

HPS&ST Note

December 2015

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Introduction

This HPS&ST monthly note is sent direct to about 6,600 individuals who directly or indirectly have an interest in the connections of history and philosophy of science with theoretical, curricular and pedagogical issues in science teaching, and/or interests in the promotion of more engaging and effective teaching of the history and philosophy of science. The note is sent on to different HPS lists and to science teaching lists.

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 HPS&ST concerns.

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.

‘The Contribution of HPS to Science Literacy and Policy’, Boston University, February 26-27, 2016.

The two-day conference and workshop is part funded by the US NSF and sponsored jointly by Boston University Centre for History and Philosophy of Science and Boston University School of Education.

The programme includes:

- Fostering Scientific Literacy through the Development of Epistemic Practices
Gregory Kelly College of Education, Pennsylvania State University
- What Do We Need to Know about Embryos, and Why it Really Matters?

Inter-Divisional Teaching Commission

International Union of the History and Philosophy of Science

www.idtc-ihps.com

Jane Maienschein, Center for Biology & Society, Arizona State U. and Marine Biological Lab

- Teaching Ecological Citizenship and Sustainable Living in the Social Studies Classroom

Jay Shuttleworth College of Education, Long Island University, Brooklyn

- How I Learned to Stop Worrying about Making Little Scientists & Love Persuasion: K-12 Science Literacy

Fouad Abd-El-Khalick College of Education, University of Illinois at Urbana-Champaign

- Engaging Good Climate Citizens

Andrew Light Philosophy and Public Policy, George Mason University and World Resources Institute

- Teachers as Moral Agents? The Challenges of Teaching about and for the Environment

Li-Ching Ho School of Education, University of Wisconsin-Madison

- Philosophical Implications of Understanding Citizens as Science Consumers

Rachel A. Ankeny School of Humanities, University of Adelaide

- Engagement, the Emerging Frontier: Bridging the Divides between Science, Policy, & Citizenship

Mahmud Farooque School for the Future of Innovation in Society, Arizona State University

Further information from: Peter Garik garik@bu.edu

Division of the History of Science & Technology (DHST) 25th International Congress, Rio de Janeiro, Brazil, 23 to 29 July 2017.

The 25th ICHST will be held in the Praia Vermelha campus of the Federal University of Rio de Janeiro (UFRJ), located in one of the most beautiful and touristic regions in the city, served by various forms of public transport and close to important clusters of hotels, beaches, and numerous artistic and cultural attractions.

More information is available at: <http://www.ichst2017.sbhc.org.br/>



The theme of the 25th Congress is “Science, Technology and Medicine between the Global and the Local”. This theme is construed broadly, and studies of the History of Science, Technology and Medicine at the global, national and local levels, across all periods, and from a variety of methodological and historiographical approaches are encouraged.

Deadline for submission of symposia proposals is 30 April 2016.
Deadline for submission of stand-alone papers 30 November 2016

The Inter-Divisional Teaching Commission (IDTC) of the DHST/DLMPS will stage a education-related symposium during the congress. This might consist of 3, 5, 7 or more papers depending on number and quality of submissions received by 15 April 2016, thus allowing time for selection by IDTC and final submission to Congress Organising Committee by due date of 30 April.

Proposals of 1,000 words, including title, author's name, institution and email should be sent as a Word document to the local IDTC contact person:

Andréia Guerra
Centro Federal de Educação Tecnológica do Rio de Janeiro - CEFET-RJ
Teknê Group
Departamento de Pesquisa
BRAZIL
aguerra@tekne.pro.br

Education symposium papers ideally should connect to the Congress theme (broadly construed) and can deal with the history of science education, the utilisation of history of science in education, curriculum debates about appropriate school and university science programmes, the impact of textbooks on teaching, the role of HPS in teacher education, and other topics. All symposium presenters need to be registered for the congress.

In addition to the symposium, the IDTC will arrange a congress session on 'Engaging and Innovative Teaching in the History of Science'. More details on this will follow.

Ernst Mach Centenary Conference 2016, University of Vienna, June 16-18, 2016.

Ernst Mach (1838-1916) – Life, Work, and Influence: An International Conference, University of Vienna and Austrian Academy of Sciences. The Call for Papers and other information is available at:

<http://www.univie.ac.at/ivc/MachCentenaryED.pdf>

Questions can be directed to the local organizer Friedrich Stadler:
Friedrich.Stadler@univie.ac.at

Mach's reputation as a preeminent physicist, historian and philosopher needs no elaboration. Unfortunately Mach's sterling and insightful work as an educator, both a theorist and practitioner, is not as well-known in the Anglo-American community as it deserves to be. He was one of the foremost contributors to the Enlightenment Tradition in education, and more specifically in science education; however if known at all, his work is often dismissed in the more general trite dismissal of all things positivist.

Conference papers will be in the following sections:

1. Ernst Mach's Life and Work in Context

2. Mach as a Physicist and the Physicists of his Time: Planck, Boltzmann, Einstein ...
3. Mach, Biology, and the Life Sciences: Darwinism, Lamarckism, Theory of Evolution
4. Mach and Physiology, Psychology, Psychoanalysis
5. Mach and the Medical Sciences, esp. the Vienna School of Medicine
6. Mach and the History and Philosophy of Science (HPS, Historical Epistemology)
7. Mach, Didactics, and Pedagogy: Textbooks, Genetic Theory of Learning
8. Mach and „Austrian Philosophy“: F. Brentano, E. Husserl, L. Wittgenstein, K. Popper
9. Mach and the Vienna Circle/Ernst Mach Society, esp. M. Schlick (1882-1936).
10. Mach and Pragmatism: Ch.S. Peirce, W. James, J. Dewey and The Monist
11. Mach, the Social Sciences, and Politics (W.I. Lenin, F. Adler and Austro-Marxism)
12. Mach, Literature, Music, and the Arts (Impressionism, „Jung Wien“, R. Musil etc.)
13. Open Section: Topics not covered above

Special Symposium: “E. Mach, P. Duhem and French Philosophy of Science. On the Occasion of the Centenary of Pierre Duhem’s Death (1861-1916)”

1st European IHPST Regional Conference, August 22-25, 2016, Europa-Universität Flensburg, Germany

Chairs- Peter Heering & Claus Michelsen (ihpst16@uni-flensburg.de)

http://ihpst.net/content.aspx?page_id=22&club_id=360747&module_id=189361

3rd Asian IHPST Regional Conference, December 15-18, 2016, Pusan National University, South Korea.

Chairs: Hae-Ae Seo (Biology Education, PNU) & Youngmin Kim (Physics Education, PNU)

Conference Theme: **Inquiry in Science and in Science Education: Historical, Philosophical and Pedagogical Dimensions**

This conference follows the previous very successful Asian regional meetings in Seoul (2012) and Taipei (2014).

Pusan National University is in Busan, South Korea’s second largest city, located on the southern coast of the country with easy high-speed train and air connection to Seoul. The Conference will open on Thursday evening with a plenary lecture and welcoming reception in the evening and on Friday and Saturday for full day presentations. The Conference will close on Sunday at lunch time and a half-day excursion will be offered in the afternoon. A pre-conference research workshop on HPS and Education themes and methodologies will be organized for graduate students and junior scholars.

Proposals for individual papers (1,000 words) and symposia are due by: **June 10, 2016.**

Inquiries to: Hae-Ae Seo (haseo@pusan.ac.kr)

The 7th International Conference of the European Society for the History of Science (ESHS) will be held in Prague, 22 - 24 September, 2016.

The Conference website is available at: <http://www.7eshs2016.cz>

There you will find the presentation of the Conference as well as the various deadlines for registration and submission of abstracts (<http://www.7eshs2016.cz/callforpapers/>).

The submission of stand-alone papers and symposia is now possible at the following <http://7eshs2016.guarant.eu/abstracts/>

2015 HSS Conference: Education-related presentations.

Science Pedagogy and Education

Chair: Emily Redman (University of Massachusetts Amherst, USA)

“The Elephant in the Room: Presence, Performance and Pedagogy in Nineteenth-Century Object Lessons,” Melanie Keene (University of Cambridge, UK)

“Sir Oliver Lodge: Physicist and Public Educationist,” Shawn Bullock (Simon Fraser University, Canada)

“Animated Mathematics: Ludwig Muench’s Experimental Cartoons,” Anja Sattelmacher (Max Planck Institute for the History of Science, Germany)

“Mathematics Education under the Nazis,” Samuel Huneke (Stanford University, USA)

“The Teaching of Biological Evolution in Mexico,” Erica Torrens (National Autonomous University of Mexico, Mexico)

Doing Science Education “Right”

Chair and Commentator: Adam Shapiro (Unaffiliated, USA)

Organizer: Dana Freiburger (University of Wisconsin–Madison, USA)

Sponsored by the Committee on Education

“‘If well conducted’ - Teaching Science to Survive in Early Nineteenth-Century American Catholic Colleges,” Dana Freiburger (University of Wisconsin–Madison, USA)

“Science Education as Civic Education: Clear Thinking and the Problem of Transfer, 1900-1945,” Michelle Hoffman (American University of Central Asia, Kyrgyzstan; Bard College, USA)

“‘The humanism inherent to us’: Reforming Science Education in Colombian Schools, 1975-1985,” Nicolas Sanchez-Guerrero (University of Toronto, Canada; Colegio Alemán Alexander von Humboldt, Mexico)

Roundtable: Gender in History of Science Pedagogy

Chair: Karen Rader (Virginia Commonwealth University, USA)

Organizer: Xan Chacko (University of California, Davis, USA)

Participants:

Maura Flannery (St. John’s University, USA)

Tina Gianquitto (Colorado School of Mines, USA)

Bridget Gurtler (Bryn Mawr College, USA)

Erika Milam (Princeton University, USA)

Donald Opitz (DePaul University, USA)

Sarah Richardson (Harvard University, USA)

Debbie Weinstein (Brown University, USA)

Recent HPS&ST Research Articles

Canadian Journal of Science, Mathematics and Technology Education (Vol. 15, N. 3, Sep 2015)
Special Issue: Rethinking Education for Citizenship
Guest Editors: Hagop A. Yacoubiana and Jesse Bazzulb
<http://www.tandfonline.com/toc/ucjs20/15/3>

The Science Museum Group Journal (N. 4, Autumn 2015)
<http://journal.sciencemuseum.org.uk/issues/autumn-2015/>

Isis (Vol. 106, N. 2, Jun 2015)
Focus on: The History of Humanities and the History of Science
Guest editors: Rens Bod and Julia Kursell
<http://www.jstor.org/stable/10.1086/681972>

The American Biology Teacher (Vol. 77, N.7, Sep 2015)
Featured Articles: Nature of Science
<http://www.bioone.org/toc/ambt/77/7>

The European Physical Journal Special Topics (Vol. 224, N. 10, Sep 2015)
Topical Collection: The Early Solvay Councils and the Advent of the Quantum Era.
Editors: Franklin Lambert, Frits Berends and Michael Eckert

Pinheiro, J. (2015). Interview with Stathis Psillos. *Kayros - Journal of Philosophy & Science*, 14, 55-71. Retrieved at:
<http://kairos.fc.ul.pt/nr%2014/Interview%20with%20Stathis%20Psillos.pdf>

Morse, R.A. (2015). A Course Connecting Astronomy to Art, History, and Literature. *The Physics Teacher*, 53, 392-393. doi:<http://dx.doi.org/10.1119/1.4931002>

Raveendran, A., Chunawala, S. (2015). Values in Science: Making Sense of Biology Doctoral Students' Critical Examination of a Deterministic Claim in a Media Article, *Science Education*, 99(4), 669-695. doi: 10.1002/sce.21174

Jenkins, B. (2015). Neptunism and Transformism: Robert Jameson and other Evolutionary Theorists in Early Nineteenth-Century Scotland. *Journal of the History of Biology*, 1-31. doi: 10.1007/s10739-015-9425-4 online first

Akerson V. L., Pongsanon, K., Rogers, M. P., Carter, I., Galindo, E. (2015). Exploring the Use of Lesson Study to Develop Elementary Preservice Teachers' Pedagogical Content Knowledge for Teaching Nature of Science, *International Journal of Science and Mathematics Education*, 1-20. doi: 10.1007/s10763-015-9690-x online first

Govender, N. (2015). Physical Sciences Preservice Teachers' Religious and Scientific Views Regarding the Origin of the Universe and Life. *International Journal of Science and Mathematics Education*, 1-20. doi: 10.1007/s10763-015-9695-5 online first

Park, J., Song, J., Abrahams, I. (2015). Unintended Learning in Primary School Practical Science Lessons from Polanyi's Perspective of Intellectual Passion. *Science & Education*, 1-18. doi: 10.1007/s11191-015-9788-0 online first

- Archila, P. A. (2015). Using History and Philosophy of Science to Promote Students' Argumentation: A Teaching–Learning Sequence Based on the Discovery of Oxygen. *Science & Education*, 1-26. doi:10.1007/s11191-015-9786-2 online first
- Bagdonas, A., Silva, C. C. (2015). Enhancing Teachers' Awareness About Relations Between Science and Religion: The Debate Between Steady State and Big Bang Theories, *Science & Education*, 1-27. doi: 10.1007/s11191-015-9781-7 online first
- Sandoval, W., Redman, E. H. (2015). The Contextual Nature of Scientists' Views of Theories, Experimentation, and Their Coordination. *Science & Education*, 1-24. doi: 10.1007/s11191-015-9787-1 online first
- Brading, K. (2015). Émilie Du Châtelet and the foundations of physical science [preprint]. Retrieved at: <http://philsci-archive.pitt.edu/11610/>
- Yacoubiana, H. A. (2015). A Framework for Guiding Future Citizens to Think Critically About Nature of Science and Socioscientific Issues. *Canadian Journal of Science, Mathematics and Technology Education*, 248-260. doi: 10.1080/14926156.2015.1051671
- Wolfensberger, B., Canella, C. (2015) Cooperative Learning about Nature of Science with a Case from the History of Science. *International Journal of Environmental and Science Education*, 10(6), 865-889. doi: 10.12973/ijese.2015.281a
- Zuidervaart, H. J., Rijks, M. (2015). 'Most rare workmen': optical practitioners in early seventeenth-century Delft, *The British Journal for the History of Science*, 48(1), 53-85. doi: 10.1017/S0007087414000181
- Babich, B. (2015). Calling Science Pseudoscience: Fleck's Archaeologies of Fact and Latour's 'Biography of an Investigation' in AIDS Denialism and Homeopathy. *International Studies in the Philosophy of Science*, 29(1), 1-39. doi: 10.1080/02698595.2015.1071550
- Wray, K. B. (2015). Pessimistic Inductions: Four Varieties. *International Studies in the Philosophy of Science*, 29(1), 61-73. doi: 10.1080/02698595.2015.1071551
- Wayne, A. (2015). Causal Relations and Explanatory Strategies in Physics. *International Studies in the Philosophy of Science*, 29(1), 75-89. doi: 10.1080/02698595.2015.1071552
- Llored, J.-P., Sarrade, S. (2015). Connecting the philosophy of chemistry, green chemistry, and moral philosophy. *Foundations of Chemistry*, 1-28. Doi: 10.1007/s10698-015-9242-z online first
- Müürsepp, P. (2015). Chemistry as a practical science: Edward Caldin revisited. *Foundations of Chemistry*, 1-11. Doi: 10.1007/s10698-015-9244-x online first

Wolfensberger, B., Canella, C. (2015). Cooperative Learning about Nature of Science with a Case from the History of Science. *International Journal of Environmental and Science Education*, 10(6), 865-889. doi: 10.12973/ijese.2015.281a

Recent HPS&ST Related Books

Harding, S. (2015). *Objectivity and Diversity: Another Logic of Scientific Research*. London: University of Chicago Press

“Worries about scientific objectivity seem never-ending. Social critics and philosophers of science have argued that invocations of objectivity are often little more than attempts to boost the status of a claim, while calls for value neutrality may be used to suppress otherwise valid dissenting positions. Objectivity is used sometimes to advance democratic agendas, at other times to block them; sometimes for increasing the growth of knowledge, at others to resist it.

“Sandra Harding is not ready to throw out objectivity quite yet. For all of its problems, she contends that objectivity is too powerful a concept simply to abandon. In *Objectivity and Diversity*, Harding calls for a science that is both more epistemically adequate and socially just, a science that would ask: How are the lives of the most economically and politically vulnerable groups affected by a particular piece of research? Do they have a say in whether and how the research is done? Should empirically reliable systems of indigenous knowledge count as "real science"? Ultimately, Harding argues for a shift from the ideal of a neutral, disinterested science to one that prizes fairness and responsibility.” (From the Publisher)

More information at: <http://press.uchicago.edu/ucp/books/book/chicago/O/bo19804521.html>

Parshall, K. H., Walton, M.T., Moran, B.T. (2015). *Bridging Traditions: Alchemy, Chemistry, and Paracelsian Practices in the Early Modern Era*. Kirksville, MO: Truman State University Press.

“This collection of essays is a fitting tribute to Allen Debus’s radically contrarian and visionary work. On topics ranging from Paracelsian medicine in Spain to the enigma of John Dee, the essays demonstrate that Debus’s legacy continues, though shaped and reshaped by new perspectives. Just as Debus confounded the traditional narrative of the Scientific Revolution by following the trail of alchemy and magic to discover a different Scientific Revolution, *Bridging Traditions* probes deeply into issues once snubbed as suitable only for the trash bin of history. An engaging and thought-provoking volume, *Bridging Traditions* will be important reading for anyone interested in early modern science and medicine” (by William Eamon at the publisher page)

More information at: <https://tsup.truman.edu/item.asp?itemId=505>

Rouse, J. (2015). *Articulating the World: Conceptual Understanding And The Scientific Image*. London: University of Chicago Press

“Naturalism as a guiding philosophy for modern science both disavows any appeal to the supernatural or anything else transcendent to nature, and repudiates any philosophical or religious authority over the workings and conclusions of the sciences. A longstanding paradox within naturalism, however, has been the status of scientific knowledge itself, which seems, at first glance, to be something that transcends and is therefore impossible to conceptualize within scientific naturalism itself.

In *Articulating the World*, Joseph Rouse argues that the most pressing challenge for advocates of naturalism today is precisely this: to understand how to make sense of a scientific conception of nature as itself part of nature, scientifically understood. Drawing upon recent developments in evolutionary biology and the philosophy of science, Rouse defends naturalism in response to this challenge by revising both how we understand our scientific conception of the world and how we situate ourselves within it.”

More information at: <http://press.uchicago.edu/ucp/books/book/chicago/A/bo21263435.html>

Kargon, R., Fiss, K., Low, M., Molella, A. (2015). *World's Fairs on the Eve of War: Science, Technology, and Modernity, 1937–1942*. Pittsburgh, MA: University of Pittsburgh Press

“Since the first world’s fair in London in 1851, at the dawn of the era of industrialization, international expositions served as ideal platforms for rival nations to showcase their advancements in design, architecture, science and technology, industry, and politics. Before the outbreak of World War II, countries competing for leadership on the world stage waged a different kind of war—with cultural achievements and propaganda—appealing to their own national strengths and versions of modernity in the struggle for power. (...) This coauthored work considers representations of science and technology at world’s fairs as influential cultural forces and at a critical moment in history, when tensions and ideological divisions between political regimes would soon lead to war. (From the publisher)

More information at: <http://www.upress.pitt.edu/BookDetails.aspx?bookId=36587>

Baldwin, M. (2015). *Making "Nature": The History of a Scientific Journal*. Chicago: University of Chicago Press.

“We often think of scientific journals as receptacles for knowledge created elsewhere. But Baldwin shows that *Nature*, one of the premier journals in the world, was not a passive vessel, but rather a site where the rules of science themselves were debated and developed. Its pages were where scientists defined what it meant to do science: professionalization, peer review, science and internationalism, and the role of science in the public sphere. *Making "Nature"* presents a powerful argument for the critical role of publishing in the creation of modern science.” (Matthew Stanley, New York University)

More information at: <http://press.uchicago.edu/ucp/books/book/chicago/M/bo20298849.html>

Numbers, R. L., Kampourakis, K. (Eds.) (2015). *Newton’s Apple and Other Myths about Science*. Cambridge, MA: Harvard University Press

“A falling apple inspired Isaac Newton’s insight into the law of gravity—or so the story goes. Is it true? Perhaps not. But the more intriguing question is why such stories endure as explanations of how science happens. *Newton’s Apple and Other Myths about Science* brushes away popular misconceptions to provide a clearer picture of great scientific breakthroughs from ancient times to the present.

“Among the myths refuted in this volume is the idea that no science was done in the Dark Ages, that alchemy and astrology were purely superstitious pursuits, that fear of public reaction alone led Darwin to delay publishing his theory of evolution, and that Gregor Mendel was far ahead of his time as a pioneer of genetics. Several twentieth-century myths about particle physics, Einstein’s theory of relativity, and more are discredited here as well. In

addition, a number of broad generalizations about science go under the microscope of history: the notion that religion impeded science, that scientists typically adhere to a codified “scientific method,” and that a bright line can be drawn between legitimate science and pseudoscience.” (From the publisher)

More information at: <http://www.hup.harvard.edu/catalog.php?isbn=9780674967984>

Tunncliffe, S. D., Scheersoi, A. (Eds.) (2015). *Natural History Dioramas: History, Construction and Educational Role*. Netherlands: Springer.

“This book brings together in a unique perspective aspects of natural history dioramas, their history, construction and rationale, interpretation and educational importance, from a number of different countries, from the west coast of the USA, across Europe to China. It describes the journey of dioramas from their inception through development to visions of their future. A complementary journey is that of visitors and their individual sense making and construction of their understanding from their own starting points, often interacting with others (e.g. teachers, peers, parents) as well as media (e.g. labels). Dioramas have been, hitherto, a rather neglected area of museum exhibits but a renaissance is beginning for them and their educational importance in contributing to people’s understanding of the natural world. This volume showcases how dioramas can reach a wide audience and increase access to biological knowledge.” (From the publisher)

More information at: <http://www.springer.com/us/book/9789401794954>

Bod, R. (2015). *A New History of the Humanities: The Search for Principles and Patterns from Antiquity to the Present*. Oxford: Oxford University Press

“Many histories of science have been written, but A New History of the Humanities offers the first overarching history of the humanities from Antiquity to the present.

Its central theme is the way in which scholars throughout the ages and in virtually all civilizations have sought to identify patterns in texts, art, music, languages, literature, and the past. What rules can we apply if we wish to determine whether a tale about the past is trustworthy? By what criteria are we to distinguish consonant from dissonant musical intervals? What rules jointly describe all possible grammatical sentences in a language? How can modern digital methods enhance pattern-seeking in the humanities? Rens Bod contends that the hallowed opposition between the sciences (mathematical, experimental, dominated by universal laws) and the humanities (allegedly concerned with unique events and hermeneutic methods) is a mistake born of a myopic failure to appreciate the pattern-seeking that lies at the heart of this inquiry.” (From the Publisher)

More information at: <https://global.oup.com/academic/product/a-new-history-of-the-humanities-9780199665211?cc=au&lang=en&>

Rublack, U. (2015). *The Astronomer and the Witch: Johannes Kepler's Fight for his Mother*. Oxford University Press

“This book takes you right to the heart of life in the seventeenth century, with all its sense of intellectual possibility, its dreams and its fears. Rublack tells a shocking story. How was it possible for the mother of the famous scientist Kepler to be accused of witchcraft, and why did she come to trial? In gripping prose, Rublack shows how the case destroyed those involved in it. She makes us understand how witchcraft could be credible and why people feared it so much. She makes us understand the psychological wellsprings of Keplers work.

And she presents a whole new account of scientific thinking and its relationship to natural knowledge at the dawn of a new era. The most compelling book I have read for a long time. (By Lyndal Roper, University of Oxford)

More information at: <http://ukcatalogue.oup.com/product/9780198736776.do> and at: <http://tinyurl.com/pbaw6j2>

Love, D. K. (2015). *Kepler and the Universe: How One Man Revolutionized Astronomy*. Amherst, New York, NY: Prometheus Books

“Love’s book goes far beyond the well-known facts about Kepler’s life and works, describing, for example, his groundbreaking work on the optics of the eye and writing what was, perhaps, the first relatively modern science fiction work, *Somnium* (The Dream). One of the best aspects of this book is how the author puts Kepler’s life and work in the context of the developments in astronomy across Europe and his interactions with other astronomers of the time. It would be difficult to find as authoritative a book on Kepler as this, and it is one I highly recommend.” (By Ian Morison, Gresham College)

More information at: <http://tinyurl.com/o5smbwv> For a commentary to the title: <http://tinyurl.com/p6ws7rs>

Berkowitz, C. (2015). *Charles Bell and the Anatomy of Reform*. London: University of Chicago Press

“Sir Charles Bell (1774–1842) was a medical reformer in a great age of reform—an occasional and reluctant vivisectionist, a theistic popularizer of natural science, a Fellow of the Royal Society, a surgeon, an artist, and a teacher
(...)

In *Charles Bell and the Anatomy of Reform*, Carin Berkowitz takes readers into Bell’s world, helping us understand the life of medicine before the modern separation of classroom, laboratory, and clinic. Through Bell’s story, we witness the age when modern medical science, with its practical universities, set curricula, and medical professionals, was born.” (From the publisher)

More information at: <http://tinyurl.com/psemkfd>

Hopwood, N. (2015). *Haeckel's Embryos: Images, Evolution, and Fraud*. London: University of Chicago Press

"Through eighteen chapters of beautifully illustrated text, Hopwood lays out the unfolding landscape of scientific, social, and political factors that led Haeckel to create his images for public consumption, as well as the rounds of debates that have dogged these images since their first appearance in print. . . . Hopwood does a good job of giving his reader a glimpse into the manufacture of Haeckel’s images, and in so doing, gives a fresh perspective on the controversy surrounding Haeckel’s famous embryos.” (Kate MacCord, Arizona State University)

More information at: <http://tinyurl.com/otrltmy>

Redniss, L. (2015). *Thunder & Lightning: Weather Past, Present, Future*. New York, NY: Penguin Random House

“This is a terrific celebration of weather as an elemental force in not only our daily lives, but in our global stories, myths, history, and cultural identities. It is part powerful graphic novel

(with impeccable color sense) and part meteorological text. The author divides the book into chapters such as Cold, Rain, Sky, Heat, Dominion, Profit, and Forecasting, and within each chapter is an array of anecdotes and factoids, vest-pocket biographies, and elegant place descriptions.” (From Kirkus Review)

“Redniss produced each element of *Thunder & Lightning*: the text, the artwork, the covers, and every page in between. She created many of the images using the antiquated printmaking technique copper plate photogravure etching. She even designed the book’s typeface. The result is a book unlike any other: a spellbinding combination of storytelling, art, and science” (From the Publisher)

More information at: <http://tinyurl.com/pel3q79>

Whitmer, K. J. (2015). *The Halle Orphanage as Scientific Community: Observation, Eclecticism, and Pietism in the Early Enlightenment*. London: University of Chicago Press.

“[This book] calls into question a long-standing tendency to view German Pietists as anti-science and anti-Enlightenment, arguing that these tendencies have drawn attention away from what was actually going on inside the orphanage. Whitmer shows how the orphanage’s identity as a scientific community hinged on its promotion of philosophical eclecticism as a tool for assimilating perspectives and observations and working to perfect one’s abilities to observe methodically. Because of the link between eclecticism and observation, Whitmer reveals, those teaching and training in Halle’s Orphanage contributed to the transformation of scientific observation and its related activities in this period.” (From the Publisher)

"Whitmer's new book offers a history of science set in the Halle Orphanage, a building that was founded in the middle of the 1690s in the Prussian city of Halle by a group of German Lutherans known as Pietists. . . . As the fascinating story unfolds, Whitmer's account meaningfully contributes to histories of observation, material culture, models and modeling, and education." (By Carla Nappi)

More information at: <http://tinyurl.com/p2y7znt>

Chorafas, D. N. (2015). *Science and Technology*. Cham: Springer International Publishing

“The aim of this book is to explore science and technology from the viewpoint of creating new knowledge, as opposed to the reinterpretation of existing knowledge in ever greater but uncertain detail. Scientists and technologists make progress by distinguishing between what they regard as meaningful and what they consider as secondary or unimportant. The meaningful is dynamic; typically, the less important is static. Science and technology have made a major contribution to the culture and to the standard of living of our society.(...)

Using practical examples and case studies, this book documents the correlations existing between science and technology, and elucidates these correlations with practical applications ranging from real-life situations, from R&D to energy production. As it is a salient problem, and a most challenging one to our society, power production has been chosen as a major case study. The holistic approach to science and technology followed by this text enhances the ability to deliver practical results. This book is intended for students and researchers of science, technology and mathematical analysis, while also providing a valuable reference book for professionals. Its subject is one of the most debated problems of mankind.” (From the publisher)

More information at: <http://www.springer.com/gp/book/9783319091884>

de Mieroop, M. V. (2015) *Philosophy before the Greeks: The Pursuit of Truth in Ancient Babylonia*. Princeton, NJ: Princeton University Press.

“In *Philosophy before the Greeks*, Marc Van De Mieroop, an acclaimed historian of the ancient Near East, presents a groundbreaking argument that, for three millennia before the Greeks, one Near Eastern people had a rich and sophisticated tradition of philosophy fully worthy of the name. (...)

Van De Mieroop uncovers Babylonian approaches to knowledge in three areas: the study of language, which in its analysis of the written word formed the basis of all logic; the art of divination, which interpreted communications between gods and humans; and the rules of law, which confirmed that royal justice was founded on truth.

The result is an innovative intellectual history of the ancient Near Eastern world during the many centuries in which Babylonian philosophers inspired scholars throughout the region—until the first millennium BC, when the breakdown of this cosmopolitan system enabled others, including the Greeks, to develop alternative methods of philosophical reasoning.” (From the publisher)

More information at: <http://tinyurl.com/ppfhlx2>

Lin, J.-L., Yan, H.-S. (2015). *Decoding the Mechanisms of Antikythera Astronomical Device*. Berlin: Springer-Verlag

“This book presents a systematic design methodology for decoding the interior structure of the Antikythera mechanism, an astronomical device from ancient Greece. The historical background, surviving evidence and reconstructions of the mechanism are introduced, and the historical development of astronomical achievements and various astronomical instruments are investigated. Pursuing an approach based on the conceptual design of modern mechanisms and bearing in mind the standards of science and technology at the time, all feasible designs of the six lost/incomplete/unclear subsystems are synthesized as illustrated examples, and 48 feasible designs of the complete interior structure are presented.

This approach provides not only a logical tool for applying modern mechanical engineering knowledge to the reconstruction of the Antikythera mechanism, but also an innovative research direction for identifying the original structures of the mechanism in the future. In short, the book offers valuable new insights for all readers who are interested in the Antikythera mechanism.” (From the publisher)

More information at: <http://tinyurl.com/q3928oy>

Arnaud, S. (2015). *On Hysteria: The Invention of A Medical Category Between 1670 and 1820*. London: University of Chicago Press

“In this profoundly original and interdisciplinary work, Arnaud provides us with a major study on the dynamics on science, medicine, and culture in the eighteenth century. Her analysis complements the recent pioneering works by Anne Vila, Elizabeth A. Williams, and Jan Goldstein, among others, while all along offering the most extensive treatment of the early hysteria phenomena since the classic work by Ilza Veith. Her study is essential reading for anyone interested in this quintessential but enigmatic malady—one that so defines long-standing perceptions of gender, bourgeois culture, and modernity itself.” (Sean Quinlan)

More information at: <http://press.uchicago.edu/ucp/books/book/chicago/O/bo20580600>

Calaprice, A., Kennefick, D., Schulmann, R. (2015). *An Einstein Encyclopedia*. Princeton, NJ: Princeton University Press

“A fascinating and exceptionally readable reference volume for anyone interested in Einstein as a personality, scientist, political figure, or humanitarian. The authors make clear how we have come to know what we know about Albert Einstein. They also place him within networks of biographical profiles of family members, friends, romantic interests, teachers, collaborators, and colleagues, discrediting myths of Einstein as a solitary man. This is a valuable resource by three accomplished Einstein scholars.” (by Mary Jo Nye)

More information at: <http://tinyurl.com/oxweex5>

Canales, J. (2015). *The Physicist and the Philosopher: Einstein, Bergson, and the Debate That Changed Our Understanding of Time*. Princeton, NJ: Princeton University Press

“On April 6, 1922, in Paris, Albert Einstein and Henri Bergson publicly debated the nature of time. Einstein considered Bergson’s theory of time to be a soft, psychological notion, irreconcilable with the quantitative realities of physics. Bergson, who gained fame as a philosopher by arguing that time should not be understood exclusively through the lens of science, criticized Einstein’s theory of time for being a metaphysics grafted on to science, one that ignored the intuitive aspects of time. *The Physicist and the Philosopher* tells the remarkable story of how this explosive debate transformed our understanding of time and drove a rift between science and the humanities that persists today.

“Jimena Canales introduces readers to the revolutionary ideas of Einstein and Bergson, describes how they dramatically collided in Paris, and traces how this clash of worldviews reverberated across the twentieth century. She shows how it provoked responses from figures such as Bertrand Russell and Martin Heidegger, and carried repercussions for American pragmatism, logical positivism, phenomenology, and quantum mechanics. Canales explains how the new technologies of the period—such as wristwatches, radio, and film—helped to shape people’s conceptions of time and further polarized the public debate. She also discusses how Bergson and Einstein, toward the end of their lives, each reflected on his rival’s legacy—Bergson during the Nazi occupation of Paris and Einstein in the context of the first hydrogen bomb explosion. *The Physicist and the Philosopher* reveals how scientific truth was placed on trial in a divided century marked by a new sense of time.” (From the Publisher)

More information at: <http://press.princeton.edu/titles/10445.html>

Campos, L. A. (2015). *Radium and the Secret of Life*. Chicago: Chicago University Press

Before the hydrogen bomb indelibly associated radioactivity with death, many chemists, physicians, botanists, and geneticists believed that radium might hold the secret to life. Physicists and chemists early on described the wondrous new element in lifelike terms such as "decay" and "half-life," and made frequent references to the "natural selection" and "evolution" of the elements. Meanwhile, biologists of the period used radium in experiments aimed at elucidating some of the most basic phenomena of life, including metabolism and mutation.

From the creation of half-living microbes in the test tube to charting the earliest histories of genetic engineering, *Radium and the Secret of Life* highlights previously unknown interconnections between the history of the early radioactive sciences and the sciences of heredity. Equating the transmutation of radium with the biological transmutation of living species, biologists saw in metabolism and mutation properties that reminded them of the new

element. These initially provocative metaphoric links between radium and life proved remarkably productive and ultimately led to key biological insights into the origin of life, the nature of heredity, and the structure of the gene. Radium and the Secret of Life recovers a forgotten history of the connections (From the Publisher)

More information at: <http://press.uchicago.edu/ucp/books/book/chicago/R/bo19804483.html>

Coming Conferences

- December 15-22, 2015, 20th European School Network, History of Science and Technology meeting, Toledo, Spain
Details at: <http://www.epmagazine.org/>
Inquiries from: Angelo Rapsiarda (ganges@alice.it)
- February 26-27, 2016, 'The Contribution of HPS to Science Literacy and Policy', Boston University Centre for History and Philosophy of Science, and Boston University School of Education.
Details from: Peter Garik garik@bu.edu
- February 26-27, 2016, Meeting of the South Carolina Society for Philosophy (Biennial Joint Meeting with the North Carolina Philosophical Society)
Details at: <http://www.southcarolinaphilosophy.org/>
- March 11-12, 2016, University of Washington Graduate Student Conference: Theme: Values in Science, Seattle, WA, USA.
Details at: <http://tinyurl.com/qj5dh63>
- March 17-19, 2016, 16th Annual Meeting of the Southern Association for the History of Medicine and Science (SAHMS), Las Vegas, NV, USA.
Details at: <http://www.sahms.net/sahms-2016-las-vegas.html>
- March 31-2, 2016, 9th conference of the Munich-Sydney-Tilburg (MuST) conference series, Munich, Germany
Details at: <http://www.must2016.philosophie.uni-muenchen.de/index.html>
- April 6-10, 2016, Third Biennial Early-Career Conference for Historians of the Physical Sciences, Annapolis, MD, USA.
Details at: <http://tinyurl.com/o7hn765>
- April 7-9, 2016, British Society for Literature and Science Conference, University of Birmingham, England
Details from: Will Tattersdill, w.j.tattersdill@bham.ac.uk
- April 14-17, 2016, NARST annual conference, Baltimore, MD, USA.
Details at: <https://www.narst.org/annualconference/2016conference.cfm>
- April 21-23, 2016 Nordic Network for Philosophy of Science Fourth Annual Meeting, Tartu, Estonia.
Details at: <https://nnpscience.wordpress.com/meetings/tartu-2016/>
- May 18-29, 2016, Models and Simulations 7 Conference (MS7), Barcelona, Spain.
Details at: <http://www.ub.edu/ms7/>
- May 19-26, 2016, 3rd Annual Meeting of the Consortium for Socially Relevant Philosophy of/in Science and Engineering (SRPoiSE), Richardson, Texas, USA
Details at: <http://www.utdallas.edu/c4v/cfp-srpoise-vmst-2016/>
- May 19-26, 2016, 6th Annual Values in Medicine, Science, and Technology Conference, Richardson, Texas, USA
Details at: <http://www.utdallas.edu/c4v/cfp-srpoise-vmst-2016/>
- May 26-28, 2016, 23rd Symposium on Chemical and Science Education, Dortmund, Germany
Details at: <http://www.chemiedidaktik.uni-bremen.de/symp2016/>

- May 28-30, 2016, Annual Conference of the Canadian Society for the History and Philosophy of Science (CSHPS), Calgary, Canada
Details at: <http://www.yorku.ca/cshps1/meeting.html>
- May 29-31, 2016, Annual Meeting of the Canadian Society for History and Philosophy of Mathematics (CSHPM), Calgary, Canada
Details at: <http://www.cshpm.org/meeting/>
- June 16-18, 2016, Ernst Mach Centenary Conference, University of Vienna, Austria.
Details at: <http://sshap.org/2015/08/13/cfp-ernst-mach-centenary-conference-2016/>
- June 17-19, 2016, 6th Conference of the Society for the Philosophy of Science in Practice (SPSP), Glassboro, NJ, USA.
Details at: <http://www.philosophy-science-practice.org/en/events/sixth-spsp-glassboro-nj-2016/>
- June 20-24, 2016, 12th International Conference of the Learning Sciences, Nanyang Technological University, Singapore
Details at: <https://www.isls.org/icls/2016/theme.html>
- June 22-25, 2016, Eighth Joint Meeting of the BSHS, CSHPS, and HSS, Edmonton, Alberta, Canada.
Details at: www.uab.ca/3societies
- June 22-25, 2016, History of Philosophy of Science (HOPOS) annual conference, University of Minneapolis, USA.
Details at: <http://hopos2016.umn.edu/>
- June 22-26, 2016, Annual Meeting of the Society for the History of Technology (SHOT), Singapore
Details at: http://www.historyoftechnology.org/call_for_papers/index.html
- July 3-5, 2016, Sixth Integrated History and Philosophy of Science conference (&HPS6)
Details at: <https://philosophyofsciencenetwork.wordpress.com/hps6/>
- July 16-18, 2016, 18th UK-European Foundations of Physics Conference
Details at: <http://www.lse.ac.uk/philosophy/blog/2015/10/01/foundations-2016/>
- July 18-22, 2016, History and Pedagogy of Mathematics, Montpellier, France
Details at: <http://hpm2016.sciencesconf.org/resource/page/id/2>
- July 26-30, 2016, 43rd ICOHTEC meeting: Technology, Innovation, and Sustainability: Historical and Contemporary Narratives. Porto, Portugal
Details at: <http://www.icohtec.org/annual-meeting-2016-cfp.html>
- August 10-13, 2016, Annual Meeting of the Cognitive Science Society, Philadelphia, MA, USA
Details at: <http://cognitivesciencesociety.org/conference2016/index.html>
- August 22-25, 2016, 1st European IHPST Regional Conference, Flensburg, Germany
Details at:
http://ihpst.net/content.aspx?page_id=22&club_id=360747&module_id=189361
- August 26-28, 2016, International Conference of East-Asian Association for Science Education, Tokyo, Japan.
Details at: <http://ease2016tokyo.jp/>
- September 22-24, 2016, The 7th International Conference of the European Society for the History of Science (ESHS), Prague
Details at: <http://www.7eshs2016.cz>
- December, 15-18, 2016, 3rd Asian IHPST Regional Conference, Pusan National University, South Korea.
Inquiries to: Hwe-Ae Seo, haseo@pusan.ac.kr
- 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>