

About &HPS

&HPS is distinctive in that it is both historical and philosophical at the same time.

Good history and philosophy of science is not just history of science into which some philosophy of science may enter, or philosophy of science into which some history of science may enter. It is work that is both historical and philosophical at the same time. The founding insight of the modern discipline of **HPS** is that history and philosophy have a special affinity and one can effectively advance both simultaneously.

Invited Speakers of &HPS₅

Jean Gayon (Sorbonne)

Jane Maienschein (Arizona State University)

Jürgen Renn (Max Planck Institute Berlin)

All talks will take place at the Aula,
located at the Historical Campus of the University of Vienna
(Spitalgasse 2-4, Court 1, Entrance 1.11) 9.00 am to 8.00 pm.

Local Organizers

Martin Kusch (Department of Philosophy)

Elisabeth Nemeth (Dean of Faculty of Philosophy and Education)

Friedrich Stadler (Institute Vienna Circle)

Imprint: Institute Vienna Circle, Spitalgasse 2-4, Court 1.2, 1010 Vienna.



Integrated &HPS₅ Program Committee

Theodore Arabatzis (University of Athens)

Bernadette Bensaude-Vincent (Sorbonne)

Jed Buchwald (California Institute of Technology)

Alan Chalmers (University of Sydney)

Hasok Chang (University of Cambridge)

Moti Feingold (California Institute of Technology)

Jean Gayon (Sorbonne)

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Manfred Laubichler (Arizona State University)

Alan Love (University of Minnesota)

Jane Maienschein (Arizona State University)

Michela Massimi (University of Edinburgh)

Bill Newman (Indiana University)

John D. Norton (University of Pittsburgh)

Robert Rynasiewicz (Johns Hopkins University)

Jutta Schickore (Indiana University)

Alan Shapiro (University of Minnesota)

Friedrich Steinle (Technische Universität Berlin)

Co-Conveners

Don Howard (University of Notre Dame)

John D. Norton (University of Pittsburgh)

Integrated
History & Philosophy of Science
Fifth Conference

June 26-28, 2014

Program

Thursday June 26

9.00 – 9.10 **Welcome and Opening**

Elisabeth Nemeth (Dean of Faculty of Philosophy and Education)
John D. Norton (University of Pittsburgh, Co-Conveners &HPS Committee)
Friedrich Stadler (Institute Vienna Circle and Local Organizers)

Chair
Theodore Arabatzis
(University of Athens)

9.10 – 9.50 **Anjan Chakravartty** (University of Notre Dame)
A Case Study of Case Studies: Scientific Realism and Integrated HPS

9.50 – 10.30 **Klodian Coko** (Indiana University)
Jean Perrin and the Philosophers' Stories: A Case Study on the Role of Case Studies in &HPS

10.30 – 10.50 Coffee Break

Chair
Hasok Chang
(University of Cambridge)

10.50 – 11.30 **Katherina Kinzel** (University of Vienna)
Narrative and Evidence: on the Role of Historical Case Studies in the Philosophy of Science

11.30 – 12.10 **Mauricio Suarez** (University of Madrid)
The Modelling Attitude and its Roots in 19th Century Science

12.10 – 12.50 **Richard Staley** (University of Cambridge)
„Beyond the Conventional Boundaries of Physics“: On Relating Ernst Mach's Philosophy to his Teaching and Research in the 1870s and 1880s

12.50 – 14.00 Lunch Break

Chair
Alan Shapiro
(University of Minnesota)

14.00 – 14.40 **Thomas Nickles** (University of Nevada)
Scientific Discovery and the End-of-History Fallacy

14.40 – 15.20 **Samuel Schindler** (Aarhus University)
Scientific Discovery: That-what's and What-that's

Chair
Thomas Uebel
(University of Manchester)

15.20 – 16.00 **Richard Creath** (Arizona State University)
The Unity of Science: Two Hundred Years of Controversy

16.00 – 16.20 Coffee Break

16.20 – 17.00 **Raphael Scholl, Kärin Nickelsen, Tim Rüz**
(University of Bern, Ludwig-Maximilians-Universität, University of Lausanne)
Why the Dilemma of Case Studies Misses the Point: Towards an Explicit Methodology for Integrated History and Philosophy of Science

Chair
Friedrich Stadler
(University of Vienna)

17.00 – 18.00 **Invited lecture: Jane Maienschein** (Arizona State University)
Looking at Cells around 1900: Seeing Complex Systems

18.30 Reception at Aula

Friday June 27

9.00 – 9.40 **Jutta Schickore** (Indiana University)
„Control(led) Experiments“ in Historical and Philosophical Perspective

9.40 – 10.20 **Monica Solomon** (University of Notre Dame)
Retreading the Path of Science: the Case of Independent Motions

10.20 – 10.40 Coffee Break

Chair
Manfred Laubichler
(Arizona State University)

10.40 – 11.20 **Teru Miyake** (Nanyang Technological University)
Scientific Inference and the Earth's Interior: Harold Jeffreys and Dorothy Wrinch at Cambridge

11.20 – 12.00 **Laura Georgescu** (Ghent University)
Experiments and Concepts in Gilbert's *De magnet*

Chair
Elisabeth Nemeth
(University of Vienna)

12.00 – 12.40 **Thomas Uebel** (University of Manchester)
Values, Facts and Methodologies: A Case Study in Philosophy of Economics

12.40 – 14.00 Lunch Break

14.00 – 14.40 **Amy A. Fisher** (University of Puget Sound)
Reconsidering Priestley's Defense of Phlogiston

Chair
Mauricio Suarez
(University of Madrid)

14.40 – 15.20 **Haixin Dang** (University of Pittsburgh)
William Henry Bragg and the Nature of X-Rays

15.20 – 16.00 **Grant Fisher and Buhm Soon Park**
(Korea Advanced Institute of Science and Technology (KAIST))
Checks-and-balances: Orbital Symmetry and Quantitative Methods in Late Twentieth Century Quantum Chemistry

16.00 – 16.20 Coffee Break

Chair
Jed Z. Buchwald
(California Institute of Technology)

16.20 – 17.00 **Alan Chalmers** (University of Sydney)
Qualitative Novelty and the Scientific Revolution: The Emergence of the Concept of Pressure

17.00 – 17.40 **Henk W. de Regt** (VU University Amsterdam)
Kelvin's Dictum Revived: the Intelligibility of Mechanisms

17.40 – 18.00 Break

Chair
John D. Norton
(University of Pittsburgh)

18.00 – 19.00 **Invited lecture: Jürgen Renn** (Max Planck Institute for the History of Science Berlin)
On the Evolution of Knowledge: From Cooperative Action to Science

20.00 Conference Dinner

Chair
David Miller
(Iowa State University)

Saturday June 28

9.00 – 9.40 **Ann-Sophie Barwich** (Konrad Lorenz Institute)
Sensing the Unknown: Historicising the Discoverability of the Olfactory Receptors within the Life on an Experimental System

9.40 – 10.20 **Guido Caniglia** (Arizona State University)
Mathematical Theory, Natural Experiments and Ovarian Dissections: The Epistemology of Hamilton's Work on Tropical Social Wasps (1963-1968)

10.20 – 10.40 Coffee Break

10.40 – 12.40 **Symposium: *Introspection and the Problem of the Stimulus-Error: Historical and Contemporary Debates***

10.40 – 11.20 **Uljana Feest** (Max Planck Institute for Human Development)
Stimulus Error and the Red Herring of Introspection

11.20 – 12.00 **Gary Hatfield** (University of Pennsylvania)
The Stimulus Error and Experimental Design: The Manipulation of Perceptual "Set"

12.00 – 12.40 **Mazviita Chirimuuta** (University of Pittsburgh)
The Stimulus-Error, "Equivocal Correlation" and Perceptual Constancy

12.40 – 14.00 Lunch Break

Chair
Jane Maienschein
(Arizona State University)

14.00 – 14.40 **Axel Gelfert and Jacob Mok** (National University of Singapore)
Styles of Reasoning in Biology: The Case of Models in Membrane and Cell Biology

14.40 – 15.20 **Laura Nuño de la Rosa** (Konrad Lorenz Institute)
The Taxonomical and the Morphological Concepts of Type: Back to Aristotle

15.20 – 16.00 **Joeri Witteveen** (Utrecht University)
Negotiating a Causal-historical Theory of Reference: The Emergence of the 'Type Method' in 19th Century Biological Taxonomy

16.00 – 16.20 Coffee Break

Chair
Katherina Kinzel
(University of Vienna)

16.20 – 17.00 **Dunja Šešelja and Christian Straßer** (Ghent University)
Heuristic Reevaluation of the Bacterial Hypothesis of Peptic Ulcer Disease in the 1950s

17.00 – 17.40 **Mathieu Charbonneau** (Konrad Lorenz Institute)
Mechanical Molecular Models and Haptic Reasoning

17.40 – 18.20 **Daniel J. Nicholson and Richard Gawne** (University of Exeter, Duke University)
Neither Logical Empiricism nor Vitalism, but Organicism: What the Philosophy of Biology Was

18.20 – 18.40 Break

Chair
Alan Chalmers
(University of Sydney)

18.40 – 19.40 **Invited lecture: Jean Gayon** (Sorbonne)
Natural Selection vs. Descent with Modification: What Comes First? Reflections on Darwin and Sober

19.40 – 20.00 **Summary / Closings**