans (2020) and Mérida (2021), will further expand our international audience, and we hope to keep these new members attending and participating in the years to come.

As we broaden our outreach internationally, we have to ensure that the Society's meetings are welcoming to

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all. A few years ago, we created a policy setting out our expectations for respectful behavior and appointed an Ombudsperson to advise those who experienced any kind of harassment. We have also created a Committee on Diversity and Inclusion to integrate our efforts on this front. To support this initiative, we need to gather data on the demographic characteristics of those who attend meetings and contribute to our publications. I hope members will respond to requests to report their gender, ethnic identity, and nationality, when they register for a conference or submit to a publication. While nobody likes to be put in a box or reduced to a category, we do need this information to measure our progress in building a more diverse and inclusive community.

The strategic plan also calls for maintaining the quality of our publications in the new world of electronic communication and demands for open access to scholarly research. This process will be led by the Society's new co-editors, Alix Hui and Matt Lavine, who have recently moved *Isis* to Mississippi State University in Starkville. They are joined by Book Reviews Editor Projit Mukharji, working out of the office of the Consortium for History of Science, Technology, and Medicine, in Philadelphia. The distinguished

editorship of Floris Cohen and his team in Utrecht will be a hard act to follow, but I am confident Alix and Matt and their colleagues will rise to the challenge. Even as we break the link with Utrecht, the editorship of this *Newsletter* by Neeraja Sankaran, who has been working out of Bangalore and will, for a semester do so out of Leeds, is another sign of our broadening international reach.

The strength of any community depends on the inter-generational bonds that secure its continuity. We are fortunate to have an energetic cohort of younger members of the Society, organized by the Graduate and Early Career Caucus. It is inspiring to witness their dedication and the resourcefulness with which they are building their careers. Since fewer historians of science can expect to hold tenure-track academic jobs in future, we must make sure the Society continues to answer these young professionals' needs, whatever career options they end up pursuing.

To realize its ambitious aims, the Society needs the financial buffer of a larger endowment. We have done fundraising in the past, but not in a consistent way. With the centennial coming up, it's time to ramp it up now. While we hope to identify donors outside our ranks, it is only

Executive Office

History of Science Society

440 Geddes Hall
University of Notre Dame
Notre Dame, IN 46556
Phone: 574-631-1194; Fax: 574-631-1533
E-mail: info@hssonline.org
Web site: <http://www.hssonline.org/>

Subscription Inquiries

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The *Newsletter* Editor is Neeraja Sankaran. The format and editorial policies are determined by the Editor in consultation with the Society Editors. All advertising copy must be submitted in electronic form. Advertisements are accepted on a space-available basis only, and the Society reserves the right not to print a submission. The rates are as follows: Full page (10 x 7"), \$625; Horizontal or Vertical Half page (5 x 7"), \$375; Quarter page (5 x 3.5"), \$225. The deadline for insertion orders is six weeks prior to the month of publication and should be sent to info@hssonline.org. Please send photographs in a jpeg format, with a maximum size of 1024 pixels and file size of 1 MB to maintain quality during sizing and printing. The deadline for news, announcements, and job/fellowship/prize listings is firm: four weeks prior to the month of publication. Long items (feature stories) should be submitted eight weeks prior to the month of publication. Please send all material to the attention of the Executive Office: info@hssonline.org.

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realistic to expect that most will emerge from the current membership. This means that we will ask some individuals who have already given a great deal of time and effort to give additional monetary gifts. It is a hard ask, I know, but I trust that those who have already made a substantial commitment to the Society will want to help secure its financial basis into the future.

The presidency of HSS is a responsibility and a great privilege. I am particularly grateful to Bernie Lightman and the other past presidents who have led the Society to this point. Bernie's wise and unflappable chairing of meetings has given me an example to follow, as has Janet Browne's courteous and generous leadership. We will continue to depend heavily on Jay Malone, on Ryan Feigenbaum (Society Coordinator), and the other staff of the Executive Office. Most of all, we depend on the commitment of our volunteers, the members of Council and our committees, forums, and caucuses. More than anything, their spirit is what sustains this community.



Roundtable with 2018 Levinson Prize Awardee Evelleen Richards

[Editor's note: The biennial **Suzanne J. Levinson Prize** was established in 2006 by Mark Levinson to honor the memory of his wife who was especially interested in the history of evolutionary theory, microbiology, and botany. "Rich and sophisticated, synthetic and revisionist," was how the members of the prize committee described the 2018 winner, **Darwin and the Making of Sexual Selection** (University of Chicago Press, 2017) by Evelleen Richards. The Newsletter is excited to present a roundtable conversation between the author and some of the leading Darwinian scholars of the day, who also happen to be HSS members: Bernie Lightman, historian of Victorian science and outgoing HSS President; Janet Browne, Darwin biographer and past president of our society; and Greg Radick, the 2010 winner of this same award.]

HSS Newsletter: As a preface to the roundtable, could you offer our readers a quick snapshot of the book, something that the publishers, Amazon, or the Levinson Prize committee has not already commented on?

Darwin's theory of sexual selection has a long and conflicted history. From its beginnings, it was intertwined with cultural and social beliefs and shaped by professional and institutional power plays and the larger issues of the day. It was drawn from a great complexity of sources, themselves culturally inflected. And Darwin justified it with a mix of culturally laden constructions of sexuality, gender and race.

This book offers a detailed contextual reconstruction of the formation and transformation of Darwin's sexual selection, from the visual shock of "savage" encounter on the voyage of the *Beagle*, through the assembly of the matrix of theory, observation, practice and analogy that constituted the core of Darwin's theorizing and the networks of relations that



Evelleen Richards (University of Sydney), "answering curly questions in my natural habitat."

made this possible, on to its fully realized elaboration in the *Descent of Man*. It brings an unprecedented array of issues and practices to bear on Darwin's conceptualization and promotion of sexual selection: Enlightenment physiognomy, the views of his grandfather Erasmus, pigeon breeding, Victorian high fashion, domestic ideology and marriage guidance manuals, Dickensian novels, aesthetics and visual culture, ornithology, anthropology,

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contemporary theories of development and inheritance, conflict with Alfred Russel Wallace, co-founder of natural selection, eugenics, New Women, birth control and radical politics. The trajectory of sexual selection thus was shaped by many issues and thinkers, many little known in the history of evolutionary science.

But its central actor was always Darwin. Far more than natural selection, sexual selection was peculiarly Darwin's "own," and Darwin worked to keep it so, struggling to hold his creation together as it threatened to collapse under the weight of its own contradictions. Above all, it was Darwin who held fast to its "truth," who brought his great fame and his name to its making. But sexual selection, as Darwin conceived and defended it, never quite made it. This book explains why.

Greg: At the start of the book, you write about its beginnings in your work for your well-known 1983 paper "Darwin and the Descent of Woman." You note changes of ambition for the project since that time. Did you also find yourself changing your mind along the way, either about Darwin himself or the making of his theory?

I gained a new respect for the man and a greater tolerance for those of his views I did not share and had found offensive on my earlier readings. While fully acknowledging his self-absorbed, privileged, patriarchal, cosseted domestic life,

so well evoked by Janet in her biography, and looking at how this lifestyle provided both personal comfort and models of normative behavior and gender roles for his theorizing, I came to admire the prodigious amount of work that he put into the making of sexual selection.

Above all, I was impressed by his dogged perseverance in the face of his own intellectual difficulties, social attitudes and cultural values, in coming to terms with the notion of female choice as an active agent of evolutionary change. The troubling issues of sexism, racism, class privilege, etc., fell more into place as I became caught up in the challenges of following Darwin—through the complexities of his metaphor construction and theory building and gathering of evidence and ideas—identifying the cultural baggage that came with these, and then putting all of this into domestic, institutional, cultural and political contexts.

In other words, it was not so much that Darwin became in my eyes a better man, but that through studying his making of sexual selection, I became a better historian!

Bernie: What was the most surprising thing you discovered while writing this book?

There were quite a few surprises, but the most surprising—as well as the most satisfying—was

the significance of embryology to Darwin's making of sexual selection. It was all the more surprising because I had worked on the history of nineteenth-century embryology and evolution for my PhD dissertation (1976). And, although I (along with every other historian I'd consulted), had then failed to see any connection with sexual selection, I did pick up the importance of his embryological argument for his views on women's intellectual inferiority in my 1983 paper. But its full significance for Darwin's theorizing on sexual selection only slowly dawned on me over the course of researching and writing the book. For example, there are the ways in which it underpinned his defining conflict with Wallace, which is usually structured in terms of their differing views on inheritance.

Another issue that was thrown into relief was the way in which his conception of a gendered and generic embryo was fundamental to his threefold analogue of the selective practices of pigeon fanciers, the frivolous dress choices of fashion-conscious women, and the aesthetic choices of female birds, all of whom capriciously pushed their selections to nonfunctional extremes. Critical to this understanding of the significance of embryology to Darwin's formulation of sexual selection were a couple of serendipitous discoveries: notably his historically

Roundtable with Evelleen Richards, cont.

neglected notes on William Yarrell's *British Birds*, where, right at the end, I found clinching evidence for Darwin's definitive decision, primarily on the basis of his embryological argument, that skin color in humans was, like the color of bird plumage, predominantly if not solely due to sexual selection, rather than through natural selection via resistance to disease. Hence his *Origin* declaration on the determining role of sexual selection in human racial divergence.

And again, when I was, most enjoyably, researching Victorian fashion, I happened upon a pattern for a young boy's dress, which gave me the fashion referent for Darwin's fundamental embryological rule for sexually dimorphic species, of the likeness of immature young to adult females; which I could then relate to the well-known daguerreotype of Darwin with first-born son William, who is wearing a dress; Darwinian embryology made easy, as I tell students. Furthermore, I could link this finding to a quotation from a review of Alexander Walker's *Intermarriage*, a review that I knew Darwin had read, and which had led him to buy and read the work for himself. The smoking gun! On reflection, though, perhaps they were not so much surprises, as recognitions by a historian steeped in her material and finding what she was looking for.

Both Janet and Bernie had questions about the reception of Darwin's ideas about sexual selection by his contemporaries. Janet asks: *You make clear that there was not much support for sexual selection as an idea among the new Darwinians. Yet female choice became popular among social radicals especially feminists. What did Wallace make of this turn of events?*

Wallace is, of course, well known for his long-term opposition to Darwinian sexual selection, and for his 1890 *volte face* when he publicly championed the notion of informed female choice as an agency of human progress in a post-socialist society. The significant feminist appropriations of female choice—notably by the Americans, Eliza Burt Gamble and Charlotte Perkins Gilman—came after Wallace's adoption of the notion, although the American socialist Edward Bellamy had earlier promoted the idea in his highly influential futurist novel, *Looking Backward* (1888). Bellamy is the accepted source of Wallace's dramatic turnaround, but Wallace was well exposed to an earlier British tradition of sexual radical and feminist utopian versions of socially improving female choice—a tradition that extends from the time of the Owenite socialists to its reemergence among the more radically minded towards the end of the nineteenth century.

I've argued that, among other concerns, Wallace was reacting against its adoption by those associated variously with Grant Allen's version of reformist eugenics and/or free love—which Wallace pronounced “detestable”—and Neo-Malthusian birth control, also notoriously associated with female promiscuity. Wallace was a moralist intent on dissociating female choice and social progress from the taint of free love and degrading “sensuality.” His version of socially and morally improving female choice was subsumed within more conventional renderings of femininity, passive female sexuality and monogamy. This viewpoint was more acceptable to most feminist evolutionists, who in turn were happy to draw on this, by then famous, Darwinian endorsement of morally and eugenically improving female choice.

And Bernie wants to know: *What about Huxley, who never completely accepted the theory of natural selection; how did he view the validity of the theory of sexual selection?*

Now this is an interesting question, and yet another one of the surprises of my research. Given Huxley's famous caution about natural selection, I did not expect any endorsement of the more controversial principle of sexual selection. Furthermore, I had earlier formed the

Roundtable with Evelleen Richards, cont.

view that Huxley's celebrated "Evolution and Ethics" was not only directed against Wallace's socialist politics, as Michael Helfand long ago argued, but also was indirectly targeting Wallace's adoption of female choice as the agent of social progress. I made this argument in my book.

Still, I was indeed surprised when I could locate only one, solitary, explicit reference by Huxley to sexual selection in the entirety of his published work and correspondence (and that a facetious one, see Richards 2017, 472). At my request, Adrian Desmond obligingly searched his extensive database of published and unpublished Huxley material and—also to his expressed surprise—confirmed my finding. So, it seems that Huxley not only opposed the adoption of sexual selection by social radicals like Wallace, but deemed it unworthy of serious discussion, or even mention, as a biological process.

Greg: It's sometimes said that, in giving a "sexual-selectional" rather than a "natural-selectional" account of the origins of racial divergence in humans, Darwin in some way was trying to minimize the importance of racial differences. Does your book support that view?

It is an attractive thesis, but I found no evidence for it. Although Darwin's views on race were more benign than those of many of his

contemporaries, including Huxley, he also held to a Eurocentric, hierarchical interpretation of race, and evinced little empathy with "inferior" or "savage" races. He may have held an "inviolable" anti-slavery ethic, but he consistently demonized savage appearance and behavior, from the time of his *Beagle* diary to the *Descent of Man*. He was insistent on the biological basis of distinctive racial moral and mental traits, and on the intractability of interracial competition and conflict.

Before all, let us not forget that Darwin's sexual selection depended on the ability to perceive and discriminate among differences in external appearance; that appearance was all. And, while he did not view racial differences to be as pronounced as the more extreme racial determinists did, he was as committed to acknowledging and explaining racial difference, which had become one of the central anthropological/political issues of his time, as Desmond and Moore have persuasively argued. Also, although Darwin, of course, consistently opposed the polygenist thesis of separate racial origins, he also conceded that racial differences were sufficiently pronounced to warrant the classification of the human races as separate species.

My argument is that for Darwin the impact of savage encounter, as well as theoretical and

observational issues, over-rode abolitionist sympathy. His early encounters and racial rankings have a strong aesthetic component, an emphasis on the visual, on appearance, on difference; he was already aware of earlier efforts to explain racial divergence through aesthetic selection (especially Lawrence's); and, like the polygenists, he rejected the old correlation of climate or habit with race. This rejection was consistent with his principle of divergence, with his metaphor of selection to extremes, and underpinned by his embryology, and he had all this more or less together by the late 1850s and consolidated it in the 1860s, as I've explained at some length. In other words, Darwin had cogent intellectual and theoretical reasons, as well as ideological ones founded in the visual impact of racial encounter, for choosing sexual selection to explain racial differences.

It was Darwin's answer to the problems posed by all interested parties. Divergence from an original common ancestry through male combat and sexual choice, determined by specific racial notions of beauty and sustained by antipathy toward those who did not meet such racially determined aesthetic requirements, overcame the disjuncture between climate and race, so stressed by polygenists. At the same time, it also solved the issue of the long-term persistence of those nonfunctional external differences like skin color,

Roundtable with Evelleen Richards, cont.

hairiness, and face shape, given such significance by polygenists, which Wallace and Huxley were concurrently seeking to explain through the action of natural selection.

In short, I cannot see how Darwin's opting for sexual selection, rather than natural selection, to explain racial divergence, was determined by a concern to minimize the importance of racial differences. Rather, I'd argue, it played on them.

Bernie: What impact are you hoping to have on Darwin scholarship, and, more broadly, the history of Victorian science and culture? How about the history of science and gender?

I hope that my work will be of interest and use to a younger generation of Darwin scholars and those working in related fields of cultural and gender studies, in the sense that it offers them new opportunities for and provokes them into reading, critiquing, challenging, extending and refining the arguments and evidence it presents. Overall, I'm looking forward to a freshening of interest and new interdisciplinary insights that a shift of focus from natural to sexual selection hopefully will bring. I would also like practicing biologists to join the party, in line with the renewed interest in the notion of female choice and aesthetic selection. The history of science is unfinished business, as we know well, and we're all in it together. As Bob Young (vale Bob) wrote

so long ago, the history of science, like science itself, is a "social activity, born of society, and mediating its structures and values."

Greg: If a class or reading group could manage only one chapter, which one would you suggest?

This question is a hard one. I'm inclined to give them a good Victorian rap over the knuckles and tell them to begin at the beginning and read to the end! But admittedly it is a very big book, while life is short, and full of diversions. So I'd try to engage their interest by suggesting Chapter 1, "The Ugly Brother," which introduces the central theme of the book, the significance of early "savage" encounter to the inception of Darwin's theory of sexual selection, and hints at the ways in which this took him through to the presentation and defence of his "secondary principle" in the *Descent of Man*.

Janet: You know so much about the idea of sexual selection in scientific, political, and cultural context. Are there some areas that you'd recommend young scholars to explore further?

I think much more might be made of the links of sexual selection with Victorian visual culture, art history and the history of aesthetics. These are comparatively new fields of Darwin scholarship, and are attracting interest from those not usually involved in evolutionary history.

I'd also like to see more exploration of embryology and sexual selection (see above). Most work on Darwin's relation to embryology ignores sexual selection to focus on natural selection and the inheritance of acquired characters. I'm looking to see how bringing sexual selection into the picture helps to clarify some long running disputes in this area.

Another likely field of research covers the post-*Descent* period of the late nineteenth century. I've only scratched the surface here, and much more work remains to be done on this critical period in the history of sexual selection.

Ivory Ladies and Their Playful Anatomy by Cali Buckley (College Art Association)

*[Editor's Note: In this illustrated essay, **formerly published in Morbid Anatomy**, art historian Cali Buckley, Grants and Special Programs Manager at the College Art Association (CAA), offers us a peek at some rare and wondrous artifacts. She is currently compiling a database and catalog of ivory anatomical manikins and releasing an article revising their various categories, one step leading toward finding the ultimate origins of some of these mysterious objects. We hope that this contribution on that project is just the beginning of a long and fruitful mutual friendship between HSS and the CAA].*

Of all of the anatomical models in history, I study some of the least precise. They weren't even precise in their time. That is what makes them interesting. These objects were not just teaching tools, but visual anomalies meant to stir the imagination, and that they did. Unfortunately, that is also why so few people felt the need to document their existence.



Miniature anatomical “manikins,” each with a number of tiny removable parts no larger than a fingernail, are delicately carved from ivory. At least 180 of them have survived, having found their way to different parts of the globe over the last few centuries. I only started writing their history as a graduate student after seeing them in collections in the US, and then England, the Netherlands, and Germany. In time, I realized that not only were there many more than anyone had ever thought possible, but that most of them depicted women.

I finally found myself in Nuremberg, where they were first produced by an ivory turner named Stephan Zick (1639–1715). His workshop was already renowned for grand ivory “pokals” or decorative trophies as well as puzzle-like objects with moving parts, often with delicate pieces made within larger ones. Stephan’s father, Lorenz, taught the art to Kaiser Ferdinand III in Vienna and his grandfather, Peter, turned for Rudolf II in Prague.



Ivory pokals seen at the Bode Museum in Berlin; the two center pieces were crafted by Lorenz Zick. Photo by the author.

Ivory Ladies, cont.

Stephan, however, was in a workshop that demanded ingenuity to influence sales. As such, he broke out on his own to make brand new objects. In the mid-1600s he introduced his eye models in consultation with local doctors, honing each layer of the eye in a different material. These models were the first truly interactive, or “dissectable,” anatomical models.



Model of the Human Eye, by Stephan Zick around 1680. Ivory, horn, glass, paper. Height 7cm. Nuremberg, Germany. Via design-is-fine.org.

Soon he also began making ear models with the most minuscule bones attached by a string to avoid losing them during disassembly. Finally, he invented the full-body anatomical model.



Anatomical teaching model of a pregnant woman by Stephan Zick (1639–1715); Nuremberg, around 1680); Image via [KunstKammer Georg Laue](http://KunstKammerGeorgLaue.com).

These manikins are almost like action figures, but lying supine on a bed with their eyes shut. Their arms—one covering the stomach and the other to the side—can be bent at the shoulder with the aid of an ivory peg. The right wrist rests on the forehead in a gesture of woe. Only then is the torso free to be taken off. Within, bulbous mounds, often colored with shades of red, become visible. The organs within are removable, they are only the size of a fingernail, and most of them must be removed to get to the most internal treasure—a fetus attached by a length of thread.

At about 16 centimeters long, it is difficult to imagine that they could be seen, let alone toyed with, by students of any given doctor. Rather,



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Ivory Ladies, cont.

they were focal points for the sorts of lectures doctors would often give to midwives and medical students—which is also why a majority of these figures are female.

It was during this age that the man-midwife became rather well known. Male surgeons beginning to study women's medicine were dubbed "man-midwives" as they were called upon for surgical intervention when a female midwife was having difficulty birthing a baby with her hands alone. Despite their technical expertise, however, man-midwives were not well-respected due to the non-traditional nature of their occupation. One of the best known images related to man-midwifery is Samuel William Fores's satirical 1795 print which describes him as a monster and cites his "cruelty and indecency."

Other models, along with various tinctures, were sold during the public presentations made by man-midwives. In London's *The Public Advertiser* in 1755, a 37-centimeter model was being sold for "all Men-Midwives, Midwives, Students in Midwifery, and the Curious."



Satirical print/poster of man-midwife.

Although a number of these manikins also ended up in *wunderkammern* [cabinets of curiosity] that have become parts of museums in Europe, we still find manikins that have been passed through doctors' families. Just a few years ago, a pair of manikins were sold on the American television show "Antiques Roadshow," and others have appeared on the art market.

Today we have an assortment of interactive manikins in the much more ubiquitous medium of plastic, but their precious and enigmatic forebears can be found across the world. Many more may still be hidden in attics, yet to be discovered.

(Note: All images from Wellcome Images unless otherwise specified).



Q & A with Paola Bertucci about Award-winning Book

[Editor's note: Paola Bertucci's *Artisanal Enlightenment: Science and the Mechanical Arts in Old Regime France* has been making waves ever since its publication in 2017. Most recently it was selected as the winner of the 2018–2019 Louis Gottschalk Prize, sponsored by American Society for Eighteenth-Century Studies. We invited Paola to share some thoughts about her book and its impact among historians, and she not only obliged but turned the Q&A into a real two-way conversation by adding to the questions.]



Paola Bertucci with her award-winning book, *Artisanal Enlightenment: Science and the Mechanical Arts in Old Regime France*.

Please give your “elevator spiel” for this book...

On the elevator to the second floor: There is no Enlightenment without science and technology and this is what my book is about.

On the elevator to the fifteenth floor: Take the world-wide-web of the Enlightenment,

Diderot’s and d’Alembert’s *Encyclopédie*. Notice its emphasis on artisans and the mechanical arts. Ask why was *writing* about science and the mechanical arts so important? Then take the most iconic actors of the Enlightenment—the *philosophes*, academicians, aristocrats—away from the front-stage, rewind the clock back a hundred years, and put the spotlight on artisans as authors. See what changes.

So, what changes?

First, you find a new historical actor, the self-identified *artiste*, who is not an artist in the common sense of the word, but a learned, ingenious, and sociable artisan. *Artistes* could be practitioners of any mechanical art—for example, clockmakers, surgeons, goldsmiths, engravers—but they saw themselves as superior to other practitioners because of their learning and ingenuity.

Second, you realize that what was at stake in the act of writing about the mechanical arts was the very important issue of what counted as useful knowledge, who produced it, and who should serve the state in order to regulate its production. At a time of colonial expansion and commercial competition, the *artiste* claimed to be the figure who could help the state achieve its goals, in

contrast to scientists or philosophers, who, the *artistes* said, only knew theory, or to all other practitioners who could only perform manual work.

Third, you see that through writing and through the artifacts they produced, *artistes* introduced an idea of progress that no longer centered on what humans were or how they behaved, but on what they could do. It was their work—the mechanical arts—that would bring about progress. This was the world of the “moderns,” who no longer believed in a past Golden Age. As Voltaire put it, technological advances, increased luxury, and colonial expansion made the life of Adam and Eve in the Garden of Eden appear as a state of barbarity. *Artistes* produced the material landscape within which some of the foundational works of the Enlightenment emerged.

My book retrieves the *artistes*’s voice, but does not turn them into heroes: while they fought for recognition in a world that discriminated against all artisans, they discriminated in their turn against all those other practitioners who did not have access to learning and/or patronage. So the Enlightenment you find in my book has more to do with practices of inclusion and exclusion than with philosophical ideas.

Q & A with Paola Bertucci, cont.

Why artisans? What was the main sources of inspiration for embarking on this book project?

The defining moment happened quite by chance. My husband's uncle, who is a cabinet-maker, was talking about how he turned an armoire into a china cabinet. I realized that, because I am not a cabinet-maker myself, I could only notice the intelligence and ingenuity involved in the process because he was using words. This gave me insights into why artisans took time from making—a profitable activity—in order to *write* about making, an activity that was not immediately lucrative. They used words in order to communicate the embodied intelligence involved in their work. Who were they writing for? I started wondering about the political role that writing might have played at a time when states were looking at scientific academies as repositories of expertise. Then, of course, there was the vast, recent literature on artisanal knowledge, the classics on the relationship between the arts and the sciences, and above all, my own studies in the Museum of the History of Science at Oxford and work at the Galileo Museum in Florence.

Why do you place such importance on the museums?

Because it was at the museums that I learned to ask historical questions centered around artifacts

and their makers. I've always been fascinated by the puzzling complexity and idiosyncratic beauty of the various artifacts that you find in history of science museums. I am interested in how artifacts and artisanal practices generate new ways of thinking about social and human interactions. In my book I show, for example, that clockmakers imagined the *Société des Arts* as an ideal social microcosm modeled on their own workshop practices. Or, to give another example, the inventor Jacques Vaucanson believed that improvement was more easily pursued by creating intelligent machines than by instilling intelligence in manual workers through education.

The Gottschalk Prize speaks to the fact that your book has attracted the attention of more than just historians of science. What do you think is the reason for its broad appeal?

You should ask the committee! I am so happy with this prize because I did write the book with the hope of bringing perspectives from the history of science to eighteenth-century studies. In fact, I think there are very few areas in eighteenth-century studies where our discipline doesn't have something to offer. And I don't mean just in terms of content, but also more substantially, as an approach to knowledge making.

On the theme of audience, who in the HSS community did you pitch your book to?

Almost everyone really. Although the book deals with a specific moment in space and time, there are many themes of more general interest: the politics behind encyclopedic projects; the relationship between technology and the state; and the material history of the notion of progress and useful knowledge. Even more generally, however, this is a story about how a social group that was fighting for inclusion adopted exclusionist policies against its own peers. What makes it even more compelling is that knowledge, learning, and the ability to write were used as tools to carry out this exclusion. I was interested in artisans because I wanted to write history from below; I found elitist artisans who mobilized remarkable intellectual energy to discriminate against other artisans who did not have access to learning.

What was the most surprising or unexpected thing you found out while researching this subject?

I had noticed the term *artiste* in treatises on clockmaking long before I started working on the book. Then, Oliver Courcelle contacted me with the idea of co-authoring an article on the *Société des Arts*, a little known association that gathered artisans and savants in early eighteenth-century Paris. The *Société* had attracted the attention of

Q & A with Paola Bertucci, cont.

historians in the past, but had not been discussed much because of the scarcity of archival sources. Oliver, together with the late Roger Hahn, had found a private archive with lots of new materials about the *Société*. While working on the article, I noticed that all the artisans in the *Société* were referring to themselves as *artistes*, while deprecating other practitioners whom they referred to as “artisans,” just like the clockmakers in the treatises I had identified. It became clear to me that there was a book to be written about these *artistes*.

What I could not have anticipated was that I would find a direct connection between the *Société des Arts* and the making of the *Encyclopédie*, the establishment of the Paris Academy of Surgery in 1731; the encyclopedic projects within the Academy of Sciences; and above all, the behind-the-scenes fight about useful knowledge and its role within the state. The more I got to know the world of the *artistes*, the more I realized that they constituted a dissonant note in the literature about early modern artisans and *savants*. While recent works have blended distinctions between artisans and savants, hands and minds, theory and practice, my historical actors were deeply engaged in boundary work: they were eager to create these dichotomies in order to define their unique expertise. They distinguished not just between theory and practice, artisans and savants, but

also among artisans themselves. The category of artisans, without further specification, does not account for this deeply elitist attitude within the artisanal world.

What part did you have the most fun with in writing this book?

Following the *artistes* through the streets of Paris, in their workshops, through the pages of their treatises, in the Paris Mint... basically everywhere I could find sources. After my son was born I could no longer travel to the archives, and so I employed research assistants who took thousands of photos of archival materials. It was super fun to open their files in New Haven. I loved immersing myself in the secretive alchemy of making coins and cannons, reading *artistes'* bold statements about their sensorial intelligence, and studying the amazing visual materials and artifacts they produced.

What did you find most challenging or frustrating?

Not finding women artisans in my sources was certainly frustrating. But the biggest hurdle came at the worst possible time. I had been in conversation with an editor about publication, and received warm encouragement all along, but just when I submitted a formal proposal, with a good chunk of the actual manuscript, I was told that the press could not publish the book

within the timeline we had previously discussed. To make matters worse, this news arrived just shortly before my tenure dossier was due. It was a catastrophic, frightening moment. Then, wonderful colleagues (thank you!) pointed out that there were many other possibilities, and shortly afterward I had presses competing for the manuscript. I offer this episode to those out there who may be despairing because of a rejection. Don't lose hope!

What other concrete advice—dos and don'ts—would you offer to a young graduate student or scholar wanting to undertake a project in eighteenth century history of science?

Read broadly. Think creatively about sources. Discuss your work with people outside your field. And, please, do come and talk to me if we cross paths; I'm always up for a conversation on anything early modern!

Innovations in Education

[Editor's note: We are delighted to announce the revival of a column on teaching and pedagogy in the history of science, a topic that is sometimes overlooked in the flurry of doing and sharing our research with one another, especially in our annual meetings. What is more, we reintroduce the section with quite a bang, featuring not just one, but two, articles: the first, some reflections on innovative teaching strategies and the importance of multilingualism in our discipline, by Michael Osborne, winner of the 2019 Joseph H. Hazen Education Prize; and the second, by Mark Carnes of Barnard College, about an exciting and immersive "game"-based pedagogy, which he has helped adapt for use in history of science classrooms.]

Ringling Doorbells in the History of Science

by Michael Osborne (Oregon State University)

The editor of the *HSS Newsletter* has provided me—as recipient of the 2019 Hazen Prize, for which I'm both grateful and humbled—with an opportunity to reflect on effective pedagogy in the history of science, and on my efforts to internationalize the discipline. I'll begin by reminding readers that there simply isn't a magic formula for effective teaching! Effective teaching, as we all know, takes many forms and requires teachers to maintain a diverse set of tools and to



Bernie Lightman (left) and Michael Osborne at the Prize ceremony in Utrecht.

use those tools and alter them often. Now, after several years of changing the jokes in my lectures to try to tap into the undergraduate zeitgeist, I am in the process of recycling hundreds of slides from the early years of my teaching career, having long ago turned to PowerPoint.

When I accepted the Hazen Prize in Utrecht, I likened good teaching to pressing a doorbell on a house—with the student being the house of course. I make no claims of sophistication in this approach to teaching, but it is less straightforward than it seems. “Houses” come in different styles with varying commitments to learning and different backgrounds and language skills. Each student has a “doorbell” located in a different place and good teachers strive to find it and get the student to open the door. A key for me has been to listen, and to help students, especially generations of very bright science students, ask and answer historical questions. One way to do this is with primary texts and a hands-on knowledge of the materials of science. At the University of California, Santa Barbara, I required graduate students in my course on embryonic stem cells and ethics to tour the Center for Stem Cell Biology and Engineering

and view the cells in action. At Oregon State University, in particular, I have made extensive use of our Special Collections in History of Science. Each iteration of my history of biology course required two external “labs”: one focused on rare books, and another on the collections of the chemist Linus Pauling whose ingenious balloon and marble models of molecular configurations and two Nobel prizes sent some students into a state of awe. Former students have come up to me years later and often the one thing they remember about my teaching is having been able to touch a Nobel Prize medal and read books like the first edition of Darwin's *Origin of Species*. As one ecological science major in my “Three Revolutions in Biology” course, after completion of a nice project on Darwin's publications, told me, “I didn't know you could think this way.”

My career has largely focused on non-Anglophone science, and I have served on dissertation committees in France, La Réunion, and Australia. One key to internationalizing the history of science is the teaching of foreign languages in our schools and universities. Even though, as Michael Gordin has shown us in

Innovations in Education

his wonderful book *Scientific Babel*, English is now the language of science, the history and the historiography of science continue to be polyglot. Therefore, I would argue that we need to support and advocate for foreign language teaching at every level, because unfortunately it is languishing at many institutions.

I would like to signal two international programs sensitive to the multilingual nature of our discipline, which are designed to engage students in historical thinking about science. Both are associated with the activities of the **International Union of History and Philosophy of Science and Technology [IUHPST]**. The first, with which I have been associated since 2005, is a competition for completed dissertations on history of science, technology, or medicine, run by the IUHPST's Division of History of Science and Technology [DHST]. To date we have refereed more than 100 dissertations from around the world. It is fairly easy to find referees in most Western languages, as well as Chinese, Russian, and Japanese. Formerly, non-English language dissertations required a 20-page English summary. After all, the argument went, English is the language of science and most historians of science read it. We recently altered that rule out of respect for the multi-lingual nature of the field and now require *all* dissertations, irrespective of language, to include a 20-page English summary to avoid the appearance of discrimination against

contributions not written in English. My DHST colleagues feel strongly that history of science written in local—read non-English—languages needs to be nurtured. This may seem a small issue, especially since *Isis* and *Osiris* now only publish in English, but it is not. One only needs to examine the field at the global level to realize that the preservation of non-English language history of science is vital to all of us. I am unsure how many tenure line posts in history of science will open in North America this year. I hope there are many. But let's ask where the growth of our field, beneficiary of the Cold War as it was, is likely to be in the next few decades? When I was in Beijing a few years ago my hosts told me that China planned to have 180 new history of science posts in the next few years. I haven't made a tally of what was actually created, although two recent Chinese students who studied with us at Oregon State now have permanent posts in China, where of course, the language of instruction is Chinese.

A second program which DHST supports in partnership with the International Union of Biological Sciences and the International Union for Quaternary Research, also turns on “local” languages. It addresses climate education and is web-based after the fashion of the superb **Embryo Project**, winner of last year's Hazen Prize. Known as “**Trans-disciplinary Research Oriented Pedagogy for Improving Climate**

Studies and Understanding,” TROP-ICSU is directed at K-12 teachers in all languages. Its goal is to get beyond stand-alone climate education and integrate the topic into core curricula in science, mathematics, and the social sciences. Its short modules are targeted at appropriate age and grade levels, and often signal the local impacts of climate change, which like geology, has historical dimensions. Of note, the site has a good deal of history of science and ecology in the videos, animations, and pedagogical tools. The site could use even more history of science content and this is one area where historians of science and graduate students could engage international audiences.

The great success of HSS Utrecht was a reminder of the international dimensions of our field and of the necessity of continued engagement with the diverse cultures and languages of the world. History of science remains a vital intellectual field with much to offer students and practitioners of the sciences, social sciences, and humanities.

Mike Osborne is an Emeritus Professor of History of Science at Oregon State University. He is the President of the Division of History of Science and Technology (2017–2021) of the International Union of History and Philosophy of Science and Technology and in 2020–21 will be President of IUHPST as a whole.



Innovations in Education

Teaching the History of Science through In-Class Games?

by Mark Carnes (Barnard College)

“Let’s teach the history of science through games!”

When Frederick Purnell proposed this idea to me in 2003, I laughed.

For six or seven years, I had been pioneering Reacting to the Past, a pedagogical initiative where college students play complex games, set in the past, their roles informed by classic texts: democratic Athens following its defeat in the Peloponnesian War; revolutionary France before the Terror—subjects like that. Over several weeks, students—taking the role of historical figures—debate key issues while the instructor—reconfigured as Game-master—sits in the back, enforcing rules and evaluating oral presentations and written work.

But students couldn’t debate known scientific facts. Or so I believed. “How,” I asked Purnell, “can you persuade anyone that the earth doesn’t move?”

“Aristotle did it for 2000 years,” Purnell retorted. “And, using Aristotle, students can still do it.” He then announced that he wanted to design a Reacting game based on the trial of Galileo: students assigned to the conservative

faction would indeed argue that the earth doesn’t move.

I had doubts, but Purnell had strong credentials as a Renaissance scholar and chair of the philosophy department at Queens College. And he told me to read Aristotle’s *On the Heavens*.

I relented, and Purnell went to work. He set the game in the Holy Office of the Inquisition in Rome in 1632. Students would be divided into three factions: conservatives, Linceans—supporters of Galileo—and moderates, who embraced the new science but sought to restrict its dissemination. About half of the students would serve as inquisitor cardinals; another half would provide testimony to the Holy Office—as professors of mathematics and natural sciences or as specialists on canon law, papal finances, or foreign policy.

Because designing a Reacting game is onerous—often a published game consists of a quarter-million words of historical essays, roles, and supporting texts—Purnell invited Michael Pettersen, then chair of physics at Washington and Jefferson College, to join him as co-author and designer of the game.

In 2005, however, Purnell died, suddenly and tragically. Pettersen asked me to help him complete the game. I agreed. Within two years, we had completed a prototype of the game and



“Game-master” Mark Carnes meeting with students/game-participants following a session of the Reacting game, *Charles Darwin, the Copley Medal, and the Rise of Naturalism, 1862-1864*, at Barnard and Columbia.

tested it with our students. Immediately we discovered the wisdom of Purnell’s initial premise. Students assigned to the conservative faction had a far easier time making their case than did the Linceans, who assumed it would be easy to prove what everyone knew. The conservatives, however, merely articulated Aristotle’s ingenious arguments and employed his demonstrations to prove the fixity of the earth. During the early phase of the game, as in history, the conservatives had a distinct advantage.

More important, the game elicited the same sorts of intellectual debates that reverberated in early seventeenth-century Rome. The game illustrated, often in vivid and unforgettable ways, the

Innovations in Education

complex intersection of science, religion, politics, international relations, economics, and other factors. Pettersen and I finished and published the game; now it is used in scores of colleges and universities.

In the meantime, another team of scholars had begun working on a Reacting game on Darwin and evolution. They rejected building it around the Scopes Trial, because the scientific arguments on both sides were so poor in that case. Instead, they located the game in London in 1864, as the Royal Society debated whether to give Darwin the Copley medal—its most prestigious award. Religious issues figured in the debate, of course, but the most important debate focused on Baconian induction, to which the Royal Society was committed. In the game—and in the real Royal Society—the central debate was whether Darwin relied on induction—and solid evidence—to prove his theory or whether the *Origin of Species* was based on deductions which, however brilliant, were scientifically unproven.

These two projects paved the way for an NSF grant to create shorter science games for college classes. David and Susan Henderson, professors of chemistry at Trinity College and Quinnipiac, respectively, designed a game on acid rain in Europe in the 1970s. David Henderson created another on climate change set in Copenhagen in 2009. Both games have been published.

Additional games available for test play include the following:

- the debate over whether Pluto is a planet;
- the causes of the cholera outbreak in London in 1854;
- the 1860 Karlsruhe Conference on the foundations of chemistry;
- the 1927 Solvay Conference on the nature of reality;
- Alan Turing and artificial intelligence in Manchester in 1949;
- the 1994 debate in Congress (among the FDA and CDC) over cholesterol and public health;

More games are in even earlier stages of design.

Now used at over 500 colleges and universities (see the *Chronicle of Higher Education*, September 2019), Reacting is arguably the most radical of the active-learning pedagogical innovations. Historians of science have good reason to be skeptical. Nevertheless, considerable research has shown that Reacting engages students; improves speaking, writing, and critical thinking skills; and generates a strong classroom community.

But does Reacting add to students' understanding of the history of science? Is it worth all the gamey fuss?

Yes, because Reacting teaches our most important lesson. When we give lectures and write books on

the rise of scientific paradigms, we make the story as clear and clean as possible, lest students become confused. Consequently, students come to assume that the advance of science is inexorable, that knowledge inevitably crowds out error.

But we know this assumption is not true. Sometimes error persists for decades or—as in the case of Aristotle's cosmology—for millennia. And sometimes knowledge breaks through with stunning speed. The advance of science is profoundly contingent.

By playing a Reacting game, students perceive—indeed, they experience—how myriad forces impinge on the development and dissemination of new paradigms. They understand that history, even the advance of science, is not a steady, upward march, but a desperate groping for elusive truths.

For more information on Reacting, see <https://reacting.barnard.edu/>. Also check out this article in the *Chronicle of Higher Education*: **“How an Idiosyncratic Role-Playing Game Became a Popular Teaching Tool.”**

Mark C. Carnes is a Professor of History, Barnard College, and author of Minds on Fire: How Role-Playing Games Transform College (Harvard, 2014). This essay is dedicated to Frederick Purnell and Michael Pettersen, fine scholars and teachers whose scholarship and teaching were cut tragically short.

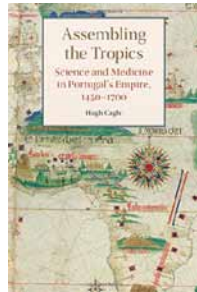


Member News

Ana Barahona (National Autonomous University of Mexico) became a Member of the Board of Governors of the UNAM. The Board was created in 1945 and is composed of fifteen distinguished members of the academic community elected by the University Council and, on specific occasions, by the Board itself. Among its responsibilities is the appointment of the Rector and the directors of the faculties, schools, and institutes, as well as the appointment of the members of the University Board.

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Hugh Cagle (University of Utah) received the **2019 Leo Gershoy Award** from the American Historical Association for his first book, *Assembling the Tropics: Science and Medicine in Portugal's Empire, 1450–1700* (New York: Cambridge University Press, 2018).



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Elly Dekker (Independent scholar) presented a lecture, “The celestial globe of Gerbert d’Aurillac: Its place in the history of celestial cartography,” at a symposium on Friday 7 June 2019 in Paris, which will be published in *La revue Cartes & Géomatique*.

Dekker also presented a lecture, “The construction of globe gores: Theory and Practice in the sixteenth and seventeenth century,” at the 14th International Symposium for the Study of Globes held 2–5 October 2019 in Zurich, which will be published in *Globe Studies*.

Dekker is also conducting research in cooperation with Kristen Lippincott, “Translation and analysis of the first celestial atlas published by Alessandro Piccolomini in his *De le Stelle Fisse* in 1540.”

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Ryan Feigenbaum (History of Science Society) recently released *The Capitalizer*, a web app for automatically capitalizing titles according to the style rules of the AP, APA, CMS, MLA, or NYT. The website may be useful to scholars, writers, and students who need to ensure that their titles are in the correct format for bibliographies, conference programs, and presentations.

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Adam Fix (University of Minnesota) published “**Esperienza, Teacher of All Things: Vincenzo Galilei’s Music as Artisanal Epistemology**” in *Nuncius* 34, no. 3 (December 2019): 535–574.

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Patrick R. Girard (Université de Lyon) published “**Histoire de la Relativité Générale d’Einstein: Développement Conceptuel de la Théorie**” a French translation of his 1981 PhD thesis, “The Conceptual Development of Einstein’s General Theory of Relativity” (University of Wisconsin-Madison USA, 1981) supplemented with explanatory tables, an index and some commentary.

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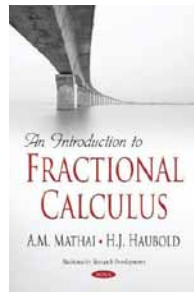
Bert Hansen (Baruch College of CUNY, emeritus) published the online report “How Renaissance Princes Pursued Beauty in Science” for *Distillations*, which is published by the Science History Institute (formerly the Chemical Heritage Foundation). The piece calls attention to a most unusual history of science exhibit and catalog at the Metropolitan Museum of Art of New York: *Making Marvels: Science and Splendor at the Courts of Europe*. The 150 items in the exhibit include not only the expected clocks and clockwork and fabulous automata, but also an alchemical smelting oven, an odometer, and the unique wire-drawing bench that pulled gold and silver wire through successively smaller dies to make them finer and finer. Many of the treasures are borrowed from historic *Kunstammern* located in Dresden and Kassel, but Paris is represented, and a surprising number were already at the Met, even if not usually on display.

Member News, cont.

Some *Newsletter* readers will have seen reports of the tragic heist of historic jewelry from Dresden's Gruenes Gewoelbe around Thanksgiving. Fortunately, the world's largest, flawless green diamond was safe at that time on loan to the Met. Historians of science who can get to New York before the show closes on 1 March 2020 will want to avail themselves of a unique opportunity. For the rest, and for their institutions' libraries, the Met has published a **sumptuous catalogue** with scholarly essays and comprehensive entries on each item.

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Hans J. Haubold (United Nations) and A. M. Mathai published **An Introduction to Fractional Calculus** (New York: Nova Science Publishers, 2019).



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Ton van Helvoort (independent scholar), **Neeraja Sankaran** (editor, *HSS Newsletter*), and **Gerard van Doornum** (Erasmus MC) are pleased to announce that their book *Leeuwenhoek's Legatees and Beijerinck's Beneficiaries: A history of medical virology in the Netherlands* (Amsterdam: Amsterdam University Press, 2020) will be out in February 2020. **More information is available on the publisher's website.**

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Marieke Hendriksen (Royal Netherlands Academy of Art and Science) is one of twelve young Dutch researchers to receive an inaugural **KNAW Early Career Award**. The Award, a sum of €15,000 and an art object, is aimed at researchers in the Netherlands at the start of their career who are capable of developing innovative and original research ideas.

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Margaret Jacob (University of California, Los Angeles) was made a **fellow at the American Association for the Advancement of Science (AAAS)**.

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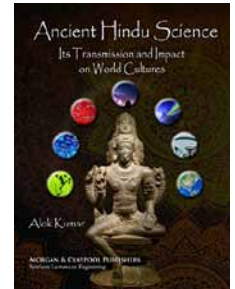
Frank James (University College London) has left the Royal Institution and moved completely to the **Department of Science and Technology Studies, University College London**. His new e-mail address is **frank.james@ucl.ac.uk**.

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Christine Keiner (Rochester Institute of Technology) was promoted to Professor of STS, with a joint appointment as Professor of History, and is now **Chair of the Science, Technology, and Society Department at RIT**.

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Alok Kumar (State University of New York Oswego) published ***Ancient Hindu Science: Its Transmission and Impact on World Cultures*** (California: Morgan and Claypool, 2019).



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Bruce Lewenstein (Cornell University) received recognition as the **2019 Cornell CALS Alumni Association Outstanding Faculty Member**, an annual award from alumni of Cornell's College of Agriculture and Life Sciences for full professors "who have made outstanding contribution to the College in one or more of the following areas: teaching, research, extension, and/or administration."

He also edited "**Special Section: The Need for Feminist Approaches to Science Communication**" appearing in the *JCOM: Journal of Science Communication* 18, no. 4 (2019). (This journal is only published online.)

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Liu Dun (Distinguished Professor of Science History of Tsinghua University) was the recipient of the International Academy of the History of Science's **Koyré Medal** in 2019. The medal was awarded at the **1st Conference of**

Member News, cont.

the International Academy of the History of Science held in Athens, Greece from 12–15 September. A distinguished scholar of the history and advancement of science in China for over 40 years, Dr. Liu is the first Chinese recipient of the Koyré Medal, which was first awarded in 1968 and recognizes the sum of a scholar’s career rather than one specific achievement or publication.

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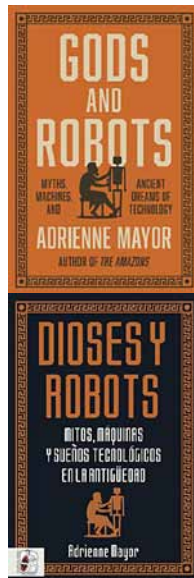
Kira Lussier (University of Toronto Mississauga) published **“Of Maslow, Motives, and Managers”** in the *Journal of the History of the Behavioral Sciences* 55 no. 4 (Autumn 2019): 319–341.

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Adrienne Mayor (Stanford University) wrote the script for the TED-Ed animation **“The Greek Myth of Talos the First Robot,”** based on her book ***Gods and Robots*** (Princeton: Princeton University Press, 2018).

Gods and Robots was translated into Spanish, ***Dioses y Robots*** by Desperta Ferro.

She was also invited to speak about “ancient automatons and



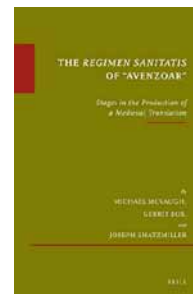
dreams of technology” at Leaders in Science Forum A*STAR, Singapore; California Classics Association-South, University of California-Irvine; Pacifica Graduate Institute, Santa Barbara; Nerd Nite Silicon Valley, San Jose; The Long Now Foundation's Interval Salon, San Francisco; and Taiwan American School, Taipei.

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James McClellan (Professor emeritus, Stevens Institute of Technology) recently completed *Old Regime France and Its Jetons: Pointillist History and Numismatics*, which is due out in early 2020 under the imprint of the American Numismatic Society.

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Michael McVaugh (University of North Carolina) published ***The Regimen Sanitatis of Avenzoar: Stages in the Production of a Medieval Translation*** with co-authors Gerrit Bos and Joseph Shatzmiller (Leiden-Boston: Brill, 2019).



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Christopher Meinel (Universität Regensburg) was **awarded the Carl-Duisberg-Plakette**

badge by the German Chemical Society to honor his outstanding contributions to a deeper understanding of the emergence and cultural signification of chemistry in history.

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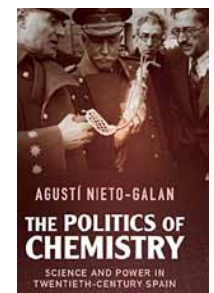
Anna-Maria Meister (Technische Universität Darmstadt) is now a tenure-track Assistant Professor for Architecture Theory at the TU Darmstadt, since September 2019.

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Ronald Mickens (Clark Atlanta University, Distinguished Fuller E. Callaway Professor) presented a lecture to The James Weldon Johnson Institute’s Colloquium Series on Race and Difference on 25 November 2019, Emory University. The title of his talk was “The Heroic Era for Blacks in Science (1935–1945): Blackwell ... Wilkins.”

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Agustí Nieto-Galan (Universitat Autònoma de Barcelona) published ***The Politics of Chemistry: Science and Power in Twentieth-Century Spain*** (Cambridge: Cambridge University Press, 2019).



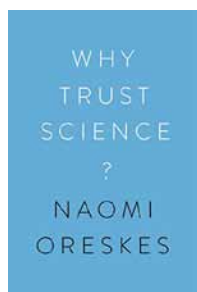
Member News, cont.

He was also awarded an **ICREA-Acadèmia research prize** (2019–2023) by the Institució Catalana de Recerca i Estudis Avançats (ICREA). This is a research prize for university professors who already hold permanent positions in the Catalan research system. The award is for five years and is meant to promote the research of the awardees mainly through relieving them from teaching duties.

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Naomi Oreskes (Harvard University) published *Why Trust Science?* (Princeton: Princeton University Press, 2019).

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Joseph Pitt (Virginia Tech) published *Heraclitus Redux: Technological Infrastructures and Scientific Change* (London: Roman and Littlefield, 2019).

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Heather Munro Prescott (Central Connecticut State University) is the recipient of this year's **Women in Medicine Legacy Foundation Fellowship** at the Archives for Women in Medicine/Center for the History of Medicine at the **Countway Library at Harvard University**

Medical School. The Women in Medicine Legacy Foundation Fellowship promotes and preserves the history of women in medicine and medical sciences. She will use the Women in Medicine Legacy Foundation Fellowship to conduct archival research for a book on the cultural history of the Planned Parenthood Federation of America.

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Peter J. Ramberg (Truman State University) was named Associate Editor of *Ambix: The Journal of the Society for the History of Alchemy and Chemistry*, beginning in January of 2020. He will be responsible for overseeing article submissions covering the eighteenth and nineteenth centuries.

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Joy Rankin (AI Now Institute, New York University) is now **Research Lead at AI Now**. As Research Lead, Joy will further develop and oversee the strategy and initiatives for AI Now's Gender, Race, and Power in AI program. She brings to AI Now her decade of experience working at the intersection of technology and education combined with her academic expertise as a historian.

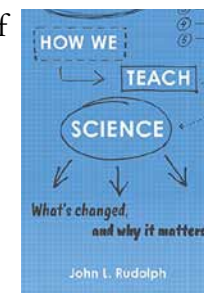
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Seth Rasmussen (North Dakota State University) published **“Sustainability and Energy - Knowledge of the Past is Critical for our Future”** in *Substantia* 3, no. 2, suppl. 1 (2019): 9–11. He also published “From Aqua Vitae to E85: The History of Ethanol as Fuel” in *Substantia* 3, no. 2, suppl. 1 (2019): 43–55. Both of the two publications above are part of a special issue that he guest edited. This special issue is one of six special issues of the journal in celebration of the international year of the periodic table.

He has also launched a new history of chemistry book series with Springer entitled *Perspectives on the History of Chemistry*, for which he will serve as the Series Editor. This series will publish books of 150–450 pages in both hardback and e-book forms.

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John L. Rudolph (University of Wisconsin-Madison) published *How We Teach Science: What's Changed, and Why It Matters* (Cambridge: Harvard University Press, 2019), which was selected as a *Choice* Outstanding Academic Title for 2019. The book explores the history of how the process of science has been taught in American schools from the nineteenth century to the

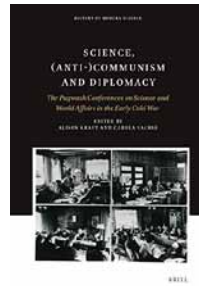


Member News, cont.

present and the implications of that history for the relationship between science and the public. Rudolph is currently completing his second term as chair of the Department of Curriculum & Instruction at the University of Wisconsin-Madison.

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Carola Sachse (University of Vienna) published *Science, (Anti-) Communism and Diplomacy. The Pugwash Conferences on Science and World Affairs in the Early Cold War, History of Modern Science, Vol. 3* (Leiden: Brill, 2019) as a co-editor with Alison Kraft. She also wrote “Patronage impossible: Cyrus Eaton and ‘his’ Pugwash Scientists” in it.



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Carlos Sierra (Universidad Nacional de Colombia) published the following:

- **“Bioética y medios de comunicación: Influencias y responsabilidades mutuas,”** Universidad Nacional de Colombia, 27 November 2019
- **“Un nuevo derecho: El derecho a la oscuridad,”** Centro de Estudios Nueva Gaceta, 13 November 2019

- **“El Sínodo Amazónico: Una visión holística de la crisis de civilización,”** Centro de Estudios Nueva Gaceta, 21 October 2019
- **“Temas especiales en la enseñanza de la Termodinámica de soluciones: Más allá de la Guía de Perplejos,”** Universidad Nacional de Colombia, 20 September 2019
- **“Chernobyl: Tecnociencia dominante irresponsable,”** Centro de Estudios Nueva Gaceta, 10 September 2019
- **“El despertar del León Durmiente: ¿Pacífico, bondadoso y civilizado?”** Centro de Estudios Nueva Gaceta, 19 August 2019

He also participated in the following conferences:

- **“La perennidad del libro: El alma de las civilizaciones,”** Tecnológico de Antioquia, Medellín, 25 October 2019
- **“La dimensión ética de Doctor Who,”** Sociedad Julio Garavito para el Estudio de la Astronomía, Medellín, 28 September 2019

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Dean Keith Simonton (University of California, Davis) published “A Publication Missing from Lewis M. Terman’s CV? Ralph K. White’s 1931 ‘The Versatility of Genius’” in *Society for the History of Psychology* 22, no. 4 (2019): 372–4.

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Pamela H Smith (Columbia University), Director of the Making and Knowing Project, was awarded the Eugene S. Ferguson Prize from the Society for the History of Technology for the project’s digital critical edition of an anonymous sixteenth-century French technical manuscript, BnF Ms. Fr. 640. The Eugene S. Ferguson Prize is awarded biennially for outstanding and original reference work that will support future scholarship in the history of technology. The Ferguson Prize recognizes work that is in the tradition of scholarly excellence established by Eugene S. Ferguson (1916–2004), SHOT’s pioneering bibliographer, a founding member of the Society (President, 1977–1978; da Vinci Medalist, 1977), museum curator and exhibit catalog author, editor, annotator, university professor, and scholar of the history of engineering and technology.

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Michael Stolberg (Universität Würzburg) is continuing work on the database project on **Early Modern Physicians’ Correspondences** in Würzburg, Germany. Started in 2009, the database now offers free online-access to the records of about 45,000 letters written by or to learned physicians in the German lands between 1500 and 1700. In addition to the basic data (names, date, place), thousands of datasets contain a detailed summary of the letter in question. Recently, an

Member News, cont.

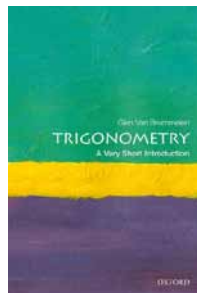
English-language user interface has been added and over the next years, English translations of the German summaries will be added.

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Alain Touwaide (University of California, Los Angeles) was interviewed by ethnobotanist Dr. Cassandra Quave (Emory University) as part of her podcast series entitled “**Foodie Pharmacology.**” In this conversation, Touwaide presents his research on food and medicine in the ancient Mediterranean.

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Glen Van Brummelen (Quest University) will publish *Trigonometry: A Very Short Introduction* (Oxford: Oxford University Press, 2020).



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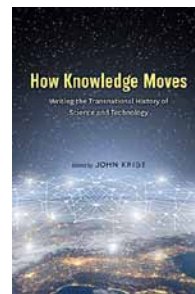
Ruben Verwaal (Durham University) is now an **NWO Rubicon postdoctoral researcher** at the Institute for Medical Humanities at Durham University.

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Zuoyue Wang (California State Polytechnic University, Pomona) was elected a **fellow of the American Association for the Advancement of Science (AAAS)** in November 2019.

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He has also published articles in the following: “Controlled Exchanges: Public-Private Hybridity, Transnational Networking, and Knowledge Circulation in US-China Scientific Discourse on Nuclear Arms Control” in *How Knowledge Moves: Writing the Transnational History of Science and Technology*, edited by John Krige, 368–10 (Chicago: University of Chicago Press, 2019).



“Theory Attached to Practice: Chinese Debates over Basic Research from Thought Remolding to the Bomb, 1949–1966” in *Basic and Applied Research: The Language of Science Policy in the Twentieth Century*, edited by David Kaldewey and Desiree Schauz, 228–247 (New York: Berghahn Books, 2018).



Additionally, he took a sabbatical leave in fall 2019 to conduct research and gave numerous lectures on Chinese American scientists and US-China scientific exchanges in Beijing, Shanghai, Nanjing, and Hohhot in China.

John Z. Wee (University of Chicago) published *Knowledge and Rhetoric in Medical Commentary: Ancient Mesopotamian Commentaries on a Handbook of Medical Diagnosis* (Sa-gig) (Leiden: Brill, 2019) and *Mesopotamian Commentaries on the Diagnostic Handbook Sa-gig: Edition and Notes on Medical Lexicography* (Leiden: Brill, 2019).

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Richard Yeo (Griffith University) was elected a **member of l’Académie internationale d’histoire des sciences.**



In Memoriam

Peter Hanns Reill

December 11, 1938 – August 18, 2019

Memories of Peter Reill from UCLA, by Stefania Tutino

Peter Hanns Reill, Professor Emeritus of History and former Director of the Clark Library and the Center for 17th- and 18th- Century Studies at UCLA, passed away suddenly on August 18, 2019. All of his friends, colleagues, and students are deeply saddened by his untimely death, and our thoughts are with his wife Jenna and his daughter Dominique as they mourn their immense loss.

Peter was a distinguished scholar, an extraordinary administrator, and a generous, warm, and decent man. Even though Peter was, in many ways, a quintessential New Yorker, he didn't have any nostalgia for the city where he was born and grew up. He came to LA in 1966, when he joined the Department of History of UCLA, and immediately fell in love with both the university and the city, where he firmly planted his roots, leaving indelible personal and professional marks.

Peter's scholarship centered on the intersection between science and philosophy during the Enlightenment. Although characterized by a profound transnational approach, its main focus was on Germany, and in fact, Peter's works on the German Enlightenment are among the

most original, creative, and novel contributions to the field. Contrary to the traditional view, Peter argued that the Enlightenment did not represent the absolute triumph of mechanism and instrumental reason. Instead, he saw the Enlightenment as a much more complex set of different—and at times diverging—ideas, doctrines, and intellectual traditions, including vitalism and religious pietism. Peter's scholarship provides not only a nuanced and rich understanding of the German (and European) Enlightenment, but also an insightful reflection on what modernity is and how it came about.

Peter was not satisfied with simply furthering his own research agenda; he strongly believed that supporting and nurturing other people's scholarship was just as important. Several cohorts of undergraduate and graduate students have benefitted from his attentive and engaged teaching and mentoring: his classes were clear and rigorous, his comments were on point, and his personal attitude was open and caring. Peter always made sure that all students felt comfortable in the class and got the help they needed to succeed, regardless of whether they were taking the class with the intention of going on to graduate school and to an academic career—as several of them did—or simply to get the credits they needed to maintain their Division I Athletic Scholarship. Peter's teaching



Prof. Reill in his element, opening remarks for the inaugural William Andrews Clark Lecture on Oscar Wilde on October 14, 2007 at the Center for 17th- and 18th- Century Studies at UCLA. Photo by Reed Hutchinson.

left a lasting memory on his students. One of them, who enrolled at UCLA the same year as Peter arrived there, was so impressed by his teacher's challenging and stimulating course that in 2008 he decided to establish an endowed chair, the Peter H. Reill Chair in European History in his former teacher's honor.

The same intellectual generosity that informed his teaching and mentoring also inspired all Peter's activities as an administrator, which in many ways are truly extraordinary. Most notable was his directorship, since 1991, of the

In Memoriam

William Andrews Clark Memorial Library and the Center for 17th- and 18th- Century Studies at UCLA, a position he held until retirement. Under his leadership, the Library and the Center became two of the most innovative, vibrant, and internationally-recognized venues for the study of early modern and modern European history and literature. Given his characteristic humility and generosity, Peter would have certainly demurred and attributed the stunning success of these institutions to his collaborators—many of whom he personally hired, selected, promoted, or mentored—but the truth is that this success wouldn't have been possible without his inexhaustible energy, keen eye for spotting and cultivating talent, unmatched intellectual generosity, and superior fundraising ability. During his tenure, a judicious and energetic acquisition policy allowed the Library to greatly enrich its holdings, while the Center planned, organized, and sponsored dozens of conferences, programs, workshops, and seminars. Peter participated personally in every aspect of the Center's activities, sharing ideas and possible topics, identifying participants, and always making sure that the programs included junior scholars alongside established senior ones. He was always present at the actual events, where he would give the introductory remarks and then take his seat, always in the same chair—in the last row in the back of the wood-paneled salon

of the Clark Library, where all conferences and seminars were held—where he would stay for the remainder of the program, asking questions that were both sharp and kind.

Peter envisioned the Clark not only as a hub for scholarly interactions, but also as a venue for culture *lato sensu*. To this effect, he set up a program of poetry readings in the Library, and a much celebrated annual series of recitals and chamber music concerts—classical music was one of Peter's life-long passions. Despite his professional standing and accomplishments, Peter never forgot the humble background of his immigrant family, and had no trace of, and no patience for, any pretense of elitism. Indeed, he always sought to make the cultural activities of the Center and the Library available to the wider community. Among the several initiatives he took in this regard, he instituted an outreach program for K-12 students, in partnership with the LA Unified School District.

On a slightly less scholarly note, Peter was a charming and charismatic host during conference dinners, in which scholarly conversation flowed and personal friendships were cemented over Italian food and wine; a wine connoisseur and a lover of food, Peter was an accomplished cook specializing in Italian cuisine, with the occasional detours into France and into Japan for memorable sushi-making sessions. Many of his friends and

colleagues will surely remember Peter's beloved *pasta alla carbonara* as well as a show-stopping cassoulet as two highlights of his repertoire.

Describing all that Peter did in his official role as director of the Clark and Center does not even begin to do justice to the immense intellectual generosity and personal warmth that Peter showed toward all the young students and scholars who gravitated around these institutions. He always had time for answering questions, sharing his knowledge and wisdom, and offering scholarly suggestions, career advice, or sometimes simply a sympathetic shoulder to cry on, both metaphorically and literally. I first met Peter while I was an exchange student from Italy, and later on as a postdoc at the Clark, and I am sure that I speak for many other fellow students, postdocs, and junior scholars when I say that even though Peter was not in our field and was not our official advisor or mentor, he did as much as any other senior scholar to make it possible for us to have a career in academia. When we thanked him, he always told us that the best way to honor our debt is paying it forward, and even though I know that we try, I am not sure that we will ever be able to fully succeed, because our debt is so very large.

Stefania Tutino is Professor of History and Italian at UCLA.

HSS News

Grad Students and Early Career Scholars Elect First Representative

The graduate student and early career community of HSS has elected **Kristine Palmieri** (University of Chicago) as its first Early Career Representative (ECR) to speak on their behalf and represent their interests in Council.

The ECR position was created in July 2019 in order to establish a mechanism through which information can be shared between this community and the rest of HSS as an organization. The ECR has three primary responsibilities: (1) to present the thoughts and concerns of the graduate and early career community to the HSS Council; (2) to speak and comment on matters discussed in Council from the point of view of this community; (3) to convey pertinent information directly to that community on behalf of the Council.

Kris would like to strongly encourage anyone to contact her with suggestions, comments, and thoughts concerning the matters and issues that they would like to see brought to Council. She can be reached at hss.ecr@gmail.com.

Meet the New Editorial Advisory Panel of the *HSS Newsletter*

I am very pleased to announce that the editorial advisory panel, which I had mentioned while introducing myself back in July, is now in place. Panel members represent different disciplinary specialties in the history of science, geographic regions and professional sectors, and will serve in this capacity for anywhere from 1–3 years. Our prediction that such a panel will improve the coverage and quality of the *Newsletter* is already being borne out in spades--not only through the direct participation in articles (as will be evident in the next issue) but also by suggesting ideas for people and issues that we may otherwise miss. I am sure that all members are well known in the HSS community, but for this issue, I asked each panel member to re-introduce themselves and share something of their vision for the *Newsletter*.

Robert Bud (PhD, History and Sociology of Science, University of Pennsylvania, 1980) worked at the Science Museum in London for forty years. Since retirement in 2018 he has taken emeritus status and continues to do research. He has sought to integrate research into nineteenth and twentieth century technoscience, particularly the disciplines around biotechnology, within curatorial work. He is a cofounder of the Artefacts consortium that brings together curators and academics to discuss the interpretation of collections and in his capacity as advisor, hopes to promote not just museum interests but also reflective engagement with the vast non-academic writing of the history of science.

Harold Burstyn, PhD Harvard, received what's now the Reingold Prize in 1960. His principal position was as the first Historian of the United States Geological Survey; he went to law school when that position was abolished. After 30 years practicing patent and trademark law, he's returned to the history of science and says that although "advanced age limits my participation in live meetings, I hope to offer through the *Newsletter* a perspective that goes back to 1947, when I entered college and first learned, probably from the late I. Bernard Cohen, about our subject."

HSS News, cont.

Pablo F. Gómez is Associate Professor of Medical History and History at the University of Wisconsin, Madison. His work examines the history of science, and the history of health and corporeality in Latin America, the Caribbean, and, more broadly, the Black Atlantic World. He is interested in promoting the visibility of scholarship in these fields within the HSS community.

Marta Hanson received her PhD in the History and Sociology of Science at the University of Pennsylvania in 1997. Currently Associate Professor in the Department of the History of Medicine, Johns Hopkins University, she writes on the history of medicine and public health in China and the cross-cultural history of medicine between China and Europe. Broadly involved in the history of science, technology, and medicine in East Asia since graduate school, she plans to encourage more coverage of new developments related to that field as a new member of the *HSS Newsletter* team.

Minakshi Menon received her PhD in History and Science Studies from the University of California San Diego and now works as a Research Scholar at the Max Planck Institute for the History of Science in Berlin. She wants to see as much coverage as possible on science in Asia at the HSS, and plans to devote her time as part of the *Newsletter* team toward making that happen.

Kristine Palmieri is a PhD candidate at the University of Chicago. Her research concerns the history of the human sciences and the humanities with a focus on philology. As Co-Chair of the HSS Graduate and Early Career Caucus from 2017–2019, she worked to develop programming that fostered an inclusive and welcoming, as well as collaborative and convivial environment, for junior scholars. She aims to bring perspectives from this community to the *Newsletter* and thus, to HSS as a whole.

Edna Suárez-Díaz is Full Professor at the National University of Mexico (UNAM), where she received her PhD and has worked since 1996. Between 2005 and 2008 she was a Research Fellow at the Max Planck Institute for the History of Science in Berlin. She has written on the history and historical epistemology of studies of molecular evolution, and currently she is broadly involved with global history of science, technology and development in the 20th century, with a focus on Mexico and Latin America. As part of the *Newsletter* team, she wants to promote the participation of Latin American scholars in HSS, and will encourage more coverage of current research happening in this field.

HSS, PSA, and HOPOS Membership Directories

Until quite recently, the membership directories for the three societies—HSS, the Philosophy of Science Association (PSA), and The International Society for the History of Philosophy of Science (HOPOS)—whose journals are published by the University of Chicago Press—were open and accessible to anyone. With the passage of the General Data Protection Regulation and other privacy laws that are soon to become active, however, these directories are now restricted to members only. They are great resources for finding colleagues with similar research interests, and so, we thought it worthwhile to bring this development to the attention of the HSS at large.

HSS News, cont.

HSS Ombudsperson

As announced briefly in the previous issue, HSS seeks a successor to Sally Gregory Kohlstedt, the first Ombudsperson, whose term will expire in June 2020.

The Ombudsperson is a volunteer position for an HSS member whose main task will be to receive inquiries and complaints relating to HSS's **Respectful Behavior Policy**. Speaking with the ombudsperson about an issue in no way obligates any further action (as is the case at some university campuses) and the intention is to provide information. Thus, the ombudsperson will also serve as a resource to meeting attendees regarding respectful behavior and general questions regarding the Society's support of, and advocacy for, diverse constituencies of its membership, especially students and early careerists. The ombudsperson's role is to

- (i) review with any interested member of HSS or meeting attendee the Respectful Behavior Policy, to which every meeting registrant agrees during the registration process;
- (ii) listen to the concerns brought forward by a person, and review with them the formal complaint process;

- (iii) carry out a formal complaint investigation if the complainant so desires, which includes interviewing both the complainant and the accused party or parties; and
- (iv) present to the Respectful Behavior Review Committee the findings. The ombudsperson shall prepare an annual report for the HSS Council, detailing activity (or lack thereof) over the previous year, being careful to maintain anonymity of all persons. The ombudsperson shall make clear to all parties that the ombudsperson is not providing legal advice and that the availability of an HSS ombudsperson is not intended to substitute for a complainant either making use of their affiliated institution's mechanisms for addressing complaints of discrimination or for consulting expert legal advice. Moreover, it is not the role of the HSS ombudsperson to assist individuals through their institution's internal mechanism for pursuing a complaint of discrimination.

The ombudsperson contributes to HSS efforts in informing/educating HSS's membership about the HSS's Respectful Behavior Policy. The ombudsperson consults, as needed, with the Executive Director, Council, and the Respectful

Behavior Review Committee, and also serves *ex-officio* on the Diversity and Inclusion Committee. The ombudsperson should, if necessary, be able to consult with a complainant rapidly, within a 24-hour period, and therefore is expected to attend the annual conference. The duties of the ombudsperson concerning discrimination and sexual harassment, as well as contact information (a secure email address) will appear on the HSS website. The ombudsperson will be appointed by the HSS Council for a 3 year term (July 2020 to June 2023, or extended by at least 60 days after an HSS annual meeting), on the recommendation of the Executive Committee, which shall solicit input from the Respectful Behavior Review Committee, Graduate and Early Career Caucus, Diversity and Inclusion Committee, and Women's Caucus.

If you are interested in serving as ombudsperson, please contact HSS Executive Director, Jay Malone (jay@hssonline.org) to express interest. You may also contact the outgoing ombudsperson Dr. Kohlstedt, who has very kindly agreed to share

News from the Profession

Two Historians of Science Elected to APS Membership



Karine Chemla



Naomi Oreskes

The American Philosophical Society, the oldest learned society in the United States, has elected two historians of science as members in 2019: **Karine Chemla**, who is a historian of mathematics in China, is currently director of research at the Centre National de la Recherche Scientifique (CNRS) in France; and **Naomi Oreskes**, an environmental historian who is professor of the history of science and affiliated professor of Earth and planetary sciences at Harvard University.

Founded by Benjamin Franklin in 1743, the APS's main mission is to "promote useful knowledge" through research, fellowships, and public outreach in different a wide variety of scholarly disciplines. Membership, which is possible only through election, honors individuals who have made extraordinary accomplishments

to their fields. The accomplishments of this year's history of science members are indeed extraordinary and prolific scholars and *HSS Newsletter* heartily congratulates them for this honor. More information about each new member and their election many be found by clicking on their names.

December 2019 Issue of *HoST: Journal of History of Science and Technology*

The December 2019 issue (13.2) of *HoST: Journal of History of Science and Technology* is now available online. HoST is a peer-reviewed open access journal, available online, published in English by De Gruyter/Sciend, as a result of a partnership between four Portuguese research units (CIUHCT, CIDEHUS, Institute for Social Sciences, and Institute of Contemporary History).

New Website: Fingerprinting in the Modern World

Rutgers University has launched **Fingerprinting in the Modern World**, a website that provides resources for teaching the history of fingerprinting in secondary and college-level humanities, life sciences, and forensic science classes.

The website provides instructional materials (short narrative modules, video lectures, online quizzes) on the following topics:

- the development and use of fingerprint identification in policing and forensics,
- how fingerprint patterning has been studied in the modern life sciences, including anthropology, human genetics, and medical genetics,
- the history of race in science, especially how disciplines such as physical anthropology and dermatoglyphics (the scientific study of fingerprints and palm patterns) have constructed notions of racial identity and difference in modern times.

The website is part of a project funded by the National Science Foundation (Note: Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author and do not necessarily reflect the views of the NSF). Any and all feedback (a feedback form is available at the bottom of the page) is most welcome!

Information about the website was provided by Daniel Asen, Associate Professor, History, Rutgers University-Newark.

HPS&ST Newsletter

The latest issue of the *HPS&ST Newsletter* is now available on the web.

News from the Profession, cont.

Dissertation Abstracts 79-01 A and B

Below are the latest batch of recent doctoral dissertations harvested from the issues 79-01 A and B of *Dissertation Abstracts* related to the history of science.

- [ISISDis79-01](#)
- [JHMDiss79-01](#)

Our deep thanks to Jonathan Erlen for faithfully compiling these lists.

The Value of Academic Societies

A recent *Chronicle of Higher Education* article questioned the value of academic societies and Joy Connolly, the new President of the American Council for Learned Societies penned a response, “**The Value of Academic Societies**” as a Letter to the Editor.

HSS has been a member of the ACLS since 1927, joining soon after its own founding in 1924. This rapid linking reflects the hunch of HSS’s leaders that associating with ACLS would pay dividends, and so it has. The HSS, and the HSS Executive Director in particular, have enjoyed enormous benefits from interaction with the now 75 sister societies. Few problems are novel and the combined experience and wisdom of the chief

executive officers of the ACLS has often provided insights that led to solutions. We are confident that this relationship will continue to prove mutually beneficial to both societies and their members.

Introducing: HPS.CESEE Online Platform (History of Science in Central, Eastern and Southeastern Europe)

We are delighted to be able to share with you the new online platform HPS.CESEE, which aims to facilitate the exchange of information about the history of scientific knowledge in Central, Eastern and Southeastern Europe. Our aim is to serve as a resource for the history of scientific knowledge in the region stretching from Prague to Perm and from Tallinn to Tirana, or from (present) Albania and Austria to the (former) Soviet Union and Yugoslavia. We will keep you updated about conferences, events, new publications, journals and positions in our field—via **our blog**, newsletter, and social media: **Facebook group** and **Twitter @hpscseee**.

As HPS.CESEE is a community project, inspired by H-Net and H-Soz-u-Kult, we will rely on the information we receive from our members and followers—so please forward this information to colleagues, students and other members of the history of science community

broadly construed. Please read our blog, subscribe to our newsletter, and follow us on social media, and send us information you would like to be circulated. And please contact us if you are interested in joining our editorial team.

- **Learn about HPS.CESEE and the editorial team**
- Contact the editors of HPS.CESEE: hps.cesee@gmail.com.

Yours,
HPS.CESEE editors

Friedrich Cain (Erfurt), Lucie Čermáková (Prague), Vedran Duančić (Zagreb), Daša Ličen (Ljubljana), Martin Rohde (Innsbruck), Timofey Rakov (Tyumen), Katalin Stráner (Southampton), Jan Surman (Moscow)

Announcement from the AAAS Board of Directors

The AAAS Board of Directors is thrilled to announce that effective 6 January 2020, Dr. Sudip Parikh joined AAAS as Chief Executive Officer and Executive Publisher of the Science family of journals. **For complete details of the appointment and Dr. Parikh, please see the announcement on the AAAS website here.**

News from the Profession, cont.

2019 ISHPSSB Biennial Conference



First plenary session of the meeting against the backdrop of Alma Mater, a mural by the Norwegian artist Edward Munch (of *The Scream* fame). Photo by Luis Campos.



Ana Barahona, Chair of the ISHPSSB Hull Prize Committee, awarding the 2019 prize to Jonathan Hodge. Photo by Luis Campos.

Now in its thirtieth year, the International Society for the History, Philosophy, and Social Studies of Biology (ISHPSSB—“ISH” for short and fondly called “Ishqibib!” by its founders) held its biennial conference in Oslo between the 7th and 12th of July 2019. With more than 560 participants from 41 countries, the meeting brought together a large and diverse group of scholars—almost half of them postdocs or PhD students—for bio-focused sessions on everything from “Art’s Take on CRISPR” to “Where are we after 160 Years of Communication between Evolutionary Biology and Economic and Social Sciences? Perspectives from History, Philosophy and Social Sciences.”

A highlight for many was the two-part session organized in tribute to Jean Gayon (1949-2018), whose work and life exemplified the Society’s ideals of cross-disciplinary scholarship and cross-generational friendliness. Another highlight was the awarding of the Society’s prizes at the General Meeting, including a new Interdisciplinary Organized Session Prize and the David L. Hull Prize “to recognize extraordinary contributions to scholarship, and service that promotes interdisciplinary connections between history, philosophy, social studies, and biology,” which this year went to Jonathan Hodge (pictured left).

Members attending the General Meeting unanimously supported a proposal to hold the 2021 conference in Milwaukee, from 11–16 July.

Please watch for the Call for Papers! **And if you’d like to find out more about the Society in the interim, please go to our website.**

Meeting details shared by Gregory Radick (President) and Ageliki Lefkaditou (Chair of the Local Arrangements Committee, Oslo).

Successful Campaign to Save the Notebooks of Charles Lyell (1797-1875)

From Jim Secord, University of Cambridge

Great news about the campaign to save Charles Lyell’s notebooks: the target of £966,000 has been achieved. David McClay, the fundraiser for the University of Edinburgh Library, has announced that nearly 1200 pledges were received, together with further donations from the National Heritage Memorial Fund and the University of Edinburgh.

If you have not already fulfilled your pledge, you can do this online. UK taxpayers, if you are able to add Gift Aid, please do; this increases the value of your donation by 25%.

Although the notebooks have been secured, fundraising will continue to support the work of scanning the documents and developing a website to make them and much other Lyell material available.

News from the Profession, cont.

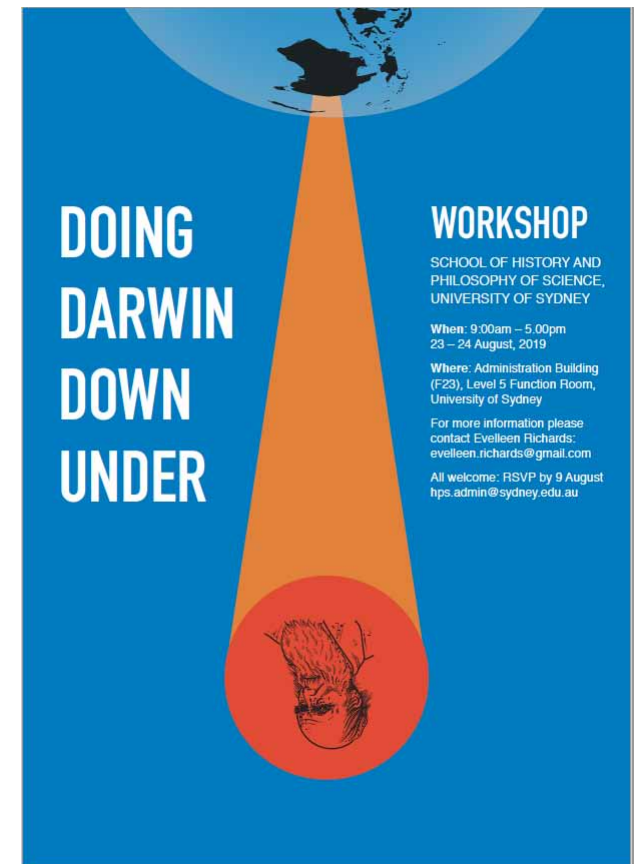
We thank everyone on this list who has pledged—the number of donors greatly surpassed expectations and was a key factor in obtaining support from the National Heritage Memorial Fund and other bodies.

Doing Darwin Down Under

There are probably more scholars today from Australia and Aotearoa New Zealand working in and around the Darwin “industry” than from any other place except Britain and the United States. At a workshop (23–24 August 2019) at the University of Sydney, jointly sponsored by the School of History and Philosophy of Science and the Sydney Centre for the Foundations of Science, more than twenty of these researchers gathered to share their work on Darwin, the past and present of evolutionary theory, and its many cultural and scientific afterlives in both the antipodes and the rest of the world. What historical or methodological insights can be gained when considering Darwin and Darwin scholarship from “down under”? How does the place of Australia in the world, both presently and historically, shape our scholarship and our reading of Darwin and Darwinism in diverse, globalized contexts? In other words: how does Darwin travel, and what happens when he arrives?

Organized by Evelleen Richards (University of Sydney) and Mark Micale (University of Illinois at Urbana-Champaign), the eight panels and roundtable brought together historians, philosophers, anthropologists and social scientists, as well as authors working in literary, media, cultural, environmental, gender and indigenous studies for lively discussions that often spilled over into the coffee breaks and evening meals. From the first panel, “Charles Darwin in Australia,” retracing Darwin’s own forays in New South Wales during the Beagle voyage, the panel topics expanded ever outward.

There were papers that considered the intellectual history of Darwinism in Australia in the arts, the natural sciences, and in the public conversation about the antiquity of humankind, a topic that continues to resonate in Australia in the twenty-first century in one session, and others that presented research at the intersection of race, science, and indigeneity, examining the work of Darwinian race scientists who conducted anatomical and physiological research on Indigenous Australians in the late-nineteenth and early-twentieth centuries. There was a session on “Gender and Sex in Evolutionary Theory,” which tackled such topics as sexual selection, materialist feminist philosophy, and the strange concatenations of Darwin, gender, and the ideal entrepreneur



in modern management science; one on the place of Darwin and Darwinism in nineteenth-century European thought, and still another that explored the relationship between evolutionary ideas and the cultural arts, with a particular focus on photography and film. A final session considered theoretical, ideological, and philosophical issues, origins, and endpoints

News from the Profession, cont.

of Darwin's theories in contexts that ranged from the nineteenth-century quest for the cradle of man to the politics of knowledge in the Cold War, and the generic and philosophical implications of contemporary popular evolutionary writings. The workshop concluded with a roundtable chaired by Richards, with Warwick Anderson, Roderick Buchanan, Barbara Anne Creed, and Micale as leading discussants. (**Visit the site for details of the complete program of sessions and speakers**).

The definition of "Darwinists Down Under" encompasses scholars born, educated in, or currently working in Australia and New Zealand, and as a relatively recent transplant from the United States, I am both very happy to get to be a part of this lively intellectual community and struck by the ways that, yes, there is something different about doing Darwin from down under. Practically, moving countries and joining new intellectual and professional communities has a way of rearranging your mental hierarchies and locally informed senses of what questions are vital and what methods are interesting and innovative. Intellectually, being in Australia has made me consider Darwin as an actor in a global world in a very different way—as a thinker who operated in and alongside multiple imperial systems of power and knowledge.

A second workshop took place at the annual meeting of the Australasian Association for the History, Philosophy, and Social Studies of Science (AAHPSSS) in Wellington, 13–15 November. This workshop continued the lines of conversation and inquiry raised in Sydney and showcased the work of Aotearoa New Zealand-based or -born scholars, alongside that of colleagues from across the Tasman Sea.

This workshop report was shared by Emily Kern, a postdoctoral fellow in the New Earth Histories Project at the University of New South Wales in Sydney, Australia.



Plan Ahead Future HSS Meetings



2020

**New Orleans, LA:
8-11 October**

Joint meeting with SHOT



2021

**Mérida, Mexico:
November** (dates to be determined)

Joint meeting with SHOT



From Our Readers

[Editor's note: Another new section we are kicking off in this issue of the Newsletter is one that came about because we received the following letter from one of you, our readers (thank you Dr. Beijerinck) and we thought it was a fine opportunity to make such items a regular feature. So whether you wish to respond to this letter or share other experiences, opinions, grievances or whatever else, please write in. We welcome letters from authors, ideally around 350 words, which are related in some way with the doings or interests of the HSS. All letters must be signed, we will not publish anonymous submissions. We reserve the right to edit and/or refuse submissions for legal ramifications, appropriateness, etc., at our discretion. Published letters are neither endorsed by, nor representative of the views of, the HSS Newsletter, HSS or any of the staff and office bearers.]

A Scientist Experiences Culture Shock at History of Science Meetings

by Herman C. W. Beijerinck

At science and technology meetings, contributed papers are presented in 20 minutes, with an excellent picture-rich Powerpoint slide show and a well-prepared but off-the-cuff presentation. Sitting in the audience you learn about the highlights and are stimulated to read up on the details. So my experience at the HSS meetings came as a rude culture shock!

I found that the phrase to 'read a paper' was interpreted in a very literal sense. There were over-filled text-only slides, quite often read out aloud, by a speaker more engaged with his or her manuscript than with the actual audience. I was flabbergasted!

With a background in research and undergraduate teaching in a physics department, I first became involved in the history of science in 2003. None of my colleagues were willing to teach a 26-hour course in this field to third year students and so I took on the task. Based on this experience, I developed a love for the field and became a member of HSS. With more time for

conference travel after my retirement, I visited the 3-Societies meeting in Edmonton in the summer of 2016 and then the 2019 HSS meeting in Utrecht. Interesting subject matter, nice people and inspiring contacts. But the talks were still being read out, and so the culture shock did not subside.

Why is there such a difference in culture in the format of presentations at scientific vs. history of science meetings? Of course, history of science is part of the humanities and not a STEM field of research. In its published papers, history of science is far more text-oriented than STEM, but still... paraphrasing an old adage, one excellent figure says more than a thousand words. In my opinion, the purpose of meetings is to communicate broad ideas, not to go into every detail of a subject.

Is it impossible to communicate ideas in history of science in a more lively and imaginative way? No, this is surely not the case, as proven at the opening session of HSS 2019 by young speakers presenting papers on such topics as circular economy and the great challenges ahead of us, in terms of climate change and migration. These young speakers showed that ideas can indeed

be communicated in a style that connects to the audience in a more direct fashion, even in an overwhelming medieval church where the opening session was organized.

Let us also look at the bright side of meetings. The large amount of time—10 minutes for a 20-minute talk— allotted for answering questions from the audience is a blessing! STEM meetings should learn from you in this respect. The same also holds for open-format discussion sessions, such as the one on education at HSS 2019. It was a lively session, with a lot of introspection and wide participation of the audience.

This letter is an openly expressed opinion to help improve the impact and liveliness of presentations at meetings in an otherwise highly interesting field. The history of science serves as a whetstone not only for those in various STEM fields but also for mankind and society at large. Teaching the history of science to a wider audience is a positive and exciting challenge, and I am looking forward to the next international meeting of the HSS.

Prof. Dr. Herman C. W. Beijerinck is a Professor-emeritus of physics at Eindhoven University of Technology.