

COMMUNIQUE



Canadian Society for the History and Philosophy of Science

Société Canadienne d'Histoire et de Philosophie des Sciences

100th Issue

**Decolonizing the History
& Philosophy of Science**



Cover Image: CSHPS/SCHPS Logo design by Greg Rupik. For details about the logo, see page 5.

ISSUE CONTENTS

Editors' Letter.....	2
CSHPS News.....	5
History of CSHPS.....	7
On Diversity in CSHPS.....	11
Career Corner.....	12
IUHPST Prize.....	14
In Conversation.....	17
Innovative Pedagogy.....	23
Obituary: Janis Langins.....	25
Decolonizing HPS: Reflections.....	29
Decolonizing HPS: A Reading List.....	31
Recent Book Releases.....	33

COMMUNIQUÉ

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What does the future of HPS look like?

Working on the 100th issue of *Communiqué* made me wonder where we've come from and where we're going.

Earlier this year, [The Conversation](#) published an address by Professor Tawana Kupe on why science matters in an era of fake news. Science, as we historians and philosophers know, is not absolute truth, but a quest for truth. As Kupe asserts, science is the “habit of exercising the mind to help think through especially difficult and complex phenomena. This makes science important in the exercise of democracy.” Yet when facts are manipulated or manufactured to create doubt or to spin lies, we are faced with the challenges of ascertaining truth from falsity. Political tension and polarization have sweeping consequences, including how scholarship is received and valued. When far right and fascist interests work to undermine critical thinking, when federal funding for humanities—and education more broadly—is cut, and when free speech is limited, if not restricted, we, as scholars, must embrace greater responsibilities to address bigotry, racism, sexism, and discrimination in our profession.

Other societies have established grounds for how these issues can be discussed. In response to increasing acts of domestic terrorism, the American Historical Association put out a statement condemning white nationalism and the violent divisions it creates. Members of the American Association for the History of Medicine have opposed legislation that interferes with healthcare providers’

ability to practice evidence-based medicine and provide comprehensive care, such as the “heartbeat bills.” The History of Science Society has additionally acknowledged the importance of membership inclusion by creating a new Diversity & Inclusion Committee. Meanwhile, the Society for the Social Studies of Science (4S) organized their New Orleans meeting with a strong commitment to accessibility and inclusion, both at the conference, and in the surrounding neighborhood; for example, attendees were informed regarding how their choice of conference accommodation might affect local citizens amid widespread racial inequities and rising costs of living.

What role can CSHPS play? For our 100th issue, we might consider how to position our society more prominently in light of these broader issues. The general theme—on decolonizing history and philosophy of science—serves as a starting point for addressing how intersectional and inclusive approaches can improve our scholarship. Aadita Chaudhury’s interview with Jenna Healey uncovers how historical color prohibitions at medical schools still bear relevance in current medical school policies. Ellie Louson and Isaac Record share their experiences in “desettling” a study away program in Maine and in connecting to museums that center Indigenous communities to take ownership of their own narratives,

history, and material culture. Also in this issue, Sarah Qidwai, Geoff Bil, and Letitia Meynell contributed to a reading list for decolonizing HPS courses.

In Canada, the Truth and Reconciliation Commission's Final Report affirms the urgency of acknowledging the harmful impact of settler colonialism and the importance of incorporating Indigenous voices in all aspects of Canadian society. As Sarah Qidwai discusses in her reflection essay, the 2018 CSHPS panel on Science and Indigenous Ways of Knowing and Geoff Bil's interview with Kim TallBear in the last issue of *Communiqué* are only the beginning. We need to extend our expertise, connect with local communities and engage with the public more. Some members, in fact, are already doing that. Vivien Hamilton's co-edited book with Brinda Sarathy and Janet Farrell Brodie, *Inevitably Toxic: Historical Perspectives on Contamination, Exposure, and Expertise* (University of Pittsburgh Press 2018), was written for a non-specialist audience in order to raise awareness regarding the emergence of toxic environments. Greg Lusk published an article with Wendy Parker on the importance of incorporating science and values to use philosophy to engage with practitioners (*Bulletin of the American Meteorological Society* 100.9). And in response to a viral tweet about the history of sterilization on Indigenous women in Canada, I wrote an article for *New Internationalist* to historicize how systemic institutional racism and discrimination have negatively affected the quality of healthcare available to

Indigenous women.

This being the 100th issue, there's also cause for celebration and collegiality. Adam Taves' essay takes us through the first twenty years of CSHPS to remind us how issues of inclusion are still prevalent today. Agnes Bolinska, co-winner of the IUHPST Prize with Joseph Martin, describes what the history of science can do for the philosophy of science. Much to our surprise, it was discovered that CSHPS did not have a logo, and in fact, the avatar on the website is the York University logo. This prompted a contest and we're pleased to announce that Greg Rupik's design has captured the essence of our society, including the merging of citizen science and expertise. And in celebration of member successes, book announcements will now be published in every issue.

Finally, as part of my broader initiative to incorporate inclusiveness, this issue has moved forward with more accessible features; unfortunately, our current platform is limited, which means it will be some time before we can go *fully* inclusive. I want to especially thank Vincent Guillin for all the work he did as editor and for supporting my vision for *Communiqué*. I have no doubt Catherine Rioux will be just as wonderful.



A stylized, handwritten signature in black ink.

Jaipreet Virdi, Co-Editor
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Meet the new *Communiqué* Co-Editor

Catherine Rioux is a PhD candidate in the Department of Philosophy at University of Toronto. She joins the *Communiqué* team as the Francophone Editor.

Je suis très heureuse de succéder à Vincent Guillin comme coéditrice francophone de *Communiqué*. À mes yeux, le bulletin remplit une mission particulièrement importante dans le contexte académique actuel : comme le remarque ma collègue Jaipreet Virdi dans son éditorial, face aux pressions politiques menaçant la pratique de la science et de la philosophie, les membres de notre société savante doivent plus que jamais s'unir et collaborer. *Communiqué* constitue une plateforme unique, qui fournit non seulement aux membres des renseignements sur les activités de la société, mais qui peut aussi servir à susciter et raviver des débats quant aux directions futures de nos champs d'étude – entre autres en ce qui a trait à l'inclusion de perspectives traditionnellement mises de côté.

En tant que coéditrice, je souhaite contribuer à tracer des ponts entre la pratique de la philosophie et l'histoire des sciences dans le monde francophone et dans le monde anglophone. Des recherches importantes sont produites et des initiatives novatrices prises dans les deux langues, sans toutefois être diffusées à toutes les parties intéressées. C'est ici que *Communiqué* peut faire une différence. En ce sens, je sollicite donc particulièrement les contributions des membres francophones de la communauté HPS. Il nous revient à tous de faire de *Communiqué* un médium rassembleur.



Catherine Rioux, coéditrice
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The New CSHPS President: Alan Richardson



Professor Alan Richardson begins his term as the new CSHPS President, taking over from Past President Ernie Hamm. Professor Richardson is a Distinguished University Scholar at the University of British Columbia, an Associate of the Peter Wall Institute of Advanced Studies, and a Faculty Fellow at Green College. His work focuses on the history of philosophy of science in the early twentieth century, with a particular concern on the place of philosophy of science in analytical philosophy. He has published widely and his books include: *Objectivity in Science: New Perspectives From Science and Technology Studies* (Springer, 2015), *The Cambridge Companion to Logical Empiricism* (Cambridge University Press, 2007), *Logical Empiricism in North America* (University of Minnesota Press, 2003), *Carnap's Construction of the World* (Cambridge University Press, 1998), and *The Origins of Logical Empiricism* (University of Minnesota Press, 1996).

Congratulations to Greg Rupik!

As some of you might recall, in *Communiqué* no.99, we launched a contest for the new CSHPS logo. The CSHPS Officers and Advisory Board agreed that Greg Rupik's design exemplifies the core principles of the history and philosophy of science and the aims of CSHPS. Greg is a PhD Candidate at the Institute for the History and Philosophy of Science and Technology. His research focuses on Johann Wolfgang von Goethe's understanding of organisms' metamorphoses, both as it was received by Goethe's contemporaries, and the ways in which it might be taken up again in biology and its philosophy today.

In designing the logo, Greg incorporated several elements that moved away from the typical Canadian maple leaf motif. What helps to identify the graphic as



Canadian is thus much more subtle. The elements of the logo are broken down as follows:

(1) The topmost star in the starscape is Polaris, and the tail star of Ursa Minor. The North star, aurora phenomenon (centre) and the Great Bear (Ursa Major) identify a starscape from the northern hemisphere and feature celestial phenomena sacred/important to indigenous and settler cultures alike.

(2) The eye frames the graphic. This is important for symbolizing the history and philosophy of science, as the celestial phenomena are reflected in the eye of a human observer, tying science, its philosophy, and its history together into a common space.

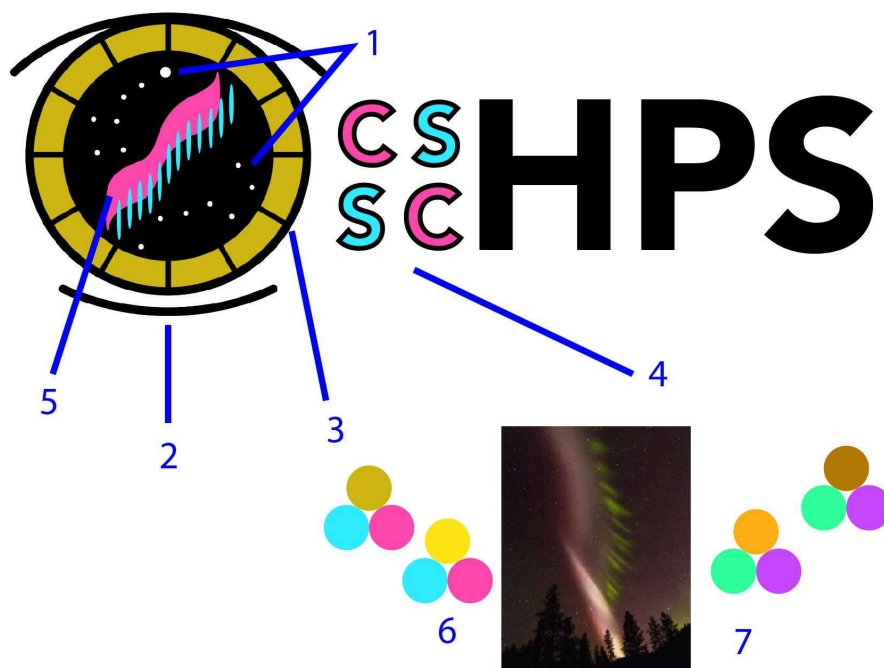
(3) The iris of the eye indicates measurement, narrative, and history/time. It's divided into 12 parts, indicating a clock face, the twelve months of the year, or the twelve signs of the zodiac.

(4) The CS/SC lettering mirrors the colour scheme of the skyscape and includes both the English and French abbreviations for the society, respectively. Outlines have been added to make the letters more visible and accessible.

(5) The specific celestial phenomenon I meant to convey by this graphic is an electromagnetic one officially "discovered" by citizen scientists in Alberta and named "Steve" (which has since become a backronym). Of course, it has been witnessed for ages, but it has only recently been differentiated from normal aurorae. The choice of colour here was deliberate. The bright, almost fluorescent colours were chosen to mimic those of Steve and to therefore colour the rest of the piece.

(6) As per best practices in graphic design, I opted to make the main three colours of the logo a triad. I sought to find two colours that best evoked Steve, while making the colour of the iris a darker version of the third triadic colour. As you can see near #6, the triad calls for a bright gold, but I simply darkened and desaturated it such that the iris resembled – not the yellow-gold of a hawk or cat, but something closer to the far more common eye colour brown and to avoid associations of Eurocentrism as might be indicated with blue iris.

(7) Here I've shifted the triad more towards the secondary colours. This does still mimic Steve and gives a richer brown (and potentially orange) for the iris.



The First Twenty Years

What role does a Society newsletter play? In this essay, librarian Adam Traves looks at the records of Communiqué to get a sense of CSHPS's history.

Society newsletters play several valuable roles – they inform membership about the work of the society, communicate upcoming events, celebrate notable achievements of members and, in a country like Canada, attempt to provide a sense of community for a group of scholars spread across a vast country. They can also be very good at providing insight into a society's history. *Communiqué* has played an important role in these regards since its inception in the late 1970s, likely 1979, although attaining a copy or proof of date for issue #1 remains elusive. But what about those intervening years between the creation of CSHPS and where the first issue *Communiqué*, now going strong for one hundred issues, picks up the story? To get a sense of the Society's origins and its development throughout the 1960s and 1970s, I turn to the Society's fonds. A brief description of the fonds, including its contents and how the records came to find a home at York University Archives, is discussed in [Communiqué #85](#).

In 1953, the Union Internationale d'Histoire des Sciences (UIHS), established in 1947, invited a delegate to represent Canada at the 7th International Congress for the History of Science in Jerusalem. Official minutes from the UIHS meeting suggest that Canada was

represented by Professor Raymond Klibansky, at the time Professor of Logic and Metaphysics at McGill University (1). Canada had not previously had representation in UIHS or at this Congress. This invitation appeared to spur the more formal organization of a group of Montréal-centred scholars from which CSHPS would emerge. The group included Mr. R. Pennington (University Librarian, McGill), Professor J.S.L. Browne (Investigative Medicine, McGill), Professor R.A. Chipman (Electrical Engineering, McGill), Professeur Léon Lortie (Faculté des Sciences, Université de Montréal), Professor F.C. MacIntosh (Physiology, McGill), and Professor L.G. Stevenson (History of Medicine and Medical Librarian, McGill). The group had three aims: to promote the history of various sciences by "viewing them in their interconnection and in their relation to the development of thought and civilization"; to encourage the teaching of the history of science which had received little attention in Canadian universities; and to promote exchanges between Canadian scholars and those from abroad, as well as to engage the wider public through lectures where appropriate (2). Unfortunately, little information about the activities of this early group appear to exist. The establishment of this group followed closely on the heels of the

creation of the Canadian Society for the History of Medicine (CSHM) in 1950, predominantly centred around individuals at Laval University.

The official founding of CSHPS, originally under a slightly different name – the Canadian Society for the *Study of* the History and Philosophy of Science – is generally understood to have occurred in 1959 with the creation of an official constitution and set of by-laws (3). The aims of the Society largely mirrored those of the original group to promote history of science as a field of scholarly endeavor and to promote a stronger national voice within international bodies dealing with the history of science. However, the scope of the Society now included an aim to “stimulate interest in, and discussion of, the Philosophy of Science” (4). The Society organized itself around a central council, consisting of the officers (president, two vice-presidents, and a secretary-treasurer) along with between 3 and 15 members. At the 1959 founding, membership consisted of thirty-nine individuals, all based in Montréal except from three members from Quebec City, Halifax, and Vancouver, the latter of which provided some modicum of national exposure. Membership largely but not exclusively drew from various university departments in the sciences, as well as philosophy and psychology. By 1963, membership was over seventy-five, although it remained overwhelmingly rooted in Montréal, predominantly at McGill. At the time, McGill had no program or department dedicated to the history and philosophy of science; however, it acted as a *de facto* epicentre of interest for this field. An early focus for CSHPS was work on UIHS’s world inventory of scientific instruments, for which the Society was charged as a trustee.

The regional and institutional balance of CSHPS began to shift in the later 1960s with the establishment of two new academic

programs. The Institute for the History and Philosophy of Science and Technology (IHPST) at the University of Toronto and the Institut d’Histoire et Sociopolitique des Sciences at the Université de Montréal enlarged graduate programming in the field. Montréal’s program was eventually absorbed by the university’s history department. This period witnessed a burgeoning interest in the history and philosophy of science (HPS) and related fields. By the 1970s, CSHPS membership had become less Montréal-centric, with a significant increase in members from outside of Québec, particularly from Toronto. This growth was likely a natural outcome of focused energy in HPS associated with the growth of IHPST, but also reflective of the more national exposure that came with holding the Society’s Annual Meeting as part of The Learned, with varying locales across the country.

The 1970s also witnessed the expansion of interests in the Society, with 1971 devoted to an exploration of linguistics. This expanded interest saw the establishment of a regular series of lectures by non-Canadian scholars, notably the Drake Lectures, with the first lecture given by Professeur Bernard Vaquois from the Centre d’études pour la traduction automatique (Paris). There also began a recurring consideration by CSHPS to itself establish a journal, perhaps serving the areas of the history of technology or the philosophy of science, with a Committee struck in 1973 to begin looking at the possibility in earnest. In this same year, the Society adopted what remains to this day its official name, dropping the somewhat awkward “for the Study of” to become the Canadian Society for the History and Philosophy of Science, with revisions to the Constitution and its first translation into French.

By the 1970s, a new generation of historians representing a much less centralized view of the country began to emerge along with

challenges to the constraints around what constituted proper scholarly work. Methodological approaches became more varied. Ethnicity, race, class, and gender received more attention. New and varying disciplinary approaches that took science as an object of study emerged. From its founding until the early 1970s and in keeping with other learned societies, CSHPS played a role in safeguarding or dictating the *who* and *what* of legitimate scholarship within the Society. Membership was closely controlled, being by invite only and requiring, according to the Society's constitution, approval by council, which reserved the power to remove any member from the Society itself. This dedication to closely controlling membership is underlined by an annual report President Klibansky submitted in 1972, wherein he reminds the Society that contrary to many learned societies in Canada, CSHPS does not accept anyone who applies and that while growth from 225 to 250 members would be ideal, it carried risk and the potential to "possibly lower the standards" (5). In 1974, the Society's Council notes that *learned person* as defined in the constitution had to be a professional philosopher interested in science, or a professional historian or scientist interested in the history and/or philosophy of science, suggesting an applicant's interest would be subject to the judgment of Council (6). This restrictive view of membership became one of the Society's most controversial issues throughout the 1970s. Challenges emanated largely from members from the IHPST, with Professors Kenneth O. May and Trevor Levere protesting the questionable vetting and circumstances around rejected memberships. These challenges continued throughout the 1970s with a few false starts and failed initiatives to repeal the problematic restrictions, culminating in a successful 1978 bid via ballot to open membership to any person interested in the history or the philosophy of science

and/or technology (7).

Intertwined with the issue of membership restrictions was a growing frustration among a group of scholars, predominantly graduate students at IHPST, with the lack of recognition for a Canadian-themed stream at the Annual Meeting's conference program, and for what was deemed a lack of respect for Canadianists and those otherwise interested in Canadian topics in the history of science and technology. The Canadianists' struggle was bolstered by the release of the Symons Report "To Know Ourselves: The Report of the Commission on Canadian Studies" which included specific mention of the history of Canadian science and technology, and perhaps, most notably, the 1976 publication of the first issue of the *HSTC Bulletin*, a quarterly newsletter for the history of science and technology in Canada for which Professor Richard Jarrell unsuccessfully attempted to attain support from CSHPS. This publication would later morph into *Scientia Canadensis*, a full-fledged scholarly journal. The growing tension between CSHPS and the Canadianists eventually led to the establishment of the Kingston Conference and the founding of the Canadian Science and Technology Historical Association in 1980. However, it must be noted that CSHPS did not remain immune or intransigent to the pressures brought forward by this group, nor was it unresponsive to other potential schismatic threats posed by emerging approaches in the field that sought to understand science and technology in wider social and economic frameworks. In 1978, Society President G.R. Paterson (History of Medicine, Hannah Institute) argued in his inaugural address that CSHPS must work to make *interdisciplinary* a respected term again (8). The 1979 Annual Meeting conference program shows that almost a third of the sessions had a Canadian focus.

It would be inaccurate to characterize CSHPS

as being *big tent* and *inclusive* by the end of the 1970s. It remained a site for continued debate among and between existing and emerging disciplinary approaches to the study of science, debates which continue to this day. Lesley Cormack in her 2000 presidential report captured the continuing challenge well: "History of Science is no longer primarily about the history of scientific ideas. These ideas are now embedded in content – cultural, sociological, institutional, imperial. The ties of historians of science are now close to sociologists and science studies practitioners than to philosophers, a challenge for an HPS society such as ours" (9).

NOTES

- (1) Professor Klibansky is identified as president of the national Canadian group – presumably the precursor to CSHPS – by the Official Minutes of the UIHS. "Procès-verbal de la IIIe Assemblée Generale de l'Union Internationale d'Histoire des Sciences, Jerusalem (3-12 aout 1953)". *Archives Internationales d'Histoire des Sciences*. Tome XXXII, 463.
- (2) Canadian Society for the Study of the History of Science. CSHPS fonds. York University Libraries.
- (3) It is difficult to definitively identify the

founding date, although documentary evidence points to 1959. Further, this date is cited by *Associations Canada*. Toronto: Canadian Almanac & Directory Publishing Co., 1991.

- (4) Constitution and By-Laws. CSHPS fonds. York University Libraries.
- (5) Report from the President, Minutes of the General Meeting. Canadian Society for the History and Philosophy of Science, May 31, 1972. CSHPS fonds. York University Libraries.
- (6) Minutes of the Meeting of CSHPS Council, October 19, 1974. CSHPS fonds. York University Libraries.
- (7) Results of the Mail Ballot on the Amendments to the Constitution, April 17, 1978. CSHPS fonds. York University Libraries.
- (8) G.R. Paterson. The President's Page, no date but believed to be summer 1978. CSHPS fonds. York University Libraries.
- (9) Lesley Cormack. "President's Report." *Communiqué* 46 (2000), 5.

Adam Traves is an Associate Librarian at York University Libraries. This essay is based on a research paper that he wrote at York University while completing an MA in Science & Technology Studies.

CONFERENCE REPORT

Sciences of Difference Workshop, University of Pennsylvania

In August, Sarah Qidwai attended a workshop at the University of Pennsylvania titled "[Sciences of Difference in South Asia](#)." Hosted by Prof. Projit Mukharji, the workshop focused on the history of how sciences produce, measure, sustain differences in South Asia. Mukharji, along with a graduate student, Koyna Tomar, demonstrated how HPS can draw scholars that are not traditionally a part of history of science departments. You can read [Sarah's Twitter thread](#) about the workshop.

Diversity and CSHPS: Where do we go from here?

Sarah Qidwai responds to an incident at Congress and asks us to consider how to better address issues related to diversity and inclusion.

In August, the theme for Congress 2020, **Bridging Divides: Confronting Colonialism and Anti-Black Racism**, was announced. As progressive and timely as this theme appears, particularly due to a recent brown-face incident at the federal level, it is important to acknowledge the real story behind the theme. I am referring to an incident on June 2nd 2019, when Shelby McPhee, a member of the Black Canadian Studies Association, was [racially profiled by two attendees at Congress](#). The Federation for the Humanities and Social Sciences acted swiftly and investigated the matter at hand. The individual in question was banned from its annual meeting and several [demands made by the BCSA were met](#). Other societies were quick to react and show support for the BCSA. Where was CSHPS in all this?

I followed the incident as it unfolded on social media. It made me think about my own experiences as a member of CSHPS and reflect on the rooms I have occupied at meetings. To put things bluntly, CSHPS has a diversity problem. Although there have been small-scale interventions, including the 2018 panel on Science and Indigenous ways of Knowing and Geoff Bill's interview with Kim Tall-Bear, we are far from addressing issues of diversity and inclusion.

To add a small anecdote from my own experiences, as a graduate student who works on the history of science and Islam in India, I can usually find visible minorities at most conferences in our field. However, even the history of science in Asia panel this year featured three white men and a white chair. The entire room was almost all white.

Personally, I see this as a problem. This is not just a CSHPS problem, but one for HPS departments across Canada, including my own in Toronto.

Going back to the Congress 2020 theme, the BCSA has urged other associations to develop short-term and long-term plans to support Black graduate students. We should demonstrate solidarity with the Black Canadian Studies Association (BCSA) and see how we as a society can work towards addressing issues related to diversity and inclusion within our ranks. Furthermore, we need to integrate conversations about decolonization across the board, not just as special themes or panels. We can look to other societies, such as the History of Science Society (HSS) and their initiatives. HSS has formed a Diversity and Inclusion committee. So, I urge CSHPS to make the 2020 theme around these issues and work with other societies that are ahead of the curve. We have an opportunity to make some changes, diversify and lead the way for history and philosophy of science in Canada to represent something bigger.



Sarah A. Qidwai is a PhD candidate at the University of Toronto, where she is working on a dissertation on the history of science and Islam in British India.

Her work examines the life and work of Sir Sayyid Ahmad Khan (1817-1898), and argues that he was a popularizer of science in India.

Career Corner

What can be done differently to improve HPS and STS Graduate education? Columnist Jonathan Turner shares how some programs have addressed this question.

In the previous column I reviewed several recent studies of PhD career outcomes and pulled out a few pieces of data pertinent to questions around HPS and STS graduate education. In this column I want to address the core question: what could be done differently?

There are two changes that seem to be inevitable at this moment (a lot can change, and there's still a lot of political battles on the horizon). Curriculum maps and frameworks are becoming mandatory at the undergraduate level, and it seems to be a matter of time before they are introduced at the graduate level. When they are, then all courses, TAs, RAships, and co-curricular professionalization and professional development will have to cohere together in a logical manner that helps a student progress towards their [degree level expectations](#). This means that the politics behind what is offered, when, and why, will shift.

Second, [CIHR](#) is leading the way on making active career management, in the form of individual development plans (IDP), mandatory for award-recipients at the graduate and postdoctoral level. The rest of the Tri-Council will probably follow shortly, although there is definitely resistance to the idea. As of now, it sounds like individuals will be able to choose between the Tri-Council supplied IDP, an institutionally created one (such as [McGill's](#)), or a publicly available one (like [Imagine PhD](#)). The current status quo, captured in this [PhD Comic](#), will no longer be a possibility. The major question that remains in the full implementation of IDPs is who will

be responsible for assessing these with students and postdocs – some institutions have said it should be the supervisor, others are pushing for career staff on campus, and others believe it should be private to the trainee.

While it is far from a foregone conclusion, there is a very high probability that graduate education will introduce curriculum maps and IDPs; the question for STS and HPS programs is when and how to incorporate these new tools.

Where HPS and STS graduate education have more options is in the other innovations in graduate education we choose to incorporate. We can start by looking at ideas from the very fields we study. As an historian of scientists working for the federal government, I can provide countless examples of STEM PhDs working in a variety of positions over the past century. In fact, the mismatch of career outcomes and aspirations is a very old problem in Canada, there is a body of literature on the same topic in the 1970s and 80s – [one of the studies](#) is about 'revisiting' the PhD dilemma, suggesting an even longer history.

Current STEM PhDs experience a similar existential crisis to humanities PhDs when their career aspiration does not match the possible outcomes. However, STEM programs are being far more proactive in addressing this. First, the NSERC CREATE funding program, which goes to teams of faculty members, includes mandatory professional development and professionalization training

for all graduate students in their labs. One of the CREATE programs, run by Ontario's first Chief Scientist, includes mandatory internships. Second, Mitacs, although primarily focused on building research partnerships for graduate students, postdocs, and faculty with industry, government, non-profit, and non-government in STEM disciplines, is, in theory, open to humanists. Interestingly, the History department at the University of Toronto used to have an exclusive internship program with one of the major financial institutions for graduate students. Third, the drive to communicate the value of academic research to non-academic audiences, through venues like the 3 Minute Thesis, is significantly higher in STEM than HPS and STS. Fourth, STEM alumni are overwhelmingly the ones pursuing the new [Canadian Science Policy Fellowship](#). Fifth, STEM Faculties and Departments are generally the most proactive in offering entire courses on professional development for non-faculty roles (I've co-created and co-delivered several at the University of Toronto), whereas the topic of non-faculty careers is usually only one week in humanities and social sciences [professionalization courses](#).

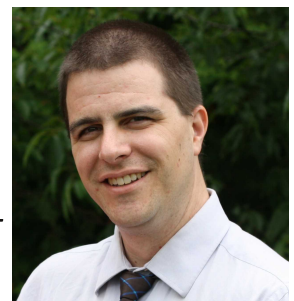
Where STEM programs still have a significant challenge is with toxic masculinity and patriarchy and the lack of diversity that results from this culture. Documenting and advocating for change here is an opportunity for HPS and STS to make a real impact, not least of which because so many of our graduate students come from these disciplines and STEM diversity is ultimately HPS and STS diversity. However, it requires a shift in culture in HPS and STS to reward and encourage public engagement alongside scholarly books and articles, and academic presentations.

The greatest resource that HPS and STS programs have access to is our alumni. We have diverse careers, and many of us want to help current students, postdocs, and recent graduates explore career possibilities. There

is a range of ways to meaningfully engage and incorporate alumni. Informational interviews, alumni panels or networking events, job-shadowing programs, and internships will all have a huge impact at little to no cost. If these types of programs are integrated into the curriculum and program requirements, they would be subtle, they would still prepare students for their desired faculty careers, but also introduce the reality that most alumni do not seem to be in stable faculty positions, and prepare current students for a wider range of careers. There are central administrative staff with deep expertise in starting and supporting these types of initiatives with faculty, staff, students, and postdocs at most institutions in Canada.

While the data that I reviewed in the last column did not paint a clear or certain picture, the numbers pointed in one direction. Career outcomes for HPS and STS PhDs do not match career aspirations, and we are less successful at meeting career aspirations than our cognate disciplines. There are also hints that HPS and STS struggle with some of the same diversity problems as STEM disciplines. What I have presented in this column are some of the possibilities, none of which are drastic, and most of which have considerable potential positive benefits.

Jonathan Turner has a PhD in the history of science from the University of Toronto. He works in university administration, is Past-Chair and co-founder of the Graduate and Postdoctoral Development Network, and has a consulting business. He can be reached at bcw.director@gmail.com



What is the Value of History of Science for Philosophy of Science?

The following is a synopsis of the essay, "[Neogitating History: Contingency, Canonicity, and Case Studies](#)" by Agnes Bolinska and Joseph D. Martin, which was awarded the 2019 International Union of History and Philosophy of Science and Technology (IUHPST) [Essay Prize in History and Philosophy of Science](#)



The 2019 IUHPST Essay Prize competition posed the question in the title. To us, the most interesting implications of this question have to do with ongoing debates about the use of historical case studies in philosophy of science. Philosophers of science often use historical case studies to support their conclusions; indeed, the discipline of history and philosophy of science (HPS) is founded in part on the assumption that this is possible. But recently, this practice has come under attack. Several HPS scholars have argued that it is methodologically problematic, if not outright unwarranted. Our two-fold goal, in answering the question, was to systematize their critiques and to show how they can be overcome.

Critiques of the use of historical cases in support of philosophical aims can be divided into two categories: problems of method and problems of metaphysics. Methodological critiques claim that the construction of historical case studies and their use by philosophers is prone to bias. If we can't construct unbiased case studies in the first place, and if we can't apply them in an unbiased way, then we don't have a solid basis for our philosophical claims. After all, a philosopher arguing for an opposing view might select an alternative case, constructed and interpreted in light of an alternative view.

Do such methodological critiques preclude the use of history of science for philosophical aims? No. These critiques could equally be levelled against history or philosophy more generally, or indeed against any scholarly enterprise. It's true that bias can creep into our various intellectual pursuits; but this doesn't imply that its effects must be so pernicious that we cannot reason from case studies at all. Much like natural scientists, who recognize the potential for biases to corrupt their investigations and develop procedures for guarding against it, we can mitigate the possible ill effects of our prior theoretical commitments. When constructing and applying historical cases in support of philosophical aims, we must exercise methodological care, just as we do in our historical or philosophical work more generally. As individuals, we should be wary of our own biases; as a community, we should point out biases that individuals miss.

Metaphysical critiques appear to pose a deeper problem. The metaphysical critique that cuts the deepest has to do with the role of chance in the way past events unfold. History, the argument goes, no matter how carefully constructed or applied, is simply too contingent to support philosophical claims. That is, any historical episode might have

unfolded differently from how it did and, had it done so, it might have supported a competing philosophical claim. This possibility thus undercuts the utility of historical cases as evidence for philosophical claims.

Addressing this critique requires something more than an admonition to exercise methodological care. History gives us a wealth of examples to choose from. Indeed, this is the source of the critique that it is far too easy to select them prejudicially. But we needn't accept the assumption that goes along with this critique, namely, that any example of science is just as good (or bad) as any other for a particular philosophical purpose. Rather, we can argue that some cases are canonical with respect to particular purposes.

Under what circumstances can a historical case be canonical? Here, we can turn our attention to contingency, transforming it from a problem for the philosopher into an advantage. Contingency can have several different meanings, but when invoked in the context of a critique of a particular historical case study, it typically refers to dependency upon certain causal factors—if an outcome is contingent upon particular antecedent factors, that means that those factors are important for the causal story we tell about why we got the outcome we did. The critique that a case study is too contingent to found philosophical claims therefore often amounts to a claim that the outcome of that case depended on something other than the reasoning processes with which philosophers are typically concerned: those directed toward truth, empirical adequacy, or other epistemic aims.

For example, Arthur Stanley Eddington's 1919 eclipse expedition, we often hear, confirmed Albert Einstein's theory of general relativity. Eddington's data showed that

relativity correctly predicted the degree to which starlight would deflect when passing through the sun's gravitational field. Thus, Eddington's data is often used to support philosophical claims about evidence and confirmation in science. But some have suggested that we cannot draw such conclusions because Eddington's analysis of his 1919 eclipse expedition data reflected more than his data: it was contingent also upon his political commitments. Eddington was a pacifist who wanted to see scientific ties between Germany and the rest of Europe restored after World War I; bolstering Einstein's theory might have been a way to help restore those ties. If this is indeed the case, then we shouldn't use this example in support of philosophical claims about theory choice.

Such critiques of particular case studies are often inflated into the larger critique that history just is contingent. But this is a leap we need not make. In fact, the critique that particular case studies depend on factors tangential to our philosophical aims points us toward an account of how case studies can be used responsibly. If a historical account gives a reasonably complete explanation of a case in terms of philosophically salient factors, then we can make a strong argument that the case in question is canonical with respect to that philosophical purpose. Subsequent historical scholarship has done just this by rehabilitating the Eddington case study, arguing that Eddington had good epistemic reasons to interpret his data the way he did. In short, the contingency of particular cases (upon factors we might regard as tangential to our philosophical purposes) does not imply that all of history is so contingent that the philosopher can never use it as evidence. We can argue effectively that some historical trajectories are more robust than others, and in the process of doing so, we negotiate a canon.

Historians and philosophers are bound to disagree about when we have a reasonably complete explanation, of course. Such is the case with any interpretive enterprise. But we can understand the conduct of those debates as negotiating which cases are canonical. The canon will shift over time. New cases will become canonical, while others lose their canonical status, as historians discover new evidence or propose alternative interpretations of existing evidence. New philosophical questions will come to the fore, requiring a new canon of historical cases to be defined for the purpose of answering them. But an active give-and-take between historians and philosophers of science can assure, first, that we have a functional historical canon for our most current philosophical questions, and, second, that it is subjected to constant and constructive criticism.

We titled our essay "Negotiating History," which is meant to capture two aspects of this process. First, it highlights the interpretive nature of HPS. Our understanding of historical episodes only deepens through continual dialogue about what they can or can't tell us. Second, it emphasizes that history is a landscape through which philosophy must move. There might not be one preferred route through that landscape, but it nonetheless has definite features that constrain how we negotiate it.

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Recently, several Canadian news outlets reported on the historic ban on Black students at the medical school at Queen's University. Among scholars and activists drawing attention to this issue is Dr. Jenna Healey, Queen's Hannah Chair in the History of Medicine.

Aadita Chaudhury got the chance to catch up with Prof. Healey over Skype to discuss her research on the concept of the "biological clock" and her upcoming curriculum module for Queen's undergraduate medical program, "Who gets to become a doctor."



AC: Tell us a little bit about your background.

JH: I completed a degree at the University of Guelph in molecular biology and English literature. I was thinking about being a science writer but then I found out about the field of history science during my time at Guelph. So, I did a masters at University of Toronto at the Institute of History and Philosophy of Science and then I did my PhD at Yale in the history of science and medicine. At Yale, I became very interested in the history of 20th century biomedicine and reproductive medicine. My dissertation looks at the history of reproductive technology through the lens of aging and changing conversations about the relationship between age and fertility in the United States in the last quarter of the 20th century. I picked the biological clock because that's an expression that emerges during that time and you can use that to trace the evolving conversations about women's fertility as well as the use of medical interventions to either alter one's fertility or ultimately extend it with more recent technologies like egg freezing.

Interestingly, the term “biological clock” to refer to women’s reproductive cycles over their lifetimes is pretty recent, coinciding with the post-war influx of women in the workplace. The term often has connotations related to women pursuing other professional pursuits or personal pursuits before parenthood. And the question becomes--when we have the medical technologies to delay parenthood, what the dangers are of doing so, and how we can best use medical technologies to create a perfectly planned pregnancy, which is the mindset I'm very interested in. This is very recent. The 1970s and 1980s are the bulk of my work.

AC: You kind of alluded to this already, but do you think these research questions were borne out of the sociocultural landscape of the time, and the way that the politics and society were changing for women and certain fears that maybe have been coming out with

regards to population, race and ethnicity especially in the Americas? Is that something that comes into what you're working on?

JH: Yes, it's a really interesting sociocultural moment. We are coming off the baby boom, so the population levels start to decline in the United States. There's this opposite panic to what we've been having so far. We've had the population control discussions within the United States more focusing on developing countries and then all of a sudden, there's this extreme panic among demographers that potentially American women (and of course, it's coded as white American women, especially middle class white American women) are no longer going to have children or they're going to have a much lower birthrate than they had before.

Here, you can really see the racial politics of it when you look at that discussion and contrast it with the discussion people were having at the time internationally. A large part of my dissertation and the book project that I'm working on actually looks at teen pregnancy discussions and pregnancy at the same time because this is where we can really see the social and cultural assumptions that are going into these conversations. For every women's magazine article panicking about women delaying fertility too long putting their fertility at risk, you know, “testing the biological clock” and similar rhetoric, you have even more social and cultural panic about the idea that some women are having children too soon and that this is implicit in debates about welfare in the United States. So, even the panic around teen pregnancy, and this being a social and cultural risk also appears in the same decade. There's all these really race loaded conversations happening on one side with women who apparently are having children too soon, and on the other side with women who were delaying pregnancy too long and it reveals the fault lines in society.

AC: So this might be a good place to pivot from that into your work with the curriculum

module “Who gets to become a doctor” for Queen’s University’s undergraduate medical program. I get a sense that this medicalization of a woman’s life in these periods and how and when she should be doing things is directly linked to who was actually allowed to become a doctor throughout history.

JH: A PhD student at Queen’s named Edward Thomas is doing his dissertation on the history of black students at Queen’s, particularly surrounding the expulsion of Black students between 1918 and 1965. This was no secret, but there was an institutional narrative around it that Edward and his research really started to challenge, thanks in part to the archival documents newly released in 2018 that

was still on the books. No one had ever appealed it. So technically it was still the policy of Queen’s University not in practice but officially at the policy level. The Senate obviously retracted the motion from 1918 and then the Commission was founded to actually address this issue in a more substantive way. And so that’s how I came to this issue and designing a curriculum for medical students to address it.

AC: Why was the ban enacted in the first place?

JH: As I mentioned this previously, this is part of the ongoing research that Edward Thomas is doing, and I’d like to credit him for sharing

"For every woman's magazine article panicking about women delaying fertility...you know, "testing the biological clock"and similiar rhetoric, you have even more social and cultural panic about the idea that some women are having children too soon"

weren't available before due to the rules of the Queen's archives. Edward found that the institutional story that had been circulated for a very long time was covering up something a little bit more menacing. His research also focuses a lot on the lives of those men that were affected by the decision. Many of them went on to become extremely accomplished physicians in spite of Queen’s expelling them. Many went on to get their degrees at McGill or at other universities while others were obviously very affected by the fact that they were denied a medical education by Queen’s.

About a year ago, I was contacted and asked to sit on a commission that has members across the university on it to properly address this. I was pleased that the university was willing to do that. Edward was drawing a lot of public attention and he advocated when he gave a presentation to our university senate that Queen’s should apologize at the very least. Also, the ruling for the expulsion

this. So interestingly, in the early 20th century Queen's is actually quite a popular institution for Black students from the West Indies, as a result of the Commonwealth colonial connection. Many of these students were Black British subjects. A lot of them would go into practice in Canada and stay in Canada after getting trained at Queen's. There were at least 20 black students at Queen’s in that period which surprises many people I think. And there doesn't appear to have been that much concern or attention paid to that or about it until the 1918 expulsions. The official story was that the university determined they could not provide enough clinical experience for the students because people in Kingston, particularly veterans, who had recently come back from the war, were “too racist” and were not allowing students to practice clinical skills on them. And so basically Queen’s regretted it saying that they were not able to provide a proper medical education and that the students would have to go to bigger city

centres that potentially had less discrimination within clinical settings.

The unofficial story which we're still in the process of uncovering was that this is post-Flexner Report. In 1910, the Carnegie Foundation publishes this report concerned with improving medical schools. It includes a lot of recommendations and schools are getting grades on their curriculum and facilities. And so Queen's is unhappy with its grade and they want to increase their grade in order to have access to different types of funding from the US, both from the Carnegie Foundation and the Rockefeller Foundation to make improvements to their facilities to further improve their grade. But the official

people refused to accept Black doctors in Kingston specifically in 1918 but they weren't concerned in 1917 or in 1916? He could find no account, no story, no newspaper article, no hint that anybody was dissatisfied with the situation. And in fact, in the year following the ban many of the students who were banned were pushing back against the official story - no one, no patient had ever complained about their presence or refused to let them practice. And so that started poking holes in the Queen's story because the experiences of the students themselves were not corresponding with the official story at Kingston.

AC: Do you find any connection, regarding Queen's' treatment of Black medical students

"And you go back and look at the Flexner Report itself, it's pretty clear on how they think the training of Black doctors should be done--that it should not be done in the same institutions that provide training for white doctors."

policy of the American Medical Association of the time is that medical schools should be segregated. The working theory is that Queen's essentially was looking for outside funding and to improve their reputation within this AMA grading system. And you go back and look at the Flexner Report itself, it's pretty clear on how they think the training of Black doctors should be done – that it should not be done in the same institutions that provide training for white doctors. And so the idea is that Queen's enacted the ban to appease potential donors.

AC: That's kind of interesting how the ban came about in a more top down way than necessarily bottom up as Queen's was claiming.

JH: Exactly. What Edward found suspicious about the official story and I think he had a very good historical sense about this, is how did people suddenly become so racist – that

and Black doctors in general – how that narrative in the medical field and institutional politics of science could have possibly played into a lot of these sociocultural and moral panics that you were talking about surrounding the 'biological clock' concept?

JH: I think my training in the history of medicine was very much focused on understanding social and cultural aspects. And so, it became obvious to me that you really can't tell any sociocultural story, especially in the North American context, without paying attention to race. The ways I deal with race in my research and in my teaching are somewhat similar. This is the first time that I've explicitly developed curriculum that's focused on race and discrimination. The curriculum that I've developed looks at different case studies and Queen's history and it focuses mainly on this 1918 incident. But Queen's also expelled female students in the 1880s. It was the first to accept them, and the first to expel them.

But the main thing I want to get across to the students is that we have tons of these episodes in the history of medicine where we actually see the medical profession basically being winnowed down--until by the 1960s it becomes a very elite white male profession. That was not always the case. We have to think about how the active discrimination and different policies on behalf of medical schools shaped a profession that looked a certain way and actually become that way. It was actually human beings who did that. And I'd like to think that that's something I bring into a lot of my teaching – the awareness of power and race and discrimination in the ways that it shapes different institutions.

I taught history medicine in the US before I came here and whenever you teach about the medical profession, one of the big stories is the ways in which these attempts to “improve” medical education in the 20th century came with a heavy dose of discrimination and shutting down medical schools that were serving underserved populations of either rural or Black or female students in the United States.

AC: Do you see any current policies or landscapes that reproduce or propagate these kinds of discriminatory regimes and maybe other ways that we might not notice if we did not know about the history of medical schools and medical education at large?

JH: Talking about the current state of medical education in Ontario – in thinking about policies that can help us further diversify medical education in classrooms – obviously there is always the balance when you're teaching something like history of medicine. We both acknowledge progress has been made in the ways in which a medical school class looks different in 2019 than it did in 1969 or 1949, but how there are still lots of structural barriers that exist are also discussed. Applying to and accessing medical education requires a lot of money, so there's a certain amount of privilege that gets reproduced

through the medical applications process. Something as simple as the type of volunteer experiences that students would like to have to be able to get into medical school often means you can't be working as much in the summer as someone with class privilege is an example that has been given to me. Students from backgrounds that are potentially less privileged might not have the opportunity to do volunteer work instead of paid work right during their time off from school and that then hurts their medical school application which, in turn, reproduces this problem of access. Of course, then, the tuition as well and how much debt students go into is a point of concern. Just the cultural barriers of mentorship and whatever students are encouraged to go into medical school and who see themselves in a medical faculty or clinics for example are also relevant issues. And that is another part of the commission that I'm on. We're working on a mentorship program for students at Queen's to encourage students of colour to consider a medical education. And I think there's a long way to go with that.

I am very interested really in both race and gender in this context. The medical profession is shaped by those things and also in turn shapes gender conversations. I work a lot on looking at the rhetoric of physicians and particularly of people working in fertility medicine and the ways that then shapes cultural narratives. Even if there was no connection to my personal research, I still would have been very eager and honoured to be part of this at Queen's because of my responsibility as a Hannah Chair. I don't think there has been a moment for a long time that this has been more urgent. And, the students push this a lot. They wanted to know more about the history of their own school. They wanted to talk about this. The class on “Who gets to become a doctor” is in October that examines this question with a reflective angle, so I'm really looking forward to that.

AC: Thank you so much for your time!

Beginning to Settle Study Away in Maine

Decentering Settler Narratives in HPS Context

Ellie Louson & Isaac Record

Michigan State University & Lyman Briggs College

Here is a story about the very beginning of our journey to decenter settler narratives in a HPS course. We aren't experts on this topic by any means, and we still have a lot to learn and lots of work ahead of us. We hope our story can help other teachers interested in “unsettling” their own syllabi.

This summer we traveled to coastal Maine on a site visit for an anticipated study away course for Michigan State University's [Lyman Briggs College](#). Titled *Maintaining Nature: infrastructure, natural resources, and coastal tourism*, this course would bring our students to coastal Maine to study issues at the intersections of nature and culture. It will offer students an alternative experience to traditional study abroad courses our college offers in Europe, Australia, and Central America. We are also designing it to reflect our research interests in wildlife and wilderness conservation (Louson) and socio-technical infrastructures (Record).

Months earlier, while we were brainstorming around the content for our syllabus, we realized that issues facing Indigenous

communities in Maine were relevant to the stories we wanted to explore around environmental history of the area, natural resource extraction, and the effects of climate change on coastal communities. We had both also begun hearing more about decolonizing and anti-colonizing pedagogies, especially in higher ed conversations on [Twitter](#). But apart from confirming how far our budding syllabus was from the anti-colonized ideal, we didn't know how to get started and we weren't sure who to ask for help.

On our trip we had a remarkable experience at the [Abbe Museum](#) in Bar Harbor, ME. The only Smithsonian Affiliate in Maine, the museum is named for its founder, Dr. Robert Abbe, an eminent physician who vacationed in Bar Harbor in the 1920s. It began as a private museum showcasing Dr. Abbe and other wealthy summer residents' collections of local Native American artifacts and grew to be the major institution holding archaeological collections in Maine's midcoast as well as sponsoring new excavations.

What was striking to us is that the museum

has undergone a significant transformation such that it is now a venue for Indigenous communities to take ownership of their own narratives, history, and material culture. We learned about contemporary issues facing Native Americans and the youth of those communities in particular, through the inclusion of student artwork and current news stories ranging from drinking water quality in reservations to efforts to remove offensive, stereotyped high school mascots. We wondered at their impressive collection of intricate woven baskets, which are part of the story we want our students to learn about the mechanization of farming in the state. We also saw that this shift included an increasing participation of Native Americans in different

components of the museum, from exhibitions to outreach to governance, and most recently in their [Decolonization Initiative, MuseDI](#).

The result was a museum experience so outside of what we were expecting, so unlike the conventional archaeological displays of arrowheads from a timeless, context-removed Indigenous past, that we were jolted into awareness that we had the power to show our students a Maine of similarly living, vibrant Indigenous communities with their own narratives around the issues central to our course. With this power comes the responsibility to do so, and that is the challenge we have set for ourselves over the coming months and years.



Isaac Record at the Abbe Museum, July 2019. Photograph by Ellie Louson.



JANIS LANGINS

1945-2019

Professor Emeritus Janis Langins passed away on 9 September 2019 from cancer. For twenty-five years he was a Professor at the Institute for the History and Philosophy of Science and Technology at the University of Toronto. Prof. Craig Fraser, wrote an obituary on the [IHPST website](#) and another one is published in [The Toronto Star](#).

In this reflection, two of Professor Langins graduate students share their recollections of their teacher, mentor, and friend.

"It doesn't have to be perfect it just has to be done. I tell this to all my graduate students. If you obsess with perfection, you'll never finish." These words stuck with me for years, long after I defended my dissertation and graduated with my PhD. They stuck with me when I worked on my second major journal article, when I wrote the first draft of my book proposal, and even when I write my lecture notes. That was the advice Janis gave me when I visited him in his office in 2013, anxious and overwhelmed with the (perhaps impossible) schedule I had set for completing my chapters. It was a few months before I would be departing for Berlin to take up a four-month fellowship; I wanted to return to Toronto with the entire dissertation draft complete.

And I did. Janis congratulated me and we made plans to discuss the last few chapters. He scolded me on my poor French, correcting the prose on the manuscript and spending a few extra minutes to explain my errors. I shared gossip about the historical actors I was writing about, telling him tales about bravado and rivalry, if only to make him chuckle under his breath the way he did. We argued about what to cut out of my last dissertation chapter, which was nearly double the length of the previous chapters. He was right of course, and my work was better for it.

Janis was kind and generous. He told me once that even though my work was largely outside his area of expertise, he was glad to have learned a new subject. One of the last conversations I remember us having was about technological networks; I was figuring out whether the hearing aid industry could be perceived as a system and asked Janis for his advice for whether this would make a suitable second project. We were in a hallway, both of us leaning against a wall. Before I walked away, I asked what he was planning to do next. "Retire," he said, as he patted my shoulder and headed to his office.

-Jaipreet Virdi

It was our last lucid, if slightly intoxicated, conversation. He was freshly retired and full of knowledge about the difference between defined benefit pension plans and defined contribution pensions. He and his wife had plans to travel. He was still running marathons, cross-country skiing, and riding his bike. We were on the back patio of the Duke of York.

By this point I'd lost track of the number of times Janis had told me that his wife always told him "you don't buy beers, you rent them." As the meal and drinks wound to their natural

conclusion, we each took a turn guarding our bags and the table while the other went to the washroom. He went to the washroom first, and the bill came, so I paid it.

I knew his rule. "While you are a graduate student, the beers are always on me." He never explained his rule, and I certainly never asked. It was only through another conversation at the Duke, with another colleague, that I came to appreciate the depth of ethical layers to the rule. Regardless, he was in the washroom, I wasn't breaking the core of the rule, so I paid.

When I got back from the washroom I could see he was troubled. "I asked for the bill and the waitress says you already paid." Grateful for the honesty of service workers, I continued to listen. "You know my rule. While you are a graduate student, the beers are always on me. Once you're done, you pay for your own beers." I could tell from how tense he was that sometime on his subway ride west from St George Station, others on the subway car, if they noticed the lanky former professor in a beret (or perhaps, given that we sat on the patio, he was wearing his Tilly), might become slightly alarmed when he contorted his arm over the back of his head to scratch his eyebrow. I could already visualize him contorting both arms over the top of his scalp to scratch both eyebrows in his living room later that evening.

As with any moderately wayward graduate student, I knew I'd already caused him this level of stress before. More than once, because I could easily visualize the progression of the stress. The guilt of causing him to get two eyebrow scratches worth of stressed about his ethics was enough for me to relent and accept cash for his share of the bill.

There were many reasons I had caused him that level of stress during my time as a graduate student. Some of those reasons were innate to Janis, some were because of my decisions and actions, and many were because

the two of us were so similar. Whether we were as similar when we met, or whether we both evolved is hard to say.

First, he was thoroughly and firmly ethical, I assumed this integrity was a remnant from his training as Chemical Engineer at McGill. He was also kind, compassionate, funny, and empathetic. None of these traits were immediately evident when I first approached him as a Master's student - I thought he was stern, cold, and short.

Second, without one of Janis' bursts of pretending to be stern and short, I would probably still be in the archives. Janis, and the rest of my committee, spent at least the last year of my time in the archives telling me that I'd already read enough, more than was necessary to complete a PhD. He ordered me back from the front, and I retreated.

As I returned to Toronto and settled into writing, and writer's block, no amount of Janis telling me the story of the time someone stole his satchel while he was a PhD candidate - his satchel with the only copy of his PhD thesis in it - was going to get me back on track. Nor his anecdote about some famous scholar of the French Revolution whose servant had burned the only copy of the manuscript, forcing them to write a shorter and better, but less thorough and documented, book. He knew what I was going through, but the only strategy he knew for overcoming it was my second stern and short ultimatum. Finish before he went on sabbatical next year - the last sabbatical of his career.

Janis wrote a brilliant PhD thesis, turned it into a fantastic book, and then wrote a second outstanding book. He never gave up hope of finding another project, even when he was blocked from accessing the requisite archives for one project he imagined. I can only assume that this setback was one of many in his career. The graduate students whispered that they would never get a job, let alone tenure, if they had his level of scholarly productivity.

The market had changed. But Janis knew and could relate to our feelings of being impostors.

Regardless of his output, Janis was a committed teacher and department steward. Not the kind of teacher who read the literature on teaching, nor the kind of instructor who methodically experimented with new ideas and measured their impact. Rather the kind of teacher with an innate sense of good ideas, an ineffable ability to tell whether it was connecting with students or not, and a drive to try fresh methods, if only to keep himself from getting bored. Students mostly only saw the cold veneer, the breadth of knowledge of his fields, but a few undergraduates came to understand the depth of his ethics and kindness.

As a department steward, Janis loved to quote Kissinger frequently. "Academic politics are so vicious precisely because the stakes are so small." He was cynical and realistic about the university, and in hindsight I can agree that the stakes were small - as one of the student society executives, we'd clashed with Janis and the rest of the department administrators over the interpretation of a \$500 increase in funding packages. \$500 was a big deal to us, because we were so far below the poverty line for Toronto, but it also wasn't going to get us anywhere near a minimum standard of living. We watched as Janis manipulated his very complex spreadsheets for the funding packages and TAs, both hands contorted over his head scratching his eyebrows as he tried to explain it to us.

One perspective of my PhD thesis is that it's about death. Nearly every major character in the story died either before I started or, in a couple of instances, while I was working. Janis, gracefully awkward as he was, brought a clipped obituary for one of my actors to my wedding. My dissertation was also a study of men (and a few women) who studied both more efficient ways to kill enemies, and better ways to defend against such attacks from enemies. In short, there was a lot of death.

After reading my first draft of my first chapter Janis wanted me to change two core things. First, I had too many characters and it was too hard to follow. Second, I kept using the euphemism "passed away" instead of the word "died" every time one of the characters exited my story. I followed both pieces of advice, and it was a better dissertation as a result of this and all of Janis' other advice, but "died," both the word and the final action, is always going to feel precisely and devastatingly cold to me.

Shortly after that conversation at the Duke about pensions, Janis Langins was diagnosed with a glioblastoma brain tumor. My partner and I visited him and his wife with our daughter. He struggled to find words and to get them out. Two of his five children, as well as one of his granddaughters, were there. His granddaughter and our daughter ran off to play. Neighbours stopped by, or called, under the auspices of scheduling visits with Anna, their children, and grandchildren. It was a house full of life and energy swirling around him during our brief visit. He seemed content and resigned to his fate. Rather than our normal handshake, we hugged - knowing that this might be the last time we saw each other.

His death, as inevitable as all of our deaths, is devastatingly cold and precise. I miss him immensely, and realize, through the final visit and visitation, how much of him I didn't know. He lived a full and happy life, and it is so thoroughly sad that a good life ended before its time.

-Jonathan Turner

Originally posted on [Boffins and Cold Warriors](#)

Decolonizing HPS: Some Reflections from a Graduate Student

In moving towards diversifying HPS, Sarah Qidwai argues we need to center conversations about decolonization around Indigenous scholars and more importantly, we need to read their work.

From calls to [decolonize museum collections](#) and return artefacts to their rightful homes, to the [withdrawal](#) of Bruce Gilley's controversial piece "The case for colonialism," the subject of decolonization has taken center stage in academia. I want to start off this reflection by turning the theme into a question. What do we mean when we state that we want to decolonize the history and philosophy of science? Do we want to change what we study and how we do it? Or do we want to examine academia itself and the pedagogical approaches we continue to teach? Is decolonization a metaphor for certain areas?

Personally, I still do not have a concrete answer to the questions at hand, but I am working towards understanding what scholars have already taught us about settler colonialism and how we can move to diversify the history and philosophy of science and technology without tokenizing the subjects we wish to study and teach.

The first and most important point is that conversations about decolonization need to center around Indigenous scholars, their experiences and views. We need to read their publications and hear their stories firsthand. After that, we, as Canadians or those studying at Canadian institutions should reflect on our own relationship with the land we occupy.

Settler colonialism as concept should be a key theme across the board. We need to ensure that our students understand the history of science and its role in colonial and post-colonial settings as much as we teach them *The Structure of Scientific Revolutions*. Some areas that we should include are: the history of nutrition experiments in Canada, forced sterilization of indigenous bodies, scientific racism, and the role of residential schools which worked to inculcate settler worldviews and erase indigenous ones. This is just a start though.

There is an entire conversation to be had about the erasure of other worldviews in history of science. This is where the question of decolonizing as a metaphor arises. For example, the contributions of prominent astronomers from the Islamicate world are often excluded, but McGill's Institute for Islamic Studies is ahead of the curve. Even more, the [Islamic Scientific Manuscripts Initiative \(ISMI\)](#) is working to ensure primary sources are available globally. Does this also fall under the umbrella of decolonization work? Or is this a different issue altogether?

Regardless of the questions at hand, there are two key issues I want to highlight. First, how do history of science programs support those who have experienced the negative impact of colonialism? This one is far more complicated

and something that requires a lot more institutional support. Second, how do we change day-to-day instruction in both subject and style at Universities? The first step is collecting what is already out there. Building on the work of several scholars, we need to create reading lists that focus on decolonizing certain areas in history of science and technology. The next step is creating committees to review syllabi and move away from historiographies of the scientific revolution that only teach us about certain individuals like Copernicus, Darwin, Newton and Einstein and incorporate the complexities

that exist when teaching global and/or transnational history.



Sarah A. Qidwai is a PhD candidate at the University of Toronto, where she is working on a dissertation on the history of science and Islam in British India.

Her work examines the life and work of Sir Sayyid Ahmad Khan (1817-1898), and argues that he was a popularizer of science in India.

Hewton, Griffin and Rae-Grant Funding Awards to Support Archival Research in 2020

The Friends of the CAMH Archives (FoCA), dedicated to the history of Canadian psychiatry, mental health and addiction, have established three endowment funds. These endowments annually provide funding in memory of their late colleagues, Ms. E.M. (Lil) Hewton and Dr. J.D.M. (Jack) Griffin, OC, and – inaugurated last year through the generosity of the Laidlaw Foundation – the Dr. Quentin Rae-Grant Scholarship.

The purpose of these funding awards is to provide financial assistance to students, and others not necessarily associated with an academic institution, who propose to undertake archival research on an aspect of the history of mental health or addiction in Canada. The FoCA board at its discretion may approve awards to a maximum of \$2,500 each.

There is no application form. Candidates are invited to submit a letter of intent not exceeding 500 words, together with a budget and résumé, not later than November 30, 2019. These research awards are conditional on the recipients agreeing to submit progress reports within one year, and a final report including a financial synopsis within two years of receiving their financial allocation.

For examples of the archival research projects (formerly “Bursaries”) previously awarded, please refer to that feature as included in the SPRING editions of our past years’ Newsletters, indexed at:

<https://www.camh.ca/en/health-info/camh-library/camh-archives/friends-of-the-archives>

To apply for a 2020 award, please submit an application by the November 30, 2019 deadline to:

Sydney Jones – President, Friends of the Archives
CAMH, 1001 Queen Street West
Toronto, Ontario M6J 1H4

Please note that electronic submissions are preferred: John.Court@camh.ca

Decolonizing HPS: A Reading List

Though no means comprehensive, this reading list provides a starting point for decolonizing the history and philosophy of science. With contributions from Sarah Qidwai, Dr. Geoff Bil, and Dr. Letitia Meynell.

Dr. Chanda Prescod-Weinstein wrote an excellent piece for [The Medium](#). This article is a treasure trove for those interested in readings related to decolonizing science. There are several other scholars and lists mentioned by Dr. Prescod-Weinstein, including one about the history of technology.

Linda Tuhiwai Smith, *Decolonizing Methodologies: Research and Indigenous Peoples*. Dunedin: University of Otago Press, 1999.

Wendy Makoons Geniusz, *Our Knowledge is Primitive: Decolonizing Botanical Anishinaabe Teachings*. Syracuse: Syracuse University Press, 2009.

Devon Abbott Mihesuah and Angela Cavender Wilson, *Indigenizing the Academy: Transforming Scholarship and Empowering Communities*. Lincoln: University of Nebraska Press, 2004.

Prakash Kumar, Projit Mukharji, and Amit Prasad, "Decolonizing Science in Asia." *Verge: Studies in Global Asias* 4.1 (2018): 24-43.

Marwa Elshakry, "When Science Became Western," *Isis* 101 (2010):98-109.

Helen Tilley, *Africa as Living Laboratory: Empire, Development, and the Problem of Scientific Knowledge, 1870-1950*. Chicago: University of Chicago Press, 2011.

Sujit Sivasundaram, "Race, Empire and Biology before Darwin," in Denis Alexander and Ronald L. Numbers, *Biology and Ideology from Descartes to Dawkins*. Chicago: University of Chicago Press, 2010.

Joan Roughgarden, "Evolutionary Biology and Sexual Diversity," in *God, Science, Sex, Gender: An Interdisciplinary Approach to Christian*. University of Illinois Press, 2010.

Terence Keel, *Divine Variations: How Christian Thought Became Racial Science*. Stanford University Press, 2018.

Ian Mosby, "Administering Colonial Science: Nutrition Research and Human Biomedical Experimentation in Aboriginal Communities

and Residential Schools, 1942-1952." *Social History*, 46.91 (2013): 145-172.

Miriam Shuchman, "Bioethicists call for investigation into nutritional experiments on aboriginal people." *Canadian Medical Association Journal* 185.14 (2001): 1201-2.

Sadia Qureshi, *Peoples on Parade: Exhibitions, Empire, and Anthropology in Nineteenth Century Britain*. Chicago: University of Chicago Press, 2001.

Ruha Benjamin, *Race after Technology: Abolitionist Tools for the New Jim Code*. Polity, 2019.

Suman Seth, *Difference and Disease: Medicine, Race, and the Eighteenth-Century British Empire*. Cambridge University Press, 2018.

Anne, Digby Waltraud Ernst, and Projit Mukharji, *Crossing Colonial Historiographies: Histories of Colonial and Indigenous Medicines in Transnational Perspective*. Cambridge Scholars Publishing, 2010.

Dhurv Raina, "Decolonisation and the Entangled Histories of Science and Philosophy in India." *Polish Sociological Review*, 178 (2012): 187-201.

Alison Wylie, "Plurality of Pluralisms: Collaborative Practice in Archaeology," in Jonathan Y. Tsou, Alan Richardson & Flavia Padovani (eds.), *Objectivity in Science*. Springer Verlag.

Kyle Whyte, "Indigeneity and US Settler Colonialism," in Naomi Zack (ed.) *Oxford Handbook of Philosophy and Race*. Oxford: Oxford University Press, 2016.

Annamarie Hatcher, Cheryl Bartlett, Albert Marshall & Murdena Marshall, "Two-Eyed Seeing in the Classroom Environment: Concepts, Approaches, and Challenges," *Canadian Journal of Science, Mathematics and Technology Education*, 9:3 (2009).

Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council of Canada (2014) "Chapter Nine: Research Involving the First Nations, Inuit and Métis Peoples of Canada," Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans.

Banu Subramaniam, "Snow Brown and the Seven Detergents: A Metanarrative on Science and the Scientific Method," *Women's Studies Quarterly*; (2000) 28, 1.

Book Releases

Brinda Sarathy, Vivien Hamilton, and Janet Farrell Brodie (eds.), *Inevitably Toxic: Historical Perspectives on Contamination, Exposure, and Expertise*. University of Pittsburgh Press, 2018.

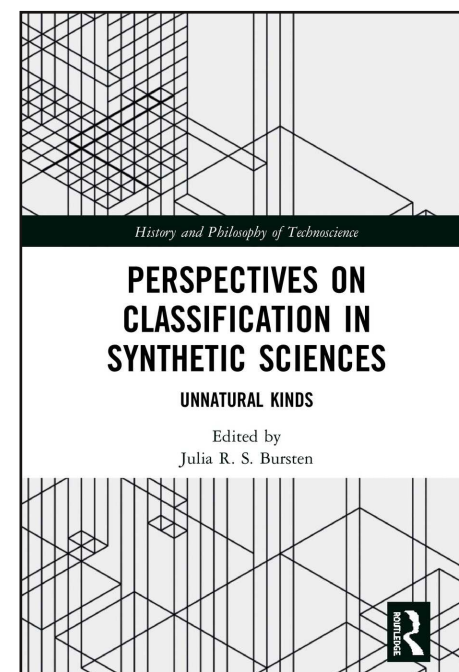
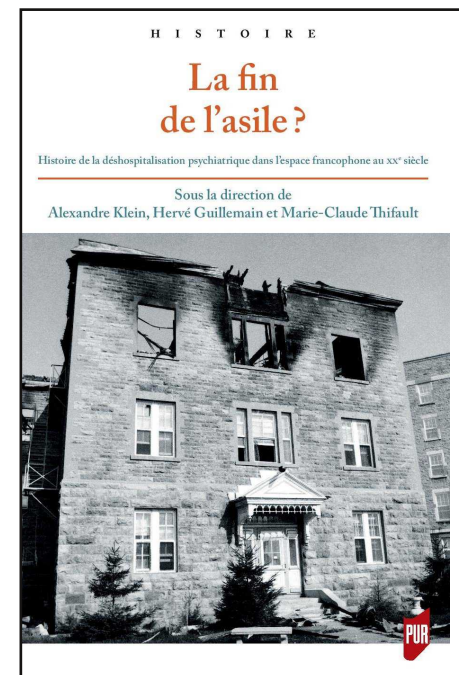
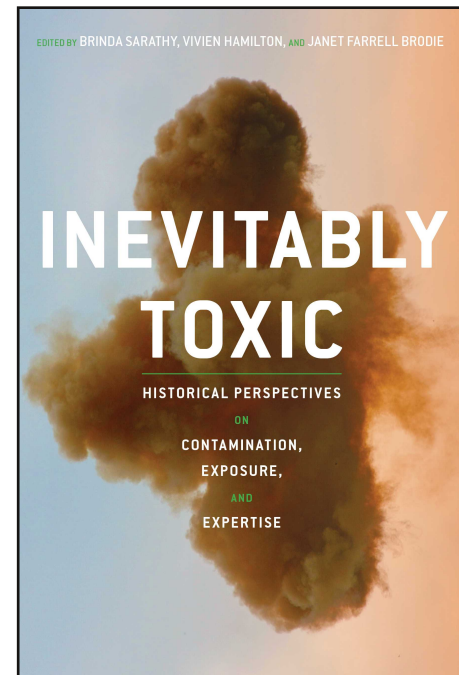
The essays in this collection ask us to confront the toxic landscapes that pervade modern life. Taking us to sites of nuclear detonation, into neighborhoods impacted by oil drilling, and forests sprayed with pesticides, these stories ask how these contaminated spaces have been created, whose health and wellbeing has been most impacted, and what role scientific experts have played in regulating radiation and chemical pollutants. If the proliferation of toxic spaces feels inevitable, driven by capitalist and imperialist ambitions, then unraveling these hidden histories can help us to understand and resist these dynamics, and ultimately imagine a different future.

Alexandre Klein, Hervé Guillemain et Marie-Claude Thifault (dir.). *La fin de l'asile ? Histoire de la déshospitalisation psychiatrique dans l'espace francophone au XXe siècle*. Presses Universitaires de Rennes, 2018.

Au cours des années 1960, les pays occidentaux s'engagèrent dans un processus politique, médical et administratif visant à sortir les malades des hôpitaux psychiatriques. Mais est-ce pour autant la fin de l'asile ? En retraçant l'histoire des modalités de sortie de l'asile dans le monde francophone du XXe siècle, cet ouvrage constate la nature mythique de la désinstitutionnalisation.

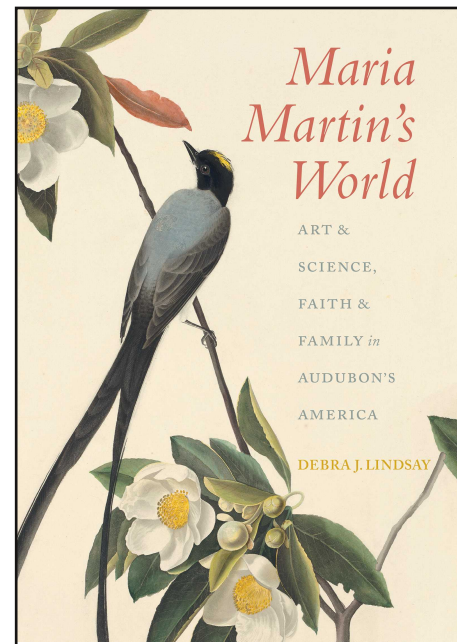
Julia R.S. Bursten, *Perspectives on Classification in Synthetic Sciences: Unnatural Kinds*. Routledge, 2019.

This volume launches a new series of contemporary conversations about scientific classification. Most philosophical conversations about kinds have focused centrally or solely on natural kinds, that is, kinds whose existence is not dependent on the scientific process of synthesis. This volume refocuses conversations about classification on unnatural, or synthetic, kinds via extensive study of three paradigm cases of unnatural kinds: nanomaterials, stem cells, and synthetic biology



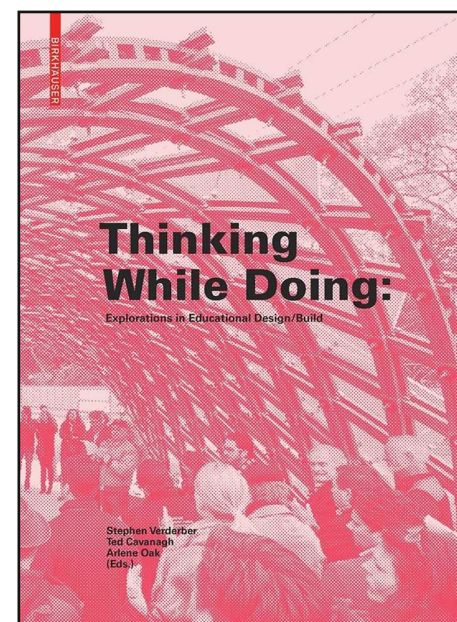
Debra J. Lindsay, *Maria Martin's World: Art and Science, Faith and Family in Audubon's America*. The University of Alabama Press, 2018.

Maria Martin's World is a heavily illustrated volume examining how Maria Martin learned to paint aesthetically beautiful botanicals with exacting accuracy. Drawing on deep research into archival documents and family-held artifacts, Debra Lindsay brings Maria Martin out from behind the curtain of obscurity and disinformation that has previously shrouded her and places her centrally in her own time and milieu. In the telling of Maria Martin's story, Lindsay also uncovers many nuances of the behavior and actions of the two prominent men in her life that readers interested in Audubon and Bachman will find noteworthy.



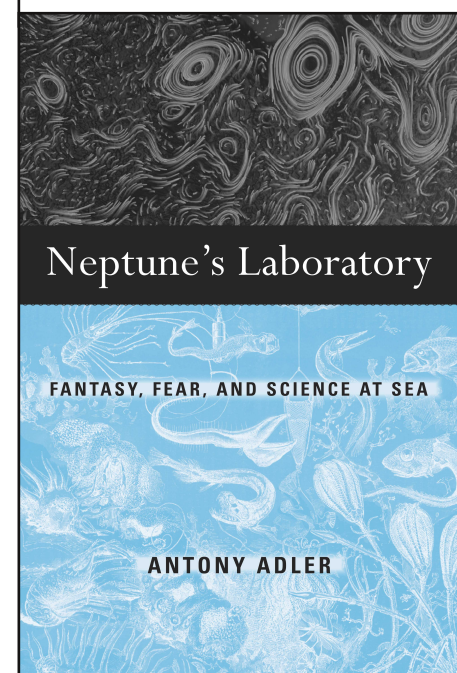
Stephen Verderber, Ted Cavanagh, and Arlene Oak (eds), *Thinking While Doing: Explorations in Educational Design/Build*. Birkhauser, 2019.

The field of design/build is rapidly growing in popularity in architectural education. The active engagement of architecture students in the design and construction of real projects is now an important dimension at more than 150 universities worldwide. Yet this emerging field continues to suffer from an insubstantial scholarly foundation, and a lack of common criteria of evaluation. In response, an interdisciplinary five-year initiative brought together numerous universities in North America with the shared aim of developing a consistent, innovative, scholarly/professional practice model, based on the contributions of the humanities, engineering, and community development. "Thinking While Doing" will set a new standard for this key aspect of education and professional practice.



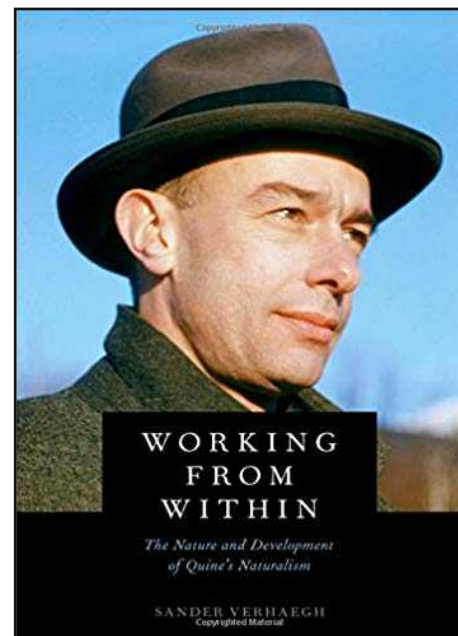
Anthony Adler, *Neptune's Laboratory: Fantasy, Fear, and Science at Sea*. Harvard University Press, 2019.

This book is about how scientists and policy makers have invoked fears and hopes for the future in debates over the exploitation and study of the marine environment. We find these invocations in scientific discourse and publications, on display in public exhibits and museums, as well as in the rhetoric deployed by politicians to garner domestic and international public support for their political projects. Paying attention to this history informs our understanding of how marine environments have historically been read, altered, and destroyed.



Sander Verhaegh, *Working from Within: The Nature and Development of Quine's Naturalism*. Oxford University Press, 2018.

During the past few decades, a radical shift has occurred in how philosophers conceive of the relation between science and philosophy. A great number of analytic philosophers have adopted what is commonly called a "naturalistic" approach, arguing that their inquiries ought to be in some sense continuous with science. Where early analytic philosophers often relied on a sharp distinction between philosophy and science, philosophers today largely follow W. V. Quine (1908-2000) in his seminal rejection of this distinction. Sander Verhaegh offers a comprehensive study of Quine's groundbreaking naturalism. *Working from Within* aims to contribute to the rapidly developing historiography of analytic philosophy, and to provide a better, historically informed, understanding of what is philosophically at stake in the contemporary naturalistic turn.



CALL FOR PAPERS

**Society for Philosophy of Science in Practice (SPSP)
Eighth Biennial Conference, 7–10 July 2020
Michigan State University (MSU), East Lansing, Michigan, USA**

SPSP is an interdisciplinary community of scholars who approach the philosophy of science with a focus on scientific practice and the practical uses of scientific knowledge. For further details on our objectives, see our mission statement. The SPSP conferences provide a broad forum for scholars committed to making detailed and systematic studies of scientific practices — neither dismissing concerns about truth and rationality, nor ignoring contextual and pragmatic factors. The conferences aim at cutting through traditional disciplinary barriers and developing novel approaches. We welcome contributions from not only philosophers of science, but also philosophers working in epistemology and ethics, as well as the philosophy of engineering, technology, medicine, agriculture, and other practical fields. Additionally, we welcome contributions from historians and sociologists of science, pure and applied scientists, and any others with an interest in philosophical questions regarding scientific practice.

Keynote Speakers:

Karen Barad, University of California at Santa Cruz

Till Grüne-Yanoff, Royal Institute of Technology (KTH) Stockholm

Keynote MSU panel on “Epistemologies of Science” in collaboration with the biennial meeting of the Consortium for Socially Relevant Philosophy of/in Science and Engineering (SRPoISE):

Kristie Dotson (Philosophy and African American and African Studies)

Sean A. Valles (Lyman Briggs College and Philosophy)

Kyle Whyte (Philosophy and Community Sustainability)

Submissions and timeline

On-line submission site for paper or session proposals: <https://easychair.org/conferences/?conf=spsp2020>

Abstract submission deadline: 10 January 2020

Notification of acceptance: 2 March 2020

Main Contact: Alan C. Love, aclove@umn.edu

For info about the organising committee, the venue, travel arrangements, and the surroundings please see the [main SPSP2020 page](#).

Submissions

All submissions and inquiries should be emailed to co-editors **Jaipreet Virdi** jvirdi@udel.edu or **Catherine Rioux** at catherine.rioux@mail.utoronto.edu.

Issues are published three times a year: in Winter, Summer, and Autumn. Submissions are welcome and can be sent in both official languages. We welcome submissions in the following categories:

Announcements: details about conferences, workshops, job openings, departmental or program news, and call for papers.

Research & Pedagogy: launches of any new and innovative research or techniques used to teach HPS or original topics addressed in their classes and seminars. We are especially interested in digital humanities projects and student engagement pedagogies. Descriptions should be no more than 800 words (with e-links, if available).

Reports & Reviews: we are interested in receiving short reports (500 w. max.) from conferences or workshops our members have attended during the fall, together with photos they would like to share with us. 500 w. max book reviews are also welcome.

In Conversation: we encourage graduate and early career scholars to contact Jaipreet Virdi if you have an idea of an individual to interview. We are especially looking for interviews of scholars who adopt intersectional approaches to HPS or who advocate non-traditional scholarly avenues.

Artwork & Photos: we welcome submissions of all original art and photos, especially for the cover.

Member Updates & New Books: once a year we'll publish member updates, but welcome new book announcements year-long. Please send no more than 200 words blurb and a high-res image of the cover.

Our aim is to keep the HPS community abreast of what is going on in the field, here and abroad, intellectually and institutionally. But we need your contributions if we are to share your news with the CSHPS community; the newsletter is only as robust and effective as we make it. We thank you for your contributions. The editors are grateful to York University for assistance with archival printing costs.

The newsletter layout was designed and created by Jaipreet Virdi using Scribus, an open source desktop publishing program.

REMINDER TO RENEW/RAPPEL DE COTISATION

This is a good time to remind members that your 2019 memberships have expired, so it is time to renew for 2020. In order to attend and/or participate in annual meetings, you do need to be a member in good standing: <http://www.yorku.ca/cshps1/join.htm>

Il le moment est venu de rappeler à nos membres que leur affiliation pour 2019 vient d'arriver à son terme et qu'il est donc temps de renouveler leur adhésion pour 2020. Pour assister et/ou participer au congrès de, vous devez être à jour de votre cotisation: http://www.yorku.ca/cshps1/join_fr.html