

HPS&ST Note

November 2016

Introduction

This HPS&ST monthly note is sent direct to about 7,300 individuals who directly or indirectly have expressed an interest in the contribution of history and philosophy of science to theoretical, curricular and pedagogical issues in science teaching, and/or interests in the promotion of innovative and more engaging and effective teaching of the history and philosophy of science. The note is sent on to different international and national HPS lists and science teaching lists. In one form or another it has been published for 20+ years.

The note seeks to serve the diverse international community of HPS&ST scholars and teachers by disseminating information about events and publications that connect to concerns of the HPS&ST community.

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

IsisCB Cumulative 1913-1975

As of November 2016, anyone can now access the printed text of the Isis Cumulative Bibliographies between 1913 and 1975. The volumes available for browsing are categorized bibliographical entries that appeared in annual or semi-annual bibliographies that were published as part of the journal Isis between volume 1 (1913) and volume 66 (1975). Since the data in IsisCB Explore only goes back to 1974, researchers can use this site to do a more thorough literature survey of articles in history of science going back 100 years.

George Sarton began publishing bibliographies in his new journal Isis from the first issue. From that time on, Sarton and his successors published at least one bibliography almost every year. The Isis Critical Bibliography of the History of Science was a classified list of recently published secondary literature that the editors and others collected. These bibliographies marked the beginning of the history of science as a scholarly specialization, bringing together scholarship from all over the world, in many different languages.

<http://cumulative.isisb.org/about.html>

World Humanities Conference, Liege, 6-12 August 2017

This conference is organised jointly by CIPSH (the Conseil International de Philosophie et des Science Humaines) and UNESCO and aims to become a pivotal conference for the

humanities. UNESCO hopes for effects comparable to the 1999 World Conference on Science in Budapest.

Submission website for the submission of symposia (deadline 31 January 2017) and individual papers (deadline 30 March 2017) for the WHC:

<http://www.cipsh.net/submit/>

The 28th Baltic Conference on the History of Science, May 18-20, 2017, Tartu, Estonia

Estonian Association of the History and Philosophy of Science cordially invites you to the 28th Baltic Conference on the History of Science (BCHS), which will take place from May 18 to 20, 2017 in Tartu, Estonia. The conference is dedicated to the 250th anniversary of Georg Friedrich Parrot (1767-1852). Parrot was the initiator of the reopening of the University of Tartu in 1802 and the first Rector. He is known as an organizer, educator and scientist who was among the very first to introduce the ideas of the Enlightenment into the Baltic region.

The Baltic conferences on the history of science share a long tradition, which stretches back to the year 1958 when the first conference took place in Riga. The following conferences were held in Estonia, Lithuania and Latvia. In 2014, the 26th BCHS took place in Helsinki, Finland.

The 28th BCHS focuses at ideas of the Enlightenment and on various sciences in late 18th and early 19th century on the western border of the Russian Empire. However, papers on more recent developments will be welcome as well.

The 28th BCHS covers a variety of topics, which divide into working sections:

- a) Enlightenment ideas in education in Europe;
- b) philosophical ideas concerning the Enlightenment;
- c) science and practice – utilitarianism and the Enlightenment;
- d) science communication and science policy.

Detailed information about the conference programme, registration, abstracts, accommodation and other matters will be published on the website of the Baltic Association for the History and Philosophy of Science www.bahps.org in due course.

Please send abstracts of 500 words maximum to tarmo.kiik@gmail.com by Feb. 28, 2017.

International History, Philosophy and Science Teaching Group (IHPST) Conference Proposals

The International History, Philosophy and Science Teaching Group (IHPST) is inviting proposals to hold the 15th Biennial Conference in North America in 2019. The IHPST Group also welcomes proposals for hosting an IHPST Regional Conference in 2018.

Colleagues interested in hosting the biennial conference in 2019 or a regional conference in 2018 are encouraged to contact Zoubeida Dagher (president@ihpst.net) as soon as possible to discuss their ideas/plans and begin the process of developing a formal conference proposal.

Opinion Page: Opinion Pieces Welcome

Previous Opinion Pieces:

Gregory Radick, Leeds University, *How Mendel's legacy holds back the teaching of science* (June 2016).

Philip A. Sullivan, University of Toronto, *What is wrong with Mathematics Teaching in Ontario?* (July 2016)

Matthew Stanley, New York University, *Why Should Physicists Study History? Teaching Philosophy in Schools*

Invitation to Submit

In order to make better educational use of the wide geographical and disciplinary reach of this HPS&ST Note, invitations are extended for readers to contribute opinion or position pieces or suggestions about any aspect of the past, present or future of HPS&ST studies.

Contributions can be sent direct to editor. Ideally they might be pieces that are already on the web, in which case a few paragraphs introduction, with link to web site can be sent, or else the pieces will be put on the web with a link given in the Note.

They will be archived in the OPINION folder at the Inter-Divisional Teaching Commission web site (<http://www.idtc-ihps.com/>).

The opinions do not, of course, represent any official position of the IDTC or the two divisions (DLMPS and DHST) it serves.

Obituaries

Obituaries for scholars in the HPS&ST field that have passed on are most welcome. It is important to keep a collective memory of people and their contributions. This is especially important for scholars outside the Anglo-American community whose contributions and passing might not be well known in the Anglo-American community.

Previous Obituaries can be read at: <http://www.idtc-ihps.com/obituaries.html>

Recent HPS&ST Research Articles

ISIS (Volume 107, Number 3, September 2016)

Viewpoint: Science and Orthodox Christianity: An Overview and Six Comments
Chen, Y-C., Benus, M. J., & Yarker, M. B. (2016). Using Models to Support Argumentation in the Science Classroom. *The American Biology Teacher*, 78(7), 549-559. doi: 0.1525/abt.2016.78.7.549

Francisco, N., Morais, C., Paiva, J. C., & Gameiro, P. (2016). A colourful bond between art and chemistry. *Foundations of Chemistry*, 1-14. Doi: 10.1007/s10698-016-9259-y
online first

- Hamlin, C. (2016). The Pedagogical Roots of the History of Science: Revisiting the Vision of James Bryant Conant. *Isis*, 107(2), 282-308. doi: 10.1086/687217
- Norton, J. D. (2016). How Einstein Did Not Discover. *Physics in Perspective*, 18(3), 249-282. doi: 10.1007/s00016-016-0186-z
- Pavuk, A. (2016). Biologist Edwin Grant Conklin and the idea of the religious direction of human evolution in the early 1920s. *Annals of Science*, 1-19. doi: 10.1080/00033790.2016.1242777 online first
- Pronskikh, V. S. (2016). E-36: The First Proto-Megascience Experiment at NAL. *Physics in Perspective*, 1-22. doi: 10.1007/s00016-016-0192-1 online first
- Toonders, W., Verhoeff, R. P., & Zwart, H. (2016). On the Use of Drama in Philosophy Courses for Science Students. *Science & Education*, 1-27. Doi: 10.1007/s11191-016-9853-3 online first
- Mürsepp, P. (2016). Chemistry as a practical science (Edward Caldin Revisited). *Foundations of Chemistry*, 18(3), 213-223. doi: 10.1007/s10698-016-9257-0
- van Besouw, J. (2016). The wedge and the vis viva controversy: how concepts of force influenced the practice of early eighteenth-century mechanics. *Archive for History of Exact Sciences*, 1-48. doi: 10.1007/s00407-016-0182-3 online first

Recent HPS&ST Books

Hall, Crystal (2016). *Galileo's Reading*. Cambridge, MA: Cambridge University Press. ISBN: 9781107652545

“Galileo (1564–1642) incorporated throughout his work the language of battle, the rhetoric of the epic, and the structure of romance as a means to elicit emotional responses from his readers against his opponents. By turning to the literary as a field for creating knowledge, Galileo delineated a textual space for establishing and validating the identity of the new, idealized philosopher. Galileo's Reading places Galileo in the complete intellectual and academic world in which he operated, bringing together, for example, debates over the nature of floating bodies and Ludovico Ariosto's Orlando furioso, disputes on comets and the literary criticism of Don Quixote, mathematical demonstrations of material strength and Dante's voyage through the afterlife, and the parallels of his feisty note-taking practices with popular comedy of the period.” (From the Publisher)

More information at:

<http://www.cambridge.org/pt/academic/subjects/literature/european-literature/galileos-reading?format=PB>

Hasse, Dag Nikolaus (2016). *Success and Suppression: Arabic Sciences and Philosophy in the Renaissance*. Cambridge, MA: Harvard University Press. ISBN: 9780674971585

“The Renaissance marked a turning point in Europe’s relationship to Arabic thought. On the one hand, Dag Nikolaus Hasse argues, it was the period in which important Arabic traditions reached the peak of their influence in Europe. On the other hand, it is the time when the West began to forget, and even actively suppress, its debt to Arabic culture. Success and Suppression traces the complex story of Arabic influence on Renaissance thought.

“It is often assumed that the Renaissance had little interest in Arabic sciences and philosophy, because humanist polemics from the period attacked Arabic learning and championed Greek civilization. Yet Hasse shows that Renaissance denials of Arabic influence emerged not because scholars of the time rejected that intellectual tradition altogether but because a small

group of anti-Arab hard-liners strove to suppress its powerful and persuasive influence. The period witnessed a boom in new translations and multivolume editions of Arabic authors, and European philosophers and scientists incorporated—and often celebrated—Arabic thought in their work, especially in medicine, philosophy, and astrology. But the famous Arabic authorities were a prominent obstacle to the Renaissance project of renewing European academic culture through Greece and Rome, and radical reformers accused Arabic science of linguistic corruption, plagiarism, or irreligion. Hasse shows how a mixture of ideological and scientific motives led to the decline of some Arabic traditions in important areas of European culture, while others continued to flourish.” (From the publisher)

More information at: <http://www.hup.harvard.edu/catalog.php?isbn=9780674971585>

Lattery, Mark J. (2006). *Deep Learning in Introductory Physics: Exploratory Studies of Model Based Reasoning*. Charlotte, NC: Information Age Publishing, Inc.

“Deep Learning in Introductory Physics: Exploratory Studies of Model Based Reasoning is concerned with the broad question of how students learn physics in a model centered classroom. The diverse, creative, and sometimes unexpected ways students construct models, and deal with intellectual conflict, provide valuable insights into student learning and cast a new vision for physics teaching. This book is the first publication in several years to thoroughly address the “coherence versus fragmentation” debate in science education, and the first to advance and explore the hypothesis that deep science learning is regressive and revolutionary. Deep Learning in Introductory Physics also contributes to a growing literature on the use of history and philosophy of science to confront difficult theoretical and practical issues in science teaching, and addresses current international concern over the state of science education and appropriate standards for science teaching and learning.” (From the Publishers)

"Deep Learning in Introductory Physics is an extraordinary book and an important intellectual achievement in many senses. It offers new perspectives on science education that will be of interest to practitioners, to education researchers, as well as to philosophers and historians of science. Lattery combines insights into model-based thinking with instructive examples from the history of science, such as Galileo’s struggles with understanding accelerated motion, to introduce new ways of teaching science(...)" By Jürgen Renn, Director, Max Planck Institute for the History of Science

More information at: <http://www.infoagepub.com/products/Deep-Learning-in-Introductory-Physics>

Leonelli, Sabina (2016). *Data-Centric Biology: A Philosophical Study*. Chicago: IL: The University of Chicago Press. ISBN: 9780226416335

“The first critical book-length study of data centrism in the life sciences and beyond, Data-Centric Biology sheds new and surprising light on the phenomenon of big data. Analytically competent, historically informed, sociologically sensitive, this book is a brilliant and successful demonstration of what bringing together philosophy, history, and social studies of science can achieve.”

Hans-Jörg Rheinberger, Max Planck Institute for the History of Science

“Going far beyond the epistemic concerns that preoccupy many philosophers, Data-Centric Biology brilliantly shows readers the practices that make data informative and meaningful, the biocurators who carefully attend to data’s forms, and the social, economic, and political resources on which our systems of Big Data Sciences depend. Leonelli is a leader in this area of scholarship, commanding a vast comprehensive knowledge of the historical, philosophical, and social studies of the life sciences and the data practices that sustain them.”

Mike Fortun, Rensselaer Polytechnic Institute

More information at:

<http://press.uchicago.edu/ucp/books/book/chicago/D/bo24957334.html>

Orr, David W. (2016). *Dangerous Years: Climate Change, the Long Emergency, and the Way Forward*. New Haven, CT: Yale University Press. ISBN: 9780300222814

“This gripping, deeply thoughtful book considers future of civilization in the light of what we know about climate change and related threats. David Orr, an award-winning, internationally recognized leader in the field of sustainability and environmental education, pulls no punches: even with the Paris Agreement of 2015, Earth systems will not reach a new equilibrium for centuries. Earth is becoming a different planet—more threadbare and less biologically diverse, with more acidic oceans and a hotter, more capricious climate. Furthermore, technology will not solve complex problems of sustainability.

Yet we are not fated to destroy the Earth, Orr insists. He imagines sustainability as a quest and a transition built upon robust and durable democratic and economic institutions, as well as changes in heart and mindset. The transition, he writes, is beginning from the bottom up in communities and neighborhoods. He lays out specific principles and priorities to guide us toward enduring harmony between human and natural systems.” (From the Publishers)

More information at: <http://yalebooks.com/book/9780300222814/dangerous-years>

Roberts, Meghan K. (2016). *Sentimental Savants: Philosophical Families in Enlightenment France*. Chicago: IL: The University of Chicago Press. ISBN: 9780226384252

Though the public may retain a hoary image of the lone scientific or philosophical genius generating insights in isolation, scholars discarded it long ago. In reality, the families of scientists and philosophers in the Enlightenment played a substantial role, not only making space for inquiry within the home but also assisting in observing, translating, calculating, and illustrating.

Sentimental Savants is the first book to explore the place of the family among the savants of the French Enlightenment, a group that openly embraced their families and domestic lives, even going so far as to test out their ideas—from education to inoculation—on their own children. Meghan K. Roberts delves into the lives and work of such major figures as Denis Diderot, Émilie Du Châtelet, the Marquis de Condorcet, Antoine Lavoisier, and Jérôme Lalande to paint a striking portrait of how sentiment and reason interacted in the eighteenth century to produce not only new kinds of knowledge but new kinds of families as well. (From the publisher)

More information at: <http://press.uchicago.edu/ucp/books/book/chicago/S/bo24117748>

Shapiro, J. (2016). *Community of Scholars, Community of Teachers*. Chicago, IL: Prickly Paradigm Press. ISBN: 9780984201099

“Academics routinely engage with colleagues in the research community as a critical part of their work. But, although many researchers are also dedicated teachers, teaching tends to be seen as a private matter between a teacher and his or her students. But why shouldn’t faculty members feel a similar impulse to be aware of what their colleagues are doing in the area of teaching? What do we miss when the conversation, especially at major research universities, is focused almost exclusively on research?”

In this revised and expanded collection of essays, Judith Shapiro, former president of Barnard College, issues an impassioned clarion call for a renewed focus on the role of community in teaching. When faculty members feel that they are not only a community of scholars, but also a community of teachers, teaching becomes more engaging for both students and teachers. Encouraging high-quality conversation about the pedagogical approaches that have proven most effective also puts the contributions of virtual, online communication into proper perspective and brings into clearer focus the advantages of a liberal arts education. With an argument that is controversial and sure to spark discussion and debate, *Community of Scholars, Community of Teachers* shows how higher education can become even more of a true community.” (From the publisher)

More information at: <http://www.prickly-paradigm.com/titles/Community-of-Scholars-Community-of-Teachers.html>

Coming HPS&ST Related Conferences

November 27-27, 2016, 1st Inter-regional Research Conference on Science and Mathematics Education: Interfacing Arab and European Science and Mathematics Education Research, American University of Beirut, Beirut, Lebanon
Details at: <http://www.aub.edu.lb/fas/smec/Pages/1stInter-RegionalConference.aspx>

December, 2-4, 2016, Disability and Religion: Disease, Disability & Medicine in Medieval Europe. 10th Anniversary Annual Meeting, Swansea University, Wales.
Contact: Dr Irina Metzler at I.V.Metzler@swansea.ac.uk

December, 14-16, 2016, Third Lisbon International Conference on Philosophy of Science: Contemporary Issues, Portugal, Lisbon University
Details at: <http://lisbonicpos.campus.ciencias.ulisboa.pt/>

December, 15-18, 2016, 3rd Asian HPS&ST Conference, Pusan National University, South Korea.
Details at: <http://asiahpsst2016.bolog.com/welcome.php>

January 5-8, 2017, 131th Annual Meeting of the American Historical Association, Denver, Colorado, USA.
Details at: <http://historians.org/annual-meeting/future-meetings>

January 19-20, 2017, “Interdisciplinary Futures: *Open the Social Sciences 20 years later*”, Lisbon, Portugal.
Conference web site: <https://ifoss20.wordpress.com/>

February 16-20, 2017, AAAS Annual Meeting, Boston, USA
Details at: <https://aaas.confex.com/aaas/2017/cfp.cgi>

February 24 – 25, 2017, Conceptions of Experience in the German Enlightenment between Wolff and Kant, University of Leuven
Organized by Karin de Boer (University of Leuven) and Tinca Prunea-Bretonnet (University of Bucharest)
Submission deadline: October 15, 2016

March 24-25, 2017, Biodiversity and its Histories, University of Cambridge
Deadline for submission: 1 September 2016
Details at: <http://philsci.org/images/docs/flyers/CFP.pdf>

March 24-26, 2017, 60th annual meeting of the Midwest Junto for the History of Science, Indiana University, US.
More information from Sander Gliboff sgliboff@indiana.edu

- April 19-22, 2017, sixth annual Scientiae conference, Pádua, Italy.
Contact info: Vittoria Feola scientiaepadua@gmail.com
- May 18-20, 2017, The 28th Baltic Conference on the History of Science, Tartu, Estonia
Details from: tarmo.kiik@gmail.com and : www.bahps.org
- May 27-29, 2017. Canadian Society for the History and Philosophy of Science Annual Meeting, Toronto, Canada
Details at: <http://www.yorku.ca/cshps1/meeting.html>
- June 28-1, 2017, Philosophical Inquiry with Children Coming of Age: Family resemblances: XVIII International Conference of ICPIC, UAM, Madrid, Spain.
Details at: <http://tinyurl.com/zt76j5n>
- July 4-7, 2017, 14th IHPST International Biennial Conference, Ankara, Turkey.
Conference Chairs Mehmet Fatih Ta ar [mftasar@gazi.edu.tr] & Gultekin Cakmakci [cakmakci@hacettepe.edu.tr]
Details at: <http://ihpst.net/>
- July 6-7, 2017, Historical Perspectives on Essentialisation and Biologisation of Gender Interdisciplinary Symposium of the Working Group of Women's and Gender History (AKHFG) at the Ruhr-Universität Bochum, Germany
Organizers: Dr. Muriel González Athenas, Dr. Falko Schnicke and Prof. Dr. Maren Lorenz, muriel.gonzalez@rub.de schnicke@ghil.ac.uk maren.lorenz@rub.de
- July 6-9, 2017, British Society for the History of Science annual meeting, York, UK
Details at: <http://www.bsbs.org.uk/conferences/annual-conference>
- July 16-21, 2017, International Society for the History, Philosophy, and Social Studies of Biology (ISHPSSB) 2017 Meeting, São Paulo, Brazil.
Details at: <http://www.ishpssb.org/announcements/148-ishpssb-2017-meeting>
- July 23-29, 2017, 25th International Congress of History of Science, and Technology (ICHST), Rio de Janeiro, Brazil.
Details at: <http://www.ichst2017.sbhc.org.br/site/capa>
- August 24-26, 2017, European Workshops on Philosophical Practice, Mazuri, Poland
Details at: <http://mazury2017.pl/>
- August 29-2, 2017, 11th International Conference on the History of Chemistry (11th ICHC) Trondheim, Norway
Details at: <http://www.ntnu.edu/11ichc>
- September 6-9, 2017, European Philosophy of Science Association (EPSA17), UK, University of Exeter.
Details: <http://www.philsci.eu/epsa17>
- September 7-10, 2017, 8th Tensions of Europe Conference Athens, Greece.
Details at: <http://8toe2017.phs.uoa.gr/>
- September 14-15, 2017, Joseph Banks: Science, Culture and Exploration, London
Details at: <http://www.rmg.co.uk/work-services/what-we-do/learning-partnerships/joseph-banks-science-culture-and-remaking-indo-pacific-world>