

HPS&ST Note

October 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 .

University of Copenhagen PhD Course on HPS&ST

During September 19-23, the University of Copenhagen hosted a PhD course for local and international students on History, Philosophy and Science Teaching. There were 27 participants from Denmark, Germany, Brazil, India, USA, Iceland, Portugal, Indonesia and UK. The course was convened by Dr Ricardo Karam.

In addition to ten student presentations, invited lectures were given by:

Peter Heering
Charbel El-Hani .
Henrik Kragh Sørensen
Helge Stjernholm Kragh
Tinne Hoff Kjeldsen
Sara Marie Ehrenreich Green
Jesper Lützen
Mikkel Willum Johansen
Michael Matthews.
Ricardo Karam

The KU Department is pleased to host visiting scholars and welcomes graduate students in science and mathematics education. Inquiries to Dr Ricardo Karam jmk397@ku.dk



KU Course Participants

Asian HPS&ST 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

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.

Keynote Speakers



Gregory Radick, Professor at University of Leeds, UK, is a historian and philosopher of science interested in the life and human sciences. His main area of research is the history of biology and the human sciences from the eighteenth century to the present, with particular emphases on Darwinism, genetics and animal behaviour. He also has interests in the philosophy of science (especially biology), the philosophy of history (especially counterfactuals), the interdisciplinary study of intellectual property, effective teaching of biology and the popularisation of science.

http://www.leeds.ac.uk/arts/profile/20040/1069/gregory_radick



Darrel P. Rowbottom is Professor and Head of Philosophy at Lingnan University, Hong Kong. He studied physics as an undergraduate (at Bristol), and history and philosophy of science (at the LSE) and philosophy (at Durham) thereafter. He subsequently held posts at several universities in the UK, including Bristol, Edinburgh, and Oxford. His current research focuses on general issues in the philosophy of science (e.g. scientific method, scientific realism, and scientific progress) and the philosophy of probability (e.g. intersubjective probability and measurement paradoxes). He also has interests in epistemology, metaphysics, and the philosophy of education.

<http://www.ln.edu.hk/philoso/staff/rowbottom/>



Michael R. Matthews Honorary Associate Professor, School of Education, University of New South Wales. President of the Interdivisional Teaching Commission of the Division of History of Science and Technology (DHST) and the Division of Logic, Methodology and Philosophy of Science (DLMPS). He was Foundation President of the International History, Philosophy and Science Teaching Group and Foundation Editor

of the journal Science & Education. He publishes in philosophy of education, science education and HPS. In 2010 he received the US History of Science Society 'Joseph H. Hazen Education Prize' in recognition of 'outstanding contributions to education in the History of Science'.

<https://education.arts.unsw.edu.au/about-us/people/michael-matthews/>



Chanju Kim, Professor of Physics at Ewha Womans University, Korea, is a theoretical physicist. His main area of research is quantum field theory and high-energy physics. He has also interests in effective teaching of physics to a general audience. His liberal art course on modern physics at Ewha has been selected as one of the first five lectures in the project searching 100 best college lectures in Korea. It was also selected as an online course in the K-MOOC (Korean MOOC) project recently initiated by the Korean government. This course got the most positive feedback among all K-MOOC courses in the course evaluation by students, for which he received an education minister's award this year.

Papers are being presented by scholars from 17 countries: China, Pakistan, Turkey, Sri Lanka, Indonesia, France, Brazil, Taiwan, Nigeria, UK, Philippines, Malaysia, USA, India, Germany, Japan and Korea.

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

Conference website: <http://asiahpsst2016.bolog.com/welcome.php>

Royal Society Publications, Open Access till November

All the Royal Society's journal content, including Notes and Records, will be free to access until Sunday 6 November. It is a once a year opportunity to access any article in our 350 year archive free of charge and without requiring a journal subscription.

Please visit: <http://rsnr.royalsocietypublishing.org/>

Leibniz: Legacy and Impact

International Conference to be held at Manchester Metropolitan University, UK
In Room 3.24, The Business School
Saturday 5 November 2016

This conference will celebrate the legacy and impact of the universal genius Gottfried Wilhelm Leibniz (1646-1716). Leibniz was a polymath who made significant contributions to

many fields of learning, among them philosophy, science, mathematics, law, and the study of history and languages. But which of his innovations had the greatest impact in the years that followed? And how have his ideas shaped these disciplines today? These are the questions that will be the focus of this conference.

Plenary Speakers

1. **Nicholas Jolley** (University of California, Irvine): Kant's 'True Apology for Leibniz' (Keynote Address)
2. **Jeremy Dunham** (Sheffield): Monkeys and Monads: The Unexpected Marriage between Darwinian Evolutionary Theory and Leibnizian Metaphysics
3. **Norma B. Goethe** (Cordoba): What can we learn from Leibniz's working tools in mathematics and the sciences?
4. **Douglas Moggach** (Ottawa): Leibnizian Natural Law and Kantian Critiques
5. **Daniel Nemenyi** (Kingston, London): Leibniz and the Internet
6. **Arnaud Pelletier** (Brussels): Leibnizian references in contemporary social sciences
7. **John Rudd** (Manchester): The Right Rules? Leibniz's Legal Legacy
8. **Frederic Tremblay** (St. Petersburg): Leibniz's Legacy in Russia

Information at:

<http://www.leibniz-translations.com/leibniz2016.htm>

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Opinion Page: Teaching Philosophy in Schools

The article linked below details the outcomes of teaching philosophy in Australian primary (elementary) and secondary schools. This is a relatively new initiative with encouraging results for student performance in other school subjects and specifically in the highly politicized National Assessment Programme for Literacy and Numeracy (NAPLAN).

<http://theconversation.com/want-to-improve-naplan-scores-teach-children-philosophy-64536>

An informative literature review of the field is provided in:

Sprod, T.: 2014, 'Philosophical Inquiry and Critical Thinking in Primary and Secondary Science Education'. In M.R. Matthews (ed.) *International Handbook of Research in History, Philosophy and Science Teaching*, Springer, Dordrecht, pp. 1531-1564.

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?*

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-juhps.com/>).

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

Recent HPS&ST Research Articles

Endersby, J. (2016). Deceived by orchids: sex, science, fiction and Darwin. *The British Journal for the History of Science*, 49(2), 205-229. doi: 10.1017/S0007087416000352

Heering, P. (2016). The Educational Potential of Teaching Science as Culture. *Science & Education*, 1-2 Doi: 10.1007/s11191-016-9855-1 online first [Guest Editorial]

Kampourakis, K, Silveira, P., & Strasser, B. J. (2016). How Do Preservice Biology Teachers Explain the Origin of Biological Traits?: A Philosophical Analysis. *Science Education*, 1-26. doi: 10.1002/sce.21245 online first

Kanderakis, N. (2016). The Mathematics of High School Physics: Models, Symbols, Algorithmic Operations and Meaning, *Science & Education*, 1-32. doi: 10.1007/s11191-016-9851-5 online first

Kind, P., & Osborne, J. (2016). Styles of Scientific Reasoning: A Cultural Rationale for Science Education? *Science Education*, 1-24. doi: 10.1002/sce.21251 online first

Metin, D., & Ertepinar, H. (2016). Inferring Pre-service Science Teachers' Understanding of Science by Using Socially Embedded Pseudoscientific Context. *International Journal of Education in Mathematics Science and Technology*, 4(4), 340-358. doi: 10.18404/ijemst.93129

Moxham, N. (2016). An experimental 'Life' for an experimental life: Richard Waller's biography of Robert Hooke (1705). *The British Journal for the History of Science* 49(1), 27-51. doi:10.1017/S0007087416000029

Zhang, L. (2016). Is Inquiry-Based Science Teaching Worth the Effort? Some Thoughts Worth Considering. *Science & Education*, 1-19. doi: 10.1007/s11191-016-9856-0 Online first

Recent HPS&ST Books

Allen, Garland E., Baker, Jeffrey J. W. (2016). *Scientific Process and Social Issues in Biology Education*. Netherlands: Springer International Publishing. ISBN: 978-3-319-44378-2

“This book complements fact-drive textbooks in introductory biology courses, or courses in biology and society, by focusing on several important points: (1) Biology as a process of doing science, emphasizing how we know what we know. (2) It stresses the role of science as a social as well as intellectual process, one that is always embedded in its time and place in history.

In dealing with the issue of science as a process, the book introduces students to the elements of inductive and deductive logic, hypothesis formulation and testing, the design of experiments and the interpretation of data. An appendix presents the basics of statistical analysis for students with no background in statistical reasoning and manipulation. Reasoning processes are always illustrated with specific examples from both the past (eighteenth and nineteenth century) as well as the present.

In dealing with science and social issues, this book introduces students to historical, sociological and philosophical issues such as Thomas Kuhn’s concept of paradigms and paradigm shifts, the social-constructions view of the history of science, as well as political and ethical issues such human experimentation, the eugenics movement and compulsory sterilization, and religious arguments against stem cell research and the teaching of evolution in schools.

In addition to specific examples illustrating one point or another about the process of biology or social-political context, a number of in-depth case studies are used to show how scientific investigations are originated, designed, carried out in particular social/cultural contexts. Among those included are: Migration of monarch butterflies, John Snow’s investigations on the cause of cholera, Louis Pasteur’s controversy over spontaneous generation, the mass extinction of the dinosaurs, and the Tuskegee syphilis experiment.” (From the Publisher)

More information at: <http://tinyurl.com/hywxdp3>

Banks, Erik C. (2016). *The Realistic Empiricism of Mach, James, and Russell Neutral Monism Reconceived*. Cambridge, UK: Cambridge University Press. ISBN: 9781107423763

“In the early twentieth century, Ernst Mach, William James, and Bertrand Russell founded a philosophical and scientific movement known as 'neutral monism', based on the view that minds and physical objects are constructed out of elements or events which are neither mental nor physical, but neutral between the two. This movement offers a unified scientific outlook which includes sensations in human experience and events in the world of physics under one roof. In this book Erik C. Banks discusses this important movement as a whole for the first time. He explores the ways in which the three philosophers can be connected, and applies their ideas to contemporary problems in the philosophy of mind and the philosophy of science - in particular the relation of sensations to brain processes, and the problem of constructing extended bodies in space and time from particular events and causal relations.”

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

Frankel, Henry R. (2016). *The Continental Drift Controversy (2nd Vol.)*. Cambridge, UK: Cambridge University Press. ISBN: 9781316616062

'A well constructed and gripping narrative, which preserves the complex scientific detail, but invites one into this fascinating world and helps the reader patiently to find a way through its labyrinth. Frankel is a wonderful guide and worthy of your trust.' Mott Greene, University of Puget Sound and University of Washington

This volume ... is a complete account and benefits from the fact that many of those who were principals in the drama are still alive ... Fascinating and full of humor, but very serious. A better book on the subject will probably never be written.' Neil D. Opdyke, University of Florida

'Tracing an exhaustive and comprehensive history, Frankel illuminates how different were geological and geophysical perspectives on continental drift, providing fascinating insights on the erratic and complex fashion in which science advances.' Jim Briden, University of Oxford

Praise for the 4-volume collection: '... an unparalleled study of remarkable depth, detail and quality of a key development in our ideas about how the Earth functions ... because Frankel draws on his extensive oral historical work with the key players in the development of plate tectonics, this is a study which can never be repeated in terms of its proximity to the events narrated, so many of those key players now being deceased.' Progress in Physical Geography

More information at: <http://tinyurl.com/ja3a8gp>

Gilbert, John K., Justi, Rosária (2016). *Modelling-based Teaching in Science Education*. Netherlands: Springer International Publishing. ISBN: 978-3-319-29038-6

This book argues that modelling should be a component of all school curricula that aspire to provide 'authentic science education for all'. The literature on modelling is reviewed and a 'model of modelling' is proposed. The conditions for the successful implementation of the 'model of modelling' in classrooms are explored and illustrated from practical experience. The roles of argumentation, visualisation, and analogical reasoning, in successful modelling-based teaching are reviewed. The contribution of such teaching to both the learning of key scientific concepts and an understanding of the nature of science are established. Approaches to the design of curricula that facilitate the progressive grasp of the knowledge and skills entailed in modelling are outlined. Recognising that the approach will both represent a substantial change from the 'content-transmission' approach to science teaching and be in accordance with current best-practice in science education, the design of suitable approaches to teacher education are discussed. Finally, the challenges that modelling-based education pose to science education researchers, advanced students of science education and curriculum design, teacher educators, public examiners, and textbook designers, are all outlined." (From the Publisher)

More information at: <http://www.springer.com/gb/book/9783319290386>

Kotowicz, Zbigniew (2016). *Gaston Bachelard: A Philosophy of the Surreal*. Edinburgh, UK: Edinburgh University Press. ISBN: 9781474417211

"The first English-language analysis of this highly influential French philosopher's work on epistemology, poetic imagination and temporality

Gaston Bachelard (1884–1962) was a seminal figure in contemporary French philosophy. Together with Michel Foucault, Georges Canguilhem and Jean Cavailles, he shaped the 'French epistemological' school of philosophy of science. In France, Bachelard is a towering presence; in the English-speaking world, he is little known. Now, Zbigniew Kotowicz gives us the first English language, in-depth presentation of the

entire spectrum of Bachelard's work: epistemology, poetic imagination and temporality. And he explores an old philosophical tradition that Bachelard's thought opens up – atomism – a doctrine that has been almost forgotten and is much misunderstood.” (From the Publisher)

More information at: <http://tinyurl.com/jkj8m7s>

Mason, Katherine A. (2016). *Infectious Change: Reinventing Chinese Public Health After an Epidemic*. Chicago, IL: Stanford University Press. ISBN: 9780804794435

“In February 2003, a Chinese physician crossed the border between mainland China and Hong Kong, spreading Severe Acute Respiratory Syndrome (SARS)—a novel flu-like virus—to over a dozen international hotel guests. SARS went on to kill about 800 people and sicken 8,000 worldwide. By July 2003 the disease had disappeared, but it left an indelible change on public health in China. The Chinese public health system, once famous for its grassroots, low-technology approach, was transformed into a globally-oriented, research-based, scientific endeavor.

In *Infectious Change*, Katherine A. Mason investigates local Chinese public health institutions in Southeastern China, examining how the outbreak of SARS re-imagined public health as a professionalized, biomedicalized, and technological machine—one that frequently failed to serve the Chinese people. Mason recounts the rapid transformation as young, highly-trained biomedical scientists flooded into local public health institutions, replacing bureaucratic government inspectors who had dominated the field for decades. *Infectious Change* grapples with how public health in China was reinvented into a prestigious profession in which global impact and recognition were paramount—and service to vulnerable local communities was secondary.” (From the Publisher)

More information at: <http://www.sup.org/books/title/?id=23913>

Mawdsley, Stephen E. (2016). *Selling Science. Polio and the Promise of Gamma Globulin*. New Brunswick, NJ: Rutgers University Press

"Mawdsley uses the enthusiasm for Gamma Globulin and the ultimate clinical trial as a vehicle to explore more broadly mid-twentieth-century attitudes towards risk, scientific transparency, double-blind clinical trials, and the power of fundraising and marketing over science. *Selling Science* is well-written, clearly argued, and extensively researched."
—Daniel J. Wilson, author of *Living with Polio: The Epidemic and Its Survivors*

"Mawdsley tells the riveting and forgotten history of a massive human experiment, conducted in the hopes of preventing polio. It provides a sober reminder of the limits of research ethics and scientific precaution in the face of a dread disease."
—Angela Creager, author of *Life Atomic: A History of Radioisotopes in Science and Medicine*

Narayanamurti, Venkatesh & Odumosu, Toluwalogo (2016). *Cycles of Invention and Discovery: Rethinking the Endless Frontier*. Cambridge, MA: Harvard University Press. ISBN: 9780674967960

“*Cycles of Invention and Discovery* offers an in-depth look at the real-world practice of science and engineering. It shows how the standard categories of “basic” and “applied” have become a hindrance to the organization of the U.S. science and technology enterprise. Tracing the history of these problematic categories, Venkatesh Narayanamurti and Toluwalogo Odumosu document how historical views of policy makers and scientists have led to the

construction of science as a pure ideal on the one hand and of engineering as a practical (and inherently less prestigious) activity on the other. Even today, this erroneous but still widespread distinction forces these two endeavors into separate silos, misdirects billions of dollars, and thwarts progress in science and engineering research.

The authors contrast this outmoded perspective with the lived experiences of researchers at major research laboratories. Using such Nobel Prize–winning examples as magnetic resonance imaging, the transistor, and the laser, they explore the daily micro-practices of research, showing how distinctions between the search for knowledge and creative problem solving break down when one pays attention to the ways in which pathbreaking research actually happens. By studying key contemporary research institutions, the authors highlight the importance of integrated research practices, contrasting these with models of research in the classic but still-influential report *Science the Endless Frontier*. Narayanamurti and Odumusu’s new model of the research ecosystem underscores that discovery and invention are often two sides of the same coin that moves innovation forward.” (From the Publisher)

More information at: <http://www.hup.harvard.edu/catalog.php?isbn=9780674967960>

Noble, Denis (2016). *Dance to the Tune of Life: Biological Relativity*. Cambridge, UK: Cambridge University Press. ISBN: 9781107176249

“In this thought-provoking book, Denis Noble formulates the theory of biological relativity, emphasising that living organisms operate at multiple levels of complexity and must therefore be analysed from a multi-scale, relativistic perspective. Noble explains that all biological processes operate by means of molecular, cellular and organismal networks. The interactive nature of these fundamental processes is at the core of biological relativity and, as such, challenges simplified molecular reductionism. Noble shows that such an integrative view emerges as the necessary consequence of the rigorous application of mathematics to biology. Drawing on his pioneering work in the mathematical physics of biology, he shows that what emerges is a deeply humane picture of the role of the organism in constraining its chemistry, including its genes, to serve the organism as a whole, especially in the interaction with its social environment. This humanistic, holistic approach challenges the common gene-centred view held by many in modern biology and culture” (From the Publishers)

More information at: <http://tinyurl.com/j5by4sn>

Pisano, Raffaele, Capecchi, Danilo (2016). *Tartaglia’s Science of Weights and Mechanics in the Sixteenth Century: Selections from Quesiti et inventioni diverse: Books VII–VIII*. Netherlands: Springer International Publishing. ISBN: 978-94-017-9709-2

“This book presents a historical and scientific analysis as historical epistemology of the science of weights and mechanics in the sixteenth century, particularly as developed by Tartaglia in his *Quesiti et inventioni diverse*, Book VII and Book VIII (1546; 1554). In the early 16th century mechanics was concerned mainly with what is now called statics and was referred to as the *Scientia de ponderibus*, generally pursued by two very different approaches. The first was usually referred to as Aristotelian, where the equilibrium of bodies was set as a balance of opposite tendencies to motion. The second, usually referred to as Archimedean, identified statics with *centrobarica*, the theory of centres of gravity based on symmetry considerations. In between the two traditions the Italian scholar Niccolò Fontana, better known as Tartaglia (1500?–1557), wrote the treatise *Quesiti et inventioni diverse* (1546).

(...)

This work gathers and re-evaluates the current thinking on this subject. It brings together contributions from two distinguished experts in the history and historical epistemology of

science, within the fields of physics, mathematics and engineering. It also gives much-needed insight into the subject from historical and scientific points of view. The volume composition makes for absorbing reading for historians, epistemologists, philosophers and scientists.” (From the Publisher)

More information at: <http://www.springer.com/la/book/9789401797092>

Saraiva, Tiago (2016). *Fascist Pigs: Technoscientific Organisms and the History of Fascism*. Cambridge, MA: The MIT Press. ISBN: 9780262035033

“In the fascist regimes of Mussolini’s Italy, Salazar’s Portugal, and Hitler’s Germany, the first mass mobilizations involved wheat engineered to take advantage of chemical fertilizers, potatoes resistant to late blight, and pigs that thrived on national produce. Food independence was an early goal of fascism; indeed, as Tiago Saraiva writes in *Fascist Pigs*, fascists were obsessed with projects to feed the national body from the national soil. Saraiva shows how such technoscientific organisms as specially bred wheat and pigs became important elements in the institutionalization and expansion of fascist regimes. The pigs, the potatoes, and the wheat embodied fascism. In Nazi Germany, only plants and animals conforming to the new national standards would be allowed to reproduce. Pigs that didn’t efficiently convert German-grown potatoes into pork and lard were eliminated.

Saraiva describes national campaigns that intertwined the work of geneticists with new state bureaucracies; discusses fascist empires, considering forced labor on coffee, rubber, and cotton in Ethiopia, Mozambique, and Eastern Europe; and explores fascist genocides, following Karakul sheep from a laboratory in Germany to Eastern Europe, Libya, Ethiopia, and Angola.

Saraiva’s highly original account—the first systematic study of the relation between science and fascism—argues that the “back to the land” aspect of fascism should be understood as a modernist experiment involving geneticists and their organisms, mass propaganda, overgrown bureaucracy, and violent colonialism.” (From the Publisher)

More information at: <https://mitpress.mit.edu/fascistpigs>

Siskin, Clifford (2016). *System: The Shaping of Modern Knowledge*. Cambridge, MA: The MIT Press. ISBN: 9780262035316

“A system can describe what we see (the solar system), operate a computer (Windows 10), or be made on a page (the fourteen engineered lines of a sonnet). In this book, Clifford Siskin shows that system is best understood as a genre—a form that works physically in the world to mediate our efforts to understand it. Indeed, many Enlightenment authors published works they called “system” to compete with the essay and the treatise. Drawing on the history of system from Galileo’s “message from the stars” and Newton’s “system of the world” to today’s “computational universe,” Siskin illuminates the role that the genre of system has played in the shaping and reshaping of modern knowledge.

Previous engagements with systems have involved making them, using them, or imagining better ones. Siskin offers an innovative perspective by investigating system itself. He considers the past and present, moving from the “system of the world” to “a world full of systems.” He traces the turn to system in the seventeenth and eighteenth centuries, and describes this primary form of Enlightenment as a mediator of political, cultural, and social modernity—pointing to the moment when people began to “blame the system” for working both too well (“you can’t beat the system”) and not well enough (it always seems to “break down”). Throughout, his touchstones are: what system is and how it has changed; how it has mediated knowledge; and how it has worked in the world.” (From the Publisher)

More information at: <https://mitpress.mit.edu/books/system>

Smith, David L. (2016). *How Biology Shapes Philosophy: New Foundations for Naturalism*. Cambridge, UK: Cambridge University Press. ISBN: 9781107055834

“How Biology Shapes Philosophy is a seminal contribution to the emerging field of biophilosophy. It brings together work by philosophers who draw on biology to address traditional and not so traditional philosophical questions and concerns. Thirteen essays by leading figures in the field explore the biological dimensions of ethics, metaphysics, epistemology, gender, semantics, rationality, representation, and consciousness, as well as the misappropriation of biology by philosophers, allowing the reader to critically interrogate the relevance of biology for philosophy. Both rigorous and accessible, the essays illuminate philosophy and help us to acquire a deeper understanding of the human condition. This volume will be of interest to philosophers, biologists, social scientists, and other readers with an interest in bringing science and the humanities together.” (From the Publisher)

More information at: <http://tinyurl.com/j9ghqk8>

Tobin, Emma, Ambrosio, Chiara (Eds.) (2016). *Theory Choice in the History of Chemical Practices*. Netherlands: Springer International Publishing. ISBN: 978-3-319-29891-7

“This collection of essays examines the question of theory from the perspective of the history of chemistry. Through the lens of a number of different periods, the authors provide a historical analysis of the question of theory in the history of chemical practice. The consensus picture that emerges is that the history of science tells us a much more complex story about theory choice. A glimpse at scientific practice at the time shows that different, competing as well as non-competing, theories were used in the context of the scientific practice at the various times and sometimes played a pivotal pedagogical role in training the next generation of chemists. This brief brings together a history of chemical practice, and in so doing reveals that theory choice is conceptually more problematic than was originally conceived. This volume was produced as part of the Ad HOC chemistry research group hosted by University College London and University of Cambridge.” (From the Publisher)

More information at: <http://www.springer.com/la/book/9783319298917>

Coming HPS&ST Related Conferences

October 26-28, 2016, Conference on science and democracy, Pisa, Italy

Details at: <http://iasc.me/2016-conference/>

October 26-28, 2016, Nature of Science Symposium, Limerick, Ireland

Details at: LimerickNOS2016@gmail.com

October 28, 2016, Science and Religion in Education Conference, Oxford, UK

Details at: <http://www.faradayschools.com/events/conference/>

October 28-29, 2016, 32nd Boulder Conference on the History and Philosophy of Science: “Gravity: Its History and Philosophy”

Deadline for Submission: August 1, 2016.

Contact: Allan Franklin Allan.Franklin@colorado.edu

November 3-5, 2016, Philosophy of Science Association, Biennial Conference, Atlanta GA.

Details at: philsci.org/psa-biennial-meeting

November 5, 2016, Leibniz: Legacy and Impact, Manchester Metropolitan University, UK

- Abstract deadline: February 28.
Details at: <http://leibniz-translations.com/leibniz2016.htm>
- November 14-15, 2016, Symposium: The Dilemmas of Upright Scientists, Israel, Tel-Aviv University
Inquiries to: Yuliana Litov, ylitov@tauex.tau.ac.il
- 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>
- 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
- 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.bshs.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, Mazury, 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>