European Science Foundation
Research Networking Programme
The Philosophy of Science
in a European Perspective (PSE)
Campus of the University of Vienna
Aula and Kapelle
Universitätscampus
Spitalgasse 2–4, Hof 1
1090 Wien

Abstracts
International Conference
December 5–7, 2011 Vienna
The European Science Foundation Research Networking Programme

“The Philosophy of Science in a European Perspective” (PSE) investigates the philosophies, foundations and methodologies of the sciences. The conference on “Philosophy of Science in Europe – European Philosophy of Science and the Viennese Heritage” (Vienna, December 5–7, 2011), combines the theoretical and historical perspective focusing on the specific features of a European philosophy of science. On the occasion of the 20th anniversary of the Institute Vienna Circle the Viennese roots and influences will be addressed, in addition.

There is no doubt that contemporary philosophy of science originated mainly in Europe beginning in the 19th century and has influenced decisively the subsequent development of globalized philosophy of science, esp. in North America. Recent research in this field documents some specific characteristics of philosophy of science covering the natural, social, and also cultural sciences in the European context up to the destruction and forced migration caused by Fascism and National Socialism.

The proceedings of the opening plenary conference of the Networking Programme PSE, held in Vienna, from December 18-20, 2008, and published in 2010 as The Present Situation in the Philosophy of Science (Springer 2010, ed. by Friedrich Stadler) document the flourishing topicality of contemporary philosophy of science in Europe. The volume covers foundational and methodological debates, formal methods and their applications, the place of the life sciences and physical sciences in the foundations of science, and the present situation of the philosophy of the cultural and social sciences on the one hand, and some specific European manifestations, on the other hand, which can be generally identified with historical, pragmatic and interdisciplinary approaches bridging the absolute dualism of “analytic” and “continental” philosophy of science. Therefore, also more general philosophical topics in the sciences are accompanied by a naturalistic approach, taking into account the aims and values of philosophy of science in itself and the consequences for the related methodology (since the Methodenstreit) and historiography, obviously within the frame of a theoretical pluralism.

This European perspective with the integration of history and philosophy of science and the current situation in the philosophy of science after the transatlantic interaction and transformation, and the “return” after World War II raises the question of contemporary European characteristics in the philosophy of science. The forthcoming conference refers to the opening conference and its results aiming at topical issues and open questions as formulated, e.g., in the review of the proceedings, namely addressing the tension and “oscillation between doing philosophy of science in Europe and doing philosophy from a European point of view . . . ” (Stathis Psillos, in: Metascience Vol. 20, No. 2)

On the occasion of the 20th anniversary of the Institute Vienna Circle, and its establishment as Department of the University of Vienna (Faculty of Philosophy and Education) in 2011, the role and function of the renowned Vienna Circle of Logical Empiricism and its impact and influence on contemporary philosophy of science is on the agenda, too. Accordingly, the general topic is dealt with in two parallel sessions representing systematic-formal as well as genetic-historical perspectives on philosophy of science in a European context up to the present.
PROGRAMME

MONDAY, DECEMBER 5

14.30 – 15.10
Friedrich Stadler (University of Vienna):
From the Vienna Circle to the Institute Vienna Circle: On the Viennese Heritage in Contemporary Philosophy of Science

15.15 – 15.55
Cristina Chimisso (The Open University, Milton Keynes): A Matter of Substance? Gaston Bachelard on Chemistry’s Philosophical Lessons

16.00 – 16.40
Oliv Gjelsvik (University of Oslo):
Gauss on Observation

19.15
OFFICIAL OPENING OF THE CONFERENCE / ERÖFFNUNG
Universitätscampus, Aula / Campus of the University of Vienna, Aula
Univ.-Prof. Mag. Dr. Susanne Weigelin-Schwiedrzik (Vice-Rector for Research and Career Development)
Univ.-Prof. Mag. Dr. Konrad Liessmann (Vice-Dean of Faculty of Philosophy and Education)
Univ.-Prof. Mag. Dr. Friedrich Stadler (Director and Head of Institute Vienna Circle)

19. WIENER KREIS VORLESUNG / 19TH VIENNA CIRCLE LECTURE
Universitätscampus, Aula / Campus of the University of Vienna, Aula
Hans-Jürgen Wendel (Universität Rostock): Moritz Schlick und die Metaphysik

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17.00 – 17.40
Claude Debru (École Normale Supérieure, Paris):
On the Relationships between Neuroscience and Philosophy: The Case of Sleep and Dreaming

17.45 – 18.25
Richard Creath (Arizona State University):
Metaphysics in the Thirties: Why Should Anyone Care Now?

18.30 – 19.00
Herbert Posch (University of Vienna):
The Murder of Moritz Schlick in the Collective Memory of the University of Vienna

10.00
COFFEE BREAK

9.00
REGISTRATION AND BUFFET
### TUESDAY, DECEMBER 6

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<th>Time</th>
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<tr>
<td>9.00 – 9.40</td>
<td>Maria Carla Galavotti (University of Bologna): Probabilistic Epistemology: A European Tradition</td>
<td>Michael Stöltzner and Veronika Hofer (University of South Carolina, Medical University of Vienna): Vienna Circle Historiographies</td>
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<tr>
<td>9.45 – 10.25</td>
<td>Richard Dawid (University of Vienna): A Bayesian Model of No Alternative Arguments</td>
<td>Antonia Soulet (Université de Paris 8): The Place of Wittgenstein in the Manifesto of the Vienna Circle</td>
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<td>10.30 – 11.10</td>
<td>Michael Esfeld (University of Lausanne): In Search for a Causal Explanation of the Bell experiments</td>
<td>Massimo Ferrari (University of Torino): Materialism zu Montz Schlicks intellektuell Biografie: Franz Erhardt und die Habilitation in Rostock</td>
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<td><strong>COFFEE BREAK</strong></td>
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<td>11.30 – 12.10</td>
<td>Wioleta Rabinowicz (Lund University): The Interference Problem for the Betting Interpretation of Subjective Probabilities</td>
<td>Owen Flanagan (Duke University): The Influence of Positivism on B.F. Skinner’s Radical Behaviorism</td>
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<tr>
<td>12.15 – 12.55</td>
<td>Gregory Wheeler (New University Leiden): The Decimation of Independence</td>
<td>Georg Schiemer (University of Munich): Semantics in Type Theory</td>
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<td><strong>LUNCH BREAK</strong></td>
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<tr>
<td>14.30 – 15.10</td>
<td>Theo Kuper (University of Groningen): Truth Approximation by Belief Revision</td>
<td>Peter Weibel (ZKM, Karlsruhe): The Vienna Circle in Hungary (Book Presentation: András Máté/Miklós Rédei/Friedrich Stadler, eds., Der Wiener Kreis in Ungarn/The Vienna Circle in Hungary (Vienna-New York: Springer 2011)</td>
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<tr>
<td>15.15 – 15.55</td>
<td>Ladislav Kvasz (Charles University in Prague): Mathematics and Experience</td>
<td>Eckhart Kühler (University of Vienna): Gödel and Carnap: Platonism vs. Conventionalism</td>
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<td>16.00 – 16.40</td>
<td>Martin Kusch (University of Vienna): Wittgenstein’s “On Certainty” and the Philosophy of Mathematics</td>
<td>Karl Sigmund (University of Vienna): Gödel in Vienna</td>
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<td><strong>COFFEE BREAK</strong></td>
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<tr>
<td>17.00 – 17.40</td>
<td>C. Kenneth Waters (University of Minnesota): An Argument for Complex Metaphysics Based on the Nature of Systematic Inquiry in an Ultimately Messy Biological World</td>
<td>Matti Sintonen (University of Helsinki): The Viennese Heritage in Finland: Kaila, von Wright and Hintikka</td>
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<tr>
<td>18.30 – 19.10</td>
<td>Jane Maienschein (Arizona State University): Hans Driesch and Developing Organisms</td>
<td>Anne J. Kox (University of Amsterdam): Some Highlights from the Vienna Circle Archive</td>
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### WEDNESDAY, DECEMBER 7

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<th>Time</th>
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<tr>
<td>9.00 – 9.40</td>
<td>Tomasz Placek (University of Cracow): Two Notions of (In)Determinism</td>
<td>Thomas Mormann (University Osnabrück-San Sebastián): Wiener wissenschaftliche Weltanschauung – Zwischen „Leben“, Politik, und Wissenschaftsphilosophie</td>
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<tr>
<td>9.45 – 10.25</td>
<td>John D. Norton (University of Pittsburgh): Approximation and Idealization: Why the Difference Matters</td>
<td>Donata Romzi (University of Vienna): The Vienna Circle’s “Scientific World Concept” and the Issue of a Politically Engaged Philosophy of Science</td>
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<td>10.30 – 11.10</td>
<td>Allan Jank (University of Helsinki): The Importance of Historical Philosophy of Science for Cultural History</td>
<td>Günther Sandner (University of Vienna): Otto Neurath and Politics – A Re-Evaluation</td>
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<td><strong>COFFEE BREAK</strong></td>
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<td>11.30 – 12.10</td>
<td>Michael Heidelberger (University of Tübingen): Mathematics and Reality: Alternative French Conceptions</td>
<td>Herlind Prössner-Studer (University of Vienna): Kelsen’s Legal Positivism and Vienna Circle Metaethics</td>
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<td>12.15 – 12.55</td>
<td>Rainer Hegselmann (University of Bayreuth): Modelling Hume’s Moral and Political Theory – Scientific Status and Perspectives</td>
<td>Otto Pferssen (Université de Paris 6): Legal Positivism – Contemporary Challenges</td>
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<td><strong>LUNCH BREAK</strong></td>
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<tr>
<td>14.30 – 15.10</td>
<td>Jeanne Peijnenburg (University of Groningen): Reasoning in Fractals</td>
<td>Christoph Limbeck-Lilienau (University of Vienna): Kuhn, Naturalism and Cognitive Psychology</td>
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<td>15.15 – 15.55</td>
<td>Matthias Neuber (University of Tübingen): Is Logical Empiricism Compatible with Scientific Realism?</td>
<td>Hans-Joachim Dahms (University of Vienna): Thomas Kuhn and the Sociology of Science</td>
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<td><strong>COFFEE BREAK</strong></td>
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<td>17.00 – 17.40</td>
<td>Miklós Rédei (London School of Economics): Hilbert’s 6th Problem and Axiomatized Quantum Field Theory</td>
<td>Michael Schomer (University of Innsbruck): Thomas Kuhn in England. The London Colloquium in the Philosophy of Science 1965</td>
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<tr>
<td>17.45 – 18.25</td>
<td>Jan Faye (University of Copenhagen): Does the Unity of Science have a Future?</td>
<td>Elisabeth Niemeth (University of Vienna): Edgar Zilsel on the Relationship between the Logical Analysis of Science and the History and Sociology of Science</td>
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<tr>
<td>18.30 – 19.10</td>
<td>Gereon Wolters (University of Konstanz): Is there a European Philosophy of Science?</td>
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Karl Popper und die Geschichte


CV

Ingrid.Belke@dla-marbach.de
A Matter of Substance? Gaston Bachelard on Chemistry’s Philosophical Lessons

Many historians of philosophy of science have pointed out that traditionally philosophers of science have paid selective attention to some sciences rather than others. Physics has been the model for a large part of mainstream of philosophy of science. Critics have argued that this has created a philosophy of science that has often been claimed to be general but has in fact reflected the particular science taken as model. On the other hand, some philosophers, as for instance Bernadette Bensaude-Vincent, have argued that the distinctiveness of an important part of French philosophy of science comes from its focus on chemistry. In this paper I shall focus on the significance of chemistry for some crucial aspects of the philosophy of Gaston Bachelard. He believed that ‘philosophy should follow science’ and that ‘the major lesson that the philosopher should learn from the evolution of science is that philosophy itself should be improved’. Here I will look specifically at some of the lessons that for Bachelard philosophy should learn from chemistry, including lessons about the role of analysis and synthesis in knowledge, the concept of substance and of the scientific object.

CV
Cristina Chimisso, PhD (University of Cambridge) is Senior Lecturer in Philosophy and European Studies at The Open University (United Kingdom). She was previously Rathenau fellow at the Max Planck Institute for the History of Science (Berlin), Sarton fellow at the American Academy of Arts and Science, and post-doctoral fellow at the Department of History of science, Harvard, and lecturer at the University of Aberdeen. She is the author of the monographs Writing the History of the Mind: Philosophy and Science in France, 1900 to 1960s, Ashgate 2008, and Gaston Bachelard: Critic of Science and the Imagination, Routledge 2001, and of articles on history and philosophy of science, including on Georges Canguilhem, Gaston Bachelard, Hélène Metzger, Aldo Mieli and Lucien Lévy-Bruhl.

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Metaphysics in the Thirties: Why Should Anyone Care Now?

We live in a metaphysical age. So some philosophers are now baffled (and others outraged) that members of the Vienna Circle in the 1930s attacked metaphysics as empty at best and utterly unintelligible at worst. This paper examines this rejection of metaphysics to understand both what metaphysics was then taken to be and why the rejection took the form that it did. The answer, it turns out, is as much political – in the widest sense – as it is scientific. Once we see that, we can begin to see why that discussion of metaphysics more than 80 years ago is relevant to our own time.

CV
Richard Creath is President’s Professor of Life Sciences and of Philosophy at Arizona State University, where he is also Director, Program in History and Philosophy of Science. He is the author of numerous papers on Rudolf Carnap and W.V. Quine, especially on the topic of analyticity. Prof. Creath is the editor of Dear Carnap, Dear Van: The Quine-Carnap Correspondence and Related Work and co-editor, with Jane Maienschein, of Biology and Epistemology. He is also General Editor of the multi-volume Collected Works of Rudolf Carnap, forthcoming from Open Court Publications.
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The talk will give a survey of Kuhn’s publications and dealings with the sociology of science. This includes his early acquaintance with Ludvik Fleck’s work “Die Entstehung einer wissenschaftlichen Tat sache” (to which Kuhn came back in the introduction to the American edition of that book in 1979) and his participation in the Berkeley conference series about measurement in the social sciences in the late 1950s. Around 1960 Kuhn had plans to develop sociology of science to a respectable and powerful academic discipline, with the collaboration of some leading representatives of that field like Robert K. Merton and Bernhard Barber. It is a question why these ambitions were not fulfilled. Surprisingly in “Structures”, published soon afterwards, sociology of science played only a minor role. And in the end Kuhn had to struggle more and more with currents like the “strong programme” on the one hand and the “strong theory” of science that is completely at odds with the logical empiricist picture. In spite of that Joseph Sneed, Wolfgang Stegmüller and their structuralist school claimed that there is a natural way to reconstruct the whole development of a science, with the inclusion of both the normal and the revolutionary phases, from a purely formal point of view. In this paper I shall defend that claim of the structuralist school. I shall argue that Kuhn never claimed that it is impossible to reconstruct revolutionary phases of a scientific theory from a formal and normative point of view. Kuhn’s challenge to the logical empiricist tradition was not the thesis of total failure of the formal and normative account but rather the claim that a rational reconstruction of the sciences is necessarily incomplete as long as it is exclusively formal and normative and does not take into account the whole historical reality with its indispensable sociological and psychological aspects.

The main basis of this paper is the scientific correspondence between Thomas Kuhn and Wolfgang Stegmüller Nachlass at the Brenner Archive in Innsbruck. This correspondence provides new insights into the philosophical positions of both Stegmüller and Kuhn. In particular, it turns out from the correspondence that Kuhn’s reaction to Stegmüller’s formal “Sneedification of Kuhn” was entirely positive and that Kuhn took Stegmüller’s formal account quite seriously, as a means for a further clarification of his philosophical positions.

CV
Christian Damböck studied philosophy in Vienna with added focuses on mathematics and history (MA 1998, PhD 2005). From 2002 to 2011 he worked in several research projects at the Institut für Philosophy in Vienna Circle, under the leadership of Friedrich Stadler. His main research topics are history of philosophy of science in the 19th and 20th century in central Europe; the philosophy of Dilthey; the philosophy of Carnap; history and philosophy of logic; formal epistemology; philosophical logic; methodological questions in philosophy and philosophy of science; the descriptive-normative-distinction in philosophy of science; the philosophy of Thomas Kuhn and Wolfgang Stegmüller; philosophy of mind; philosophy of language.

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Richard Dawid (University of Vienna)

A Bayesian Model of No Alternative Arguments

In the absence of empirical confirmation, scientists often resort to non-empirical strategies of theory assessment in order to enhance trust in their theories’ empirical viability. A main strategy of that kind is based on the observation that no-one has found an alternative to a proposed theory so far. We construct a Bayesian model to show that the observation of a lack of alternatives indeed constitutes confirmation of the one available theory under certain conditions. The talk is based on joint work with Stephan Hartmann (Tilburg).

CV
Richard Dawid is a philosopher of science at the University of Vienna and the Institute Vienna Circle. He holds a PhD in physics (University of Vienna). He has worked at the technical University of Munich, the UC Berkeley and as a visiting fellow at the University of Pittsburgh. A main focus of his work is the philosophical analysis of contemporary high energy physics. Two core questions he addresses are the ontological implications of those theories and the strategies of theory assessment in the absence of empirical confirmation.

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Claude Debru (Ecole normale supérieure, Paris)

On the Relationships Between Neuroscience and Philosophy:
The Case of Sleep and Dreaming

In the late nineteen fifties a series of discoveries in the US and in France lead to the idea that the so-called rapid-eye-movement sleep or paradoxical sleep could be the neurophysiological basis of dreaming as a special case of conscious experience. These discoveries, made by Eugene Aserinsky and William Dement in the US, and by Michel Jouvet in France, created the hope of providing an experimental content to the old philosophical theory of psychophysical parallelism, and especially of providing an experimental equivalent of the basic concepts of Freudian psychoanalysis. After many intense discussions these hopes could not be entirely fulfilled. However, the techniques used in the sixties and seventies, mainly based on electrophysiology and electroencephalography, are more and more replaced by imagery techniques which provide a finer picture of brain tissue activity in sleep and dreaming, so that psychophysical parallelism keeps its philosophical value. Psychoanalytical theories of dreaming appear less compatible with physiological data. Current theories about the biological functions of sleep and dreaming are very different in their orientations. However, Michel Jouvet’s functional theory of dreaming as a reprogramming of genetical behavioral properties remains a major one. Dreaming could play a regulatory role in the interaction between genetical individual properties and day-time experience, due to brain plasticity. These ideas may lead to further researches performed on the molecular and cellular level of brain activity in small physiological time ranges.

CV
Claude Debru is Professor of philosophy of science at the Ecole normale supérieure in Paris. He has written on the history of protein chemistry and molecular biology, on contemporary sleep and dreaming research, on the history of hematology and on epistemological problems of hematological research; on the development of neuroscience in France after World War Two, and on the relationships between philosophy and psychophysiology regarding the structure of psychological time. He has been active in the creation of the European Association for the History of medicine and health and in the creation of the European Society for the History of science. He is a full or corresponding member of several Academies and a member of the Scientific Committee of the ESF Philosophy of science in a European perspective Programme.

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Michael Esfeld (University of Lausanne)

In Search for a Causal Explanation of the Bell Experiments

The theorem of John Bell (1964) proves that no local theory can account for the correlations that quantum theory predicts and that have subsequently been confirmed by experiments. However, Bell’s theorem does not imply that we have to countenance what Einstein dismissed as “spooky action at a distance” in order to explain these correlations. The main idea in the philosophical literature is that the quantum systems in question are non-separable and that the notion of nonseparability can show the way to an explanation of these correlations that avoids a commitment to action at a distance. The notion of non-separability can be precisely spelled out in the framework of ontic structural realism (OSR), which has been developed by European philosophers of science over the last decade. However, it is clear by now that OSR is an ontological position about what there is in the physical world (namely certain structures), but that as such it does not include a dynamics for these structures and, consequently, not an explanation of experimental results. Against this background, I shall develop a framework for a dynamics within OSR and apply this framework to the task of a causal explanation of the non-local correlations manifested in the Bell experiments. Finally, I shall relate that framework to the three standard interpretations of quantum theory, namely the Everett interpretation, the Bohm interpretation, and the collapse interpretation (GRW). The result will be that all three of these interpretations fit into OSR and can on the basis of this ontology provide for a causal explanation of the Bell experiments.

CV

Michael Esfeld, born 1966, is since 2002 full professor of philosophy of science at the University of Lausanne. His main areas of research are the metaphysics of science, the philosophy of physics, and the philosophy of mind. In his recent years, he has notably worked on ontic structural realism, the causal theory of properties, and mental causation. His recent publications include a book on Conservative reductionism (with Christian Sachse, Routledge 2011), and introductory books to the philosophy of science and the philosophy of mind in French and German. Recent papers include “GRW as an ontology of dispositions” (with Mauro Dorato), Studies in History and Philosophy of Modern Physics 41 (2010); “Physics and causation”, Foundations of Physics 40 (2010); “Psycho-neural reduction through functional sub-types” (with Patrice Soom and Christian Sachse), Journal of Consciousness Studies 17 (2010).

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Jan Faye (University of Copenhagen)

Does the Unity of Science Have a Future?

The main idea behind the program of logical positivism was that of the unity of science. The idea carried the belief that all the sciences including the social sciences and the humanities ought to share some common features if these disciplines were to be considered genuine sciences (Wissenschaften). In the end, according to the standard view, the unity of science program failed because it entailed unrealistic commitments to anti-metaphysics, behaviourism, reductionism, nomothetic descriptions, objectivity, universalism, value-freeness, and verificationism. Today no philosopher of science would even think of these commitments to hold unrestrictedly for the natural sciences. The criticism raised against the logical positivist view of the unity of science program was that neither the social sciences nor the humanities were able to meet most of these requirements which were given a strong positivistic interpretation. The opponents pointed out that both the social sciences and the humanities shared an orientation towards idiographic descriptions. Hence Carl Hempel’s covering law model of explanation was useless as an account of explanation in history, psychology, sociology or anthropology. In fact, humanistic disciplines were more interested in understanding than explanation. Also the critics emphasized that research within the social and humanistic fields was not value-free, and the humanities at least were interested in subjectivity as much as objectivity. Moreover, they stressed that our understanding of social and humanistic phenomena depends on the cultural and historical context of our inquiry.

In my talk I shall nevertheless argue for a unity of all sciences in spite of all the differences. I point to some of the mistakes made by the positivists but claim that these mistakes do not falsify the main idea. To carry such an argument through requires some revision of some philosophers’ understanding of what it takes to be an interpretation, an explanation, a law, a model, and a theory.

CV

My scientific publications cover a broad spectrum of topics within philosophy of science including metaphysics, philosophy of space and time, the interpretation of quantum mechanics, general scientific methodology, and the philosophy of the humanities. I have authored 9 books, edited 15 books, and published around 120 scientific and philosophical papers. Several of them are published in Danish, but most in English. The books include The Reality of the Future (1989), Niels Bohr: His Heritage and Legacy (1991), Rethinking Science (2002), and After Postmodernism: A Naturalistic Reconstruction of the Humanities (2011).

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Materialien zu Moritz Schlicks intellektueller Biographie: Franz Erhardt und die Habilitation in Rostock


Owen Flanagan (Duke University, Durham)
The Influence of Positivism on B. F. Skinner’s Radical Behaviorism

B.F. Skinner was working as a poet in Greenwich Village in NYC, when he read a popular article by Bertrand Russell on logical positivism. In his autobiography Skinner says that this was a turning point. After reading Russell on Viennese positivism, he applied to psychology program at Harvard proposing to give „operational definitions of “belief” and “desire.” The rest, as we say, is history. In this talk, I explore the question of whether, and if so how, Skinner’s brand of radical behaviorism remained true to the spirit of the Viennese positivism that allegedly inspired him.


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Probabilistic Epistemology: A European Tradition

Probabilistic epistemology holds that the analysis of knowledge should start from the acknowledgement that probability is an essential ingredient of science and more generally of human knowledge, and that induction is a necessary constituent of the scientific method. This trend has been developed by a number of authors including Richard Jeffrey, Brian Skyrms, Patrick Suppes, and Bas van Fraassen, whose steps have been followed by so many that a probabilistic conception of epistemology is gradually becoming predominant. While probabilistic epistemology has progressively flourished, awareness of its origins has been somewhat left behind. Probabilistic epistemology is usually seen as a product of the encounter of logical empiricism with American pragmatism. Without denying the impact of American pragmatists on logical empiricists, it can be argued that a probabilistic approach to epistemology was already part of the European scenario before the dissolution of logical empiricism in the late 1930s. Traces of probabilistic epistemology can be found in the writings of a number of authors like Janina Hosiasson, Bruno de Finetti, Harold Jeffreys, Frank Ramsey and Hans Reichenbach. The work of these and other authors stemming from the four corners of Europe testifies to the existence of a European tradition in probabilistic epistemology.

CV

Maria Carla Galavotti is Professor of Philosophy of science at the University of Bologna, life member of Clare Hall College, Cambridge and of the Pittsburgh Center for the Philosophy of Science. She is Chair of the European Science Foundation Scientific Networking Programme “The Philosophy of Science in Europe” (2008-2013). Her list of publications includes a number of articles published in important journals; the volume Philosophical Introduction to Probability, Stanford 2005; and the collections Bruno de Finetti, Radical Probabilist, London: College Publications, 2009; Cambridge and Vienna. Frank P. Ramsey and the Vienna Circle, Dordrecht-Boston 2006; Observation and Experiment in the Natural and Social Sciences, Dordrecht-Boston 2003, Stochastic Causality, (edited with P. Suppes and D. Costantini), Stanford 2001; and Reasoning, Rationality, and Probability, (edited with R. Scazzieri and P. Suppes), Stanford 2008.

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The Vienna Circle: Influences on Norwegian Philosophy

Arne Naess and his philosophical works are of course deeply marked by his interactions with the Vienna circle, even there are other significant influences, and his later philosophical works present a multitude of topics and approaches. In my paper I will trace some of the Viennese influence on Norway through Arne Naess, and also try to show that the most important influences from Vienna to Norway followed other paths. I shall deal with the first by discussing some writers directly influenced by Naess, and the second by discussing more thoroughly three writers who can be seen as bringing Vienna to Norway independently of Naess. They are Knut Erik Tranøy, Dagfinn Falloesdal, and Jon Elster. Tranøy(doctorate in Cambridge), discussed very early the ethical non-cognitivism of Carnap and voiced strong criticism of it in the early 50thies. Tranøy was influenced by British philosophers and also by Georg Henrik von Wright. Dagfinn Falloesdal, (Harvard) developed philosophical views in critical discussions of Quine, and took some of Quine’s criticisms of Carnap much further. Jon Elster (Paris) was partly influenced by Falloesdal, and developed positions in the philosophy of social science with great analytical clarity and respect for knowledge of the sciences in question, thus manifesting the Viennese spirit (of f. inst. Neurath).

CV

Olav Gjelsvik received his doctorate in philosophy from University of Oxford, where he wrote a thesis on the relationship between metaphysical and epistemological aspects of the Mind-Body problem. He has since then been employed by the University of Oslo, as full professor from 1994, and has held visiting positions in Oxford, Berkeley, and LSE. He has written papers and articles about many issues in the philosophy of logic, language, mind, in metaphysics and epistemology, and also about rationality and the addictions. Presently he works on accounts of agency. He is since 2007 a Research Director at CSMN, a Centre of Excellence at the University of Oslo, since 2010 its Director.

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Michael Heidelberger (University of Tübingen)
Mathematics and Reality: Alternative French Conceptions

In this paper, I would like to deal with some French conceptions of the philosophy of mathematics starting with Auguste Comte. They are then compared to the received view of Logical Empiricism.

CV
Michael Heidelberger holds the chair for Logic and Philosophy of Science at the University of Tübingen. At the centre of his interest are topics related to causality and probability, measurement and experiment. He specialises in the history of the philosophy of science, mainly of the late nineteenth and early twentieth century and focuses on philosophy and history of psychology, of physics and related subjects in this period. He is the author of Nature from Within: Gustav Theodor Fechner’s Psychophysical Worldview (University of Pittsburgh Press 2004) and of many articles on a wide variety of subjects. Together with Gregor Schiemann, he has recently edited a volume on the notion of hypothesis in science: The Significance of the Hypothetical in the Natural Sciences.

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Rainer Hegselmann (University of Bayreuth)
Modeling Hume’s Moral and Political Theory – Scientific Status and Perspectives

Hume’s moral and political theory is about the problems, helpful inventions, and driving mechanisms of the evolution of societal forms from small to large groups. Hume’s theory is rich and informal and although over 250 years old, it is still a modern theory. HUME1.0 is a computer model that reconstructs this theory and that gives detail and precision to the complex and dynamic interplay of trust and trustworthiness, the division of labour, and material wealth. The talk, firstly, describes the components of HUME1.0, solutions of design problems and some initial results. Secondly, the talk discusses the status, dangers and perspectives of such an approach.

CV
Rainer Hegselmann was born 1950 in Essen (Germany). 1969–1973 he studied philosophy and social sciences at Bochum University. 1977 he received a doctoral degree in philosophy from Essen University, 1983 a habilitation from Karlsruhe University. In the years 1986–1988 he got a Heisenberg stipent from the DFG. 1988–1996 he was professor at Bremen University. Since 1996 he is professor of philosophy at the University of Bayreuth. He was fellow of the Netherlands Institute for Advanced Study (NIAS), the Center for Interdisciplinary Research (ZiF) of Bielefeld University and guest professor at the Catholic University of Leuven.

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During the almost 20 year both of us have been interested in the Vienna Circle, its historical perception has changed in many ways. While back then a large number of historical studies and philosophical analyses set out with the declared intention to overcome the ‘received view’ and go back to the sources themselves, today there exists a broad historical scholarship about the movement’s core members and their embedding into Austrian and German intellectual traditions. While this scholarship could initially be subdivided into a strand that took the Vienna Circle as part of an Austrian Philosophy and a contrasting one that analyzed the movements’ neo-Kantian roots, Otto Neurath and Rudolf Carnap being the main protagonists respectively, today we witness a stunning plurality both as regards the themes and the methodologies applied. Albeit less scrutinized, the same holds true for the broader movement of Logical Empiricism. Commencing from the recently published Cambridge Companion, our paper provides a provisional bridge Companion, our paper provides a provisional guide on methodology and investigations into the lessons of the surprising diversity on the interactions of philosophy and history of science.

On a first level of classification, one finds standard historiographic methods, among them network history, institutional history, intellectual history, history of ideas, cultural history, applied to the Vienna Circle alongside the history of philosophy. On a second level, these methods interact with diverging intellectual and philosophical agendas, ranging from upholding the legacy of Red Vienna or the late Enlightenment to specific programs in contemporary philosophy of science, ranging from Neurath’s economics to Carnap’s Aufbau and quasianalysis. It is interesting, Again historicizing, on a third level, these justificatory employments we find that they were started by the movement itself, both the form of programmatic writings and intellectual autobiographies, a fact which influenced the critics’ appraisal of the Circle. On a fourth level, the more recent debates about what constitutes, both historically and thematically, the history of philosophy of science can be understood as an attempt to redefine the Vienna Circle’s historiographic narrative.

CV
Veronika Hofer is a researcher at the Medical University of Vienna and a research associate at the Center of Bioethics at the University of South Carolina. She has studied history, German literature and philosophy at the Universities of Vienna and Salzburg. Her main areas of research are the history of biology and medicine in the 19th and 20th century, especially the history of genetics, eugenics, and zoological gardens, and the history of the philosophy of biology in the 20th century.
Michael Stöltzner is an associate professor of philosophy at the University of South Carolina. He has studied physics and philosophy at Tübingen, Trieste, Vienna, and Bielefeld, was a scientific member of the Institute Vienna Circle, and held positions at the Universities of Salzburg, Bielefeld and Wuppertal. His main areas of research are history and philosophy of physics and applied mathematics, core principles of mathematical physics; history of logical empiricism; the development of formal teleology; and the philosophy of applied science, in particular the role of models and ceteris paribus laws.

Veronika Hofer (Medical University of Vienna) and Michael Stöltzner (University of South Carolina)

Vienna Circle Historiographies

Relativism is the bane of cultural history. Intellectual historians want to do justice to the past but sometimes it seems virtually impossible to do so. It is bad enough that some positions, say, Aristotle’s view of women or slavery, are beyond our ken but often it is scarcely possible to make head or tail of the way a problem is posed. If you can’t understand the question, there is not much hope of making sense of any answer that is proposed. So we sometimes end up in a situation where the very problem that a thinker poses is enough to disqualify him from being taken seriously in the first place; some perfectly respectable scholars simply refuse to ‘get their hands dirty’ as it were and cultural history suffers for it. Cultural historians seem to be impaled upon the dilemma: subtle anachronism or mere relativism. The both are self-defeating for historians: the former because it is a-historical and the latter because it abandons history’s chief challenge: to make sense of the past. The conception of rationality embodied in historically-oriented philosophy of science with its emphasis upon science as reliable knowledge grounded in the practice of a critical community (vulgo “paradigms” in Kuhn’s terms) presents us with an intellectual instrumentarium that can aid cultural and intellectual historians to produce that robust relativism that permits us to evaluate the past on its own terms without being ourselves committed to accepting that evaluation. There is a problem of reflexivity but it is not a fatal one. These ideas will be discussed in terms of my own researches into Otto Weininger and fin de siècle Viennese culture.

Allan Janik (The Brenner Archives Research Institute, University of Innsbruck)

The Importance of Historical Philosophy of Science for Cultural History

CV
Allan Janik, citizen of both Austria and the United States, is a philosopher and historian of ideas. He is senior research, fellow of the Brenner Archives at the University of Innsbruck and honorary professor of philosophy at the university of Vienna. His many books include Wittgenstein’s Vienna (with S. Toulmin), The Concept of Knowledge in Practical Philosophy (in Swedish), Style, Politics and the Future of Philosophy as well as the study Towards a New Philosophy for the EU (Foundation for Political Innovation 2008). He is especially interested in problems surrounding the European Union’s “democracy deficit”, the nature of participatory democracy and the role of conflict in democratic society.

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Gödel and Carnap. Platonism vs. Conventionalism

Kurt Gödel (1955) seemed to successfully refuted the core of Carnap’s “Syntax-Program”, namely that one cannot do or even just formulate mathematics without context. (I.e. one needs significant portions of Hilbert’s “intuitive” mathematics.) Gödel omitted an explication of Conventions – other then that they allegedly exclude intuition –, but he also omitted an explication of Intuition itself (the faculty of observation which makes out the content of mathematics). Surprisingly, Gödel himself contributed to Carnap’s famous “Principle of Tolerance” (Logical Syntax §17), the core of Carnap’s Conventionalism – although of course Gödel would never have agreed to the formulation there. But Gödel’s main thesis about Conventionalism used in his refutation of the “syntax program”, namely that Carnap resorted to conventions in order to “eliminate” intuition, is misleading. For it can be shown that, unbeknownst to Carnap (or Gödel), conventions in fact “reveal” intuitions in any case. Moreover it can also be shown that Gödel’s definition of Platonism, which makes essential reference to intuition, actually makes Platonism compatible with Conventionalism! Intuition simply needs to be explicated as normative value judgment – Gödel came to within a hair’s breadth to this idea. With reference to Hume’s Law (fact/value dichotomy), Platonism is just the belief in objectively valid norms. Hume’s dichotomy is presupposed in (Bayesian) Decision Theory, and using it we may easily distinguish the real from the ideal (Platonic) world. We also quickly see that Conventionalism is compatible with Platonism – so long as conventions are sufficiently well established. In retrospect we may view Carnap as decidedly Platonistic, at least for certain areas: namely in his Inductive Logic.

CV

• Born 1939 in Darmstadt, Germany, raised in the USA. Study of Philosophy at Lehigh University, Bethlehem, PA, with a B.A. in 1962. Further studies in Philosophy at New York University 1962–64; at the University of Munich with Wolfgang Stegmüller; graduation with Ph.D. in 1976 at the University of Nebraska–Lincoln under Werner Leinfellner with a dissertation on Carnaps Inductive Logic.
• Managing Editor of the journal Theory & Decision 1970–76.
• Participation in and organization of Wittgenstein Symposia, Kirchberg am Wechsel 1977–78.
• Participant in a Research Project on the Vienna Circle with Friedrich Stadler and Karl Müller, Vienna 1981–85.
• Habilitation in Philosophy of Science at the University of Vienna in 2000 with the topic “Kurt Gödel’s Philosophy of Mathematics”.
• Author of several dozen papers and articles. Editor or co-editor of several collections of research studies and proceedings volumes.
• Co-editor with three contributions of two collections on Kurt Gödel — Wahrheit und Beweisbarkeit, I & II, Vienna 2002.
• Teaching duties at the Lauder Business School since 2003; Professor (FH) 2010.

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Heidi König-Porstner (University of Vienna)

General Relativity in the English-speaking World: Henry L. Brose’s Translation of Moritz Schlick’s “Space and Time in Contemporary Physics”

It was on an unusual path that Moritz Schlick’s monograph „Raum und Zeit in der gegenwärtigen Physik“ had made its way into the English-speaking world: Its translation took place in a German prisoner camp during the Great War. One of the internees, the young Oxford physicist Henry L. Brose, had read about Einstein’s theory of general relativity (GR) in the Vossische Zeitung, arranged for books on the subject to be sent into the camp, and dedicated the remaining years of his time as an ‘enemy alien’ in Germany to their study and translation. In England, prior to November 1919, when the spectacular results of Arthur Eddington’s eclipse expedition confirmed Einstein’s theory, no arrangements for the publication of either translations or original works on Einstein’s theory had yet been made. The sudden interest aroused by this ‘Revolution in Science.’ (The Times, 7 November 1919) had found British publishers unprepared. Moreover, the tense political situation between Britain and Germany had had a devastating effect on communication between the corresponding scientific communities, and knowledge on GR was scarce even among British physicists. So when – thanks to Brose’s enormous efforts – Space and Time in Contemporary Physics was published in spring 1920, it was one of the very first popular expositions on GR to be available in British bookshops. Besides retracing mechanisms of knowledge transfer between scientists from belligerant nations during and after WW1, I shall try to evaluate the impact of Schlick’s monograph on the philosophical reception of GR in England of the early 1920s.

CV


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Some Highlights from the Vienna Circle Archive

The Vienna Circle Archive at the Noord-Hollands Archief in Haarlem, the Netherlands, contains the papers of Moritz Schlick and Otto Neurath. In my presentation I will first sketch the history of the Archive and give a global overview of its contents. I will then single out some items of particular interest for further discussion.

CV

Anne J. Kox is Pieter Zeeman Professor of History of Physics at the University of Amsterdam and a member of the Board of the Vienna Circle Foundation, which administers the Vienna Circle Archive. He is also a long-standing member of the editorial team of the Einstein Papers Project at the California Institute of Technology.

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Truth Approximation by Belief Revision

Ilkka Niiniluoto (1999) was the first to raise the question whether the (AGM-)Belief Revision (BR) program and the Truth Approximation (TA) program could fruitfully interact. At the first EPSA-conference (Madrid, 2007) there were at least three talks on the subject, by Gustavo Cevolani and Francesco Calandra (2009), Theo Kuipers (2007, unpublished) and Niiniluoto (2009). In his invited lecture, Niiniluoto sketched the development of three more or less European research programs (Structuralism, Belief Revision, and Truthlikeness) and the possibility of interaction. This year there appeared Belief Revision Meets Philosophy of Science, edited by Erik Olsson and Sebastian Enqvist, without any contribution on BR meeting TA. No Complaint! I know that at least some of those invited to contribute, myself included, were at the time (2007) not yet ready for it. At the second EPSA-conference (2009, Amsterdam) I organized a symposium entitled as the present talk. It was easy to find contributors from the TA-side, but it was difficult to find contributors from the BR-side. Contributors were: Gustavo Cevolani (Bologna) &Vincenzo Crupi (München) &Roberto Festa (Trieste), Ilkka Niiniluoto (Helsinki), Gerhard Schurz (Düsseldorf), Sonja Smets (Groningen) &Alexandru Baltag (Amsterdam), Sjoerd Zwart (Delft/Eindhoven) &Gerard Renardel (Groningen).

Recently appeared Belief Revision Aiming at Truth Approximation, a special issue of Erkenntnis (75.2; September), edited by Gerhard Schurz and myself, and including all contributions, and two other papers, one by Igor Douven (Groningen) & Christoph Kelp (Leuven) and a refined version of the EPSA-2007-contribution of myself (Groningen). In the paper I will present 1) a survey of the problem area, 2) an indication of the content of the special issue, and 3) a general framework that unites the basic version of at least three prima facie different approaches to Truth Approximation by Belief Revision, viz. the conjunctive (Cevolani, Festa), the monadic (Niiniluoto) and the nomic one (Kuipers).

CV


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Marvin Kusch (University of Vienna)

Wittgenstein’s *On Certainty* and the Philosophy of Mathematics

This paper investigates the relationship between Wittgenstein’s last notebooks (published posthumously under the title „On Certainty“) and his reflections on the foundations of mathematics of the 1930s and 1940s. The central focus will be how the category of „certainties” emerges in the reflections on mathematics (and in Wittgenstein’s „Lectures on Religious Belief”), and on whether the last notebooks can be read as a contribution to the philosophy of mathematics.

CV


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Ladislav Kvasz (Charles University, Prague)

Mathematics and Experience

The Vienna Circle understood mathematics as an a priori discipline whose propositions are analytic. The aim of the paper is to put this view into a broader historical context and to stress also the experiential dimension of mathematics. We will introduce the notion of *symbolic experience* and argue that formal logic is, besides arithmetic, algebra and the calculus, a further tool for obtaining such experience. We will therefore interpret the thesis that mathematics is reducible to logic as the thesis of linguistic pessimism - as the claim that the symbolic tool of formal logic is the final symbolic tool and will be never overcome by some new one. We will argue against this thesis.

It seems that each symbolic tool of the past was accompanied by a philosophical thesis very similar to the logicist one. Thus besides the logicist thesis of Frege and Carnap (that mathematics is reducible to formal logic) we will discuss the „arithmetist” thesis of the Pythagoreans (that mathematics can be reduced to arithmetic), the „algebraicist” thesis of Viete and Descartes (that all problems of mathematics are soluble by means of algebra) and the „calculicist” thesis of Laplace (that everything we can know, can be derived by solving differential equations).

In the paper we will try to argue that symbolic experience accumulated during the development of mathematics changed in a radical way how we perceive shape and how we conceptualize motion. Thus it seems that mathematics contributes to our empirical experience.

CV

Ladislav Kvasz obtained Master degree in mathematics in 1986 and PhD in philosophy in 1995, both from Comenius University in Bratislava. Since 1986 he has been employed at the Comenius University. In 2007 he moved to Prague, where he is employed at Charles University. In 2010 he became a Professor of Mathematics Education. He teaches courses on calculus, set theory, logic and history of mathematics. He was holder of the Herder Scholarship (University of Vienna, 1993), Masaryk Scholarship (King’s College London, 1995), Fulbright Scholarship (University of California at Berkeley, 1998), Humboldt Scholarship (Technical University in Berlin, 2001). His book *Patterns of Change* won the 2011 Fernando Gil International Prize for the Philosophy of Science.

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Kuhn, Naturalism and Cognitive Psychology

Logical empiricism and the standard view in the philosophy of science made a strict separation between the logic of science and the empirical study of cognitive processing as it is described by psychology. Kuhn rejected this strict separation and used the results of the nascent cognitive psychology, but also from Gestalt psychology to evaluate and criticize the claims of the standard conception in philosophy of science (as he rejected the separation of the logic of science from sociology and history of science). Already in his unpublished Lowell lectures (1951) Kuhn used such a naturalistic approach and developed it further in The Structure of Scientific Revolutions (1962). Based on this naturalistic approach to philosophy of science and the new results of psychology, Kuhn gave new answers to the question of the relation of theory and observation, but also to the question of conceptual changes and the development of new scientific insights. While the logical empiricists analyzed the logical relations between the theoretical and the observational vocabulary letting aside the psychology of perception, Kuhn used the results of cognitive psychology to contest the independence between theory and observation. The psychology in the 50s strongly suggested the idea, that perceptual processes are penetrated by beliefs and conceptual content. Besides Gestalt psychology, the so called “new look” in psychology (e.g. Jerome Bruner) influenced theory-ladenness and seemed to empirically confirm it. Gestalt psychology suggested that new conceptual structures and patterns are gained through sudden insight and permit a new organization of what we see. We will investigate how this psychological research shaped Kuhn’s conception of scientific revolutions in Structure and will evaluate the conclusions Kuhn drew from psychology.

CV
Christoph Limbeck-Lilienau studied philosophy at the University Paris 1-Sorbonne, at the University of Vienna and for one term at Duke University (USA). Since 2005 he worked in different research projects at the Institute Vienna Circle (University of Vienna), so in the Schlick edition project, in a project on Carnap and Stegmüller and until 2011 in a project on the historical turn in the philosophy of science. He specialized in philosophy of science, philosophy of psychology and in philosophy of mind. He is currently writing his dissertation on the question of content in philosophy of perception.

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What is the Status of the Hardy-Weinberg Law within Population Genetics?

The aim of this communication is to analyze the status of the Hardy-Weinberg law within (classical) population genetics. The analysis will be carried out with the notions of the structuralist view of theories, specially those of fundamental law or guide-principle, specialization, and special law, having as a background a rational reconstruction of (classical) population genetics—sketched in this communication—made within the framework of such a metatheory.

CV

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Jane Maienschein (Arizona State University)

Hans Driesch and Developing Organisms

Hans Driesch is variously praised (as by Rudolf Carnap) for his approach to understanding developmental biology, and reviled for his vitalist approach that is taken as non-scientific or even as providing a foundation for Nazism. It is worth looking more closely at what Driesch actually said, in particular in his widely-read two volume Gifford Lectures of 1906-1908, The Science and Philosophy of the Organism. There, Driesch reviewed existing knowledge about embryonic development, the extent to which it is possible and what limits the ability to derive causal laws to explain how an individual organism becomes organized and retains its individuality. His own interpretations were set aside by generations of biologists, but in fact find resonance with efforts in regenerative medicine and systems biology today.

CV
Jane Maienschein specializes in the history and philosophy of developmental biology and directs the Embryo Project (embryo.asu.edu). She combines analysis of epistemologies, theories, laboratory practices and experimental approaches with study of the people, institutions, and changing social, political, and legal context in which science thrives. Maienschein has won the History of Science Society’s Joseph Hazen Education Award, is a fellow of the American Association for the Advancement of Science and the Association for Women in Science. She is Regents’ Professor, President’s Professor, and Parents Association Professor at Arizona State, where she directs the Center for Biological Laboratory, where she directs the HPS Program. Her 3 books and 12 (co) edited books include the well-received Whose View of Life? Embryos, Cloning, and Stem Cells (Harvard University Press).

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Thomas Mormann (UPV/EHU, Donostia-San Sebastián)

Wiener wissenschaftliche Weltanschauungen – Zwischen “Leben”, Politik, und Wissenschaftsphilosophie


Ich möchte in meinem Beitrag die Problematik des Manifestes im Kontext einer Reihe ähnlicher zeitgenössischer Versuche diskutieren, Wissenschaft und wissenschaftliche Philosophie für gesellschaftliche und politische Veränderungen in Richtung auf Fortschritt und Aufklärung einzusetzen. Insbesondere möchte ich dabei eingehen auf Schlicks Ausführungen zu einer wissenschaftlichen Weltanschauung und Freuds Überlegungen zur ”Weltanschauungsproblematik” eingehen, die diese Autoren etwa zur selben Zeit vorgetragen haben, als das Manifest entstand.

CV

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Elisabeth Nemeth (University of Vienna)

Edgar Zilsel on the Relationship between the Logical Analysis of Science and the History and Sociology of Science

I will talk about the multi-faceted work of the philosopher, physicist, mathematician and historian Edgar Zilsel (1891–1944). I want to shed some light on the question how Zilsel’s studies of the history of ideas, culture and science can be related to his philosophical work. It’s true that during his life Edgar Zilsel devoted himself more and more to historical and sociological research – nevertheless he continued to think of himself as a philosopher. Zilsel felt that he was affiliated to the group of Logical Empiricists, although many of his views do not easily fit in the Logico-Empiricist framework. I will try to understand how Zilsel’s historical – sociological research (into the emergence of the concept of genius and into the emergence of modern science) was related to the philosophical position he took in the Vienna Circle’s discussions about the logical structure of scientific theories.

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Matthias Neuber (University of Tübingen)

Is Logical Empiricism Compatible with Scientific Realism?

Scientific realism is the view that the theoretical entities of science exist. Atoms, forces, electromagnetic fields, and so on, are not merely instruments for organizing observational data but are real and causally effective. This view seems to be hardly compatible with the logical empiricist agenda: As common wisdom has it, logical empiricism is mainly characterized by a strong verification criterion of meaning, i.e., by the project of defining the meaning of theoretical terms by virtue of the meaning of purely observational terms. However, it has been largely ignored by the historians of logical empiricism that there indeed existed a realist faction within the logical empiricist movement. Among the few authors who have recognized both the historical and the programmatic relevance of this realist faction is Stathis Psillos who, in two recent papers, attempts to emphasize the important role played in this connection by Herbert Feigl (see Psillos 2011a) and by Hans Reichenbach (see Psillos 2011b). According to Psillos, it was these two thinkers who documented in their writings the compatibility of logical empiricism and scientific realism.

Like Psillos I am of the opinion that the realist faction within the logical empiricist movement deserves more attention than it has received so far. However, I will come to a different result than Psillos. According to the view I wish to defend, Feigl and Reichenbach (and with them Psillos) are still too optimistic about the ontological impact of language. In order to establish the intended realist account of logical empiricism, more metaphysics is needed than Feigl and Reichenbach (and with them Psillos) would allow. As will be shown, among the logical empiricists themselves it was Eino Kaila (1890-1958) who came closest to this—less linguistic and more metaphysical—kind of approach.

References:

CV
2000-2001 Visiting scholar at the University of Seattle.
2002-2005 Member of the Moritz-Schlick-Edition project at the Institute Vienna Circle.
Since 2005 Docent for ‘Logic and Philosophy of Science’ at the University of Tübingen.
Summer 2010 Visiting fellow at the University of Helsinki.
Recent Publications: Die Grenzen des Revisionismus – Schlick, Cassirer und das ‘Raumproblem’.

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Approximation and Idealization: Why the Difference Matters

Idealizations are distinguished from approximations in that only idealizations involve novel reference. This difference is important when idealizations are created by taking infinite limits such as in statistical mechanics. These infinite limits may have strange properties, much odder than the discontinuities of phase transitions now widely acknowledged in the literature. The infinite limits may be indeterministic, or may not exist at all, so that the idealization of an infinite limit should not or cannot be used.

CV
John D. Norton is Professor of History and Philosophy of Science and Director of the Center for Philosophy of Science at the University of Pittsburgh.

Herlinde Pauer-Studer (University of Vienna)
Kelsen’s Legal Positivism and Vienna Circle Metaethics

Hans Kelsen was a relativist and subjectivist in regard to morality. The belief in objective moral truths amounted for Kelsen to a fundamentalist position, often connected with a conservative natural law tradition incompatible with the value pluralism which is constitutive of democracy. In his metaethical views Kelsen was influenced by the skepticism Vienna Circle philosophers, especially Rudolf Carnap, displayed in regard to the meaningfulness of moral utterances and judgments.

After World War II Kelsen was severely criticized, not least for his subjective metaethics which was considered the reason why Kelsen drew such a sharp line between law and morality. Famous is Gustav Radbruch’s attack that legal positivism had rendered the judiciary helpless towards the Nazi regime.

In my paper I am arguing that Kelsen indeed had the wrong metaethics, but was right to insist on the separation of law and morality. The call for a unification of law and morality was central to the work of leading Nazi jurists. By taking a closer look at the work and arguments of jurists sympathetic to the Nazi regime like Otto Koellreutter, Karl Larenz and Ernst Rudolf Huber I try to show that the simple program of a moralization of law does not help against the Nazi distortions of law. I conclude with pointing out some consequences for current debates in philosophy of law.

CV
Herlinde Pauer-Studer, Professor of Philosophy at the University of Vienna. ERC-Grant 2009.

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Jeanne Peijnenburg (University of Groningen)

Reasoning in Fractals (joint work with David Atkinson)

The concept of justification is at the heart of epistemology, but opinions vary as to what exactly it means to say that a proposition $p$ justifies a proposition $q$. According to Aristotle it means that $q$ can somehow be deduced from $p$, and since his time most philosophers have followed suit. It was only in the twentieth century that alternative understandings of justification have been proposed. The account that is perhaps the most prominent one today is based on Rudolf Carnap’s work. In Carnap’s view, to say that $p$ justifies $q$ is to say that $p$ makes $q$ more probable than it would have been in the absence of $p$. Often one adds to this the requirement that the resulting probability of $q$ be not less than some threshold of justificational acceptance. Earlier we have applied these considerations to one-dimensional chains of probabilistic support. In this talk, however, I take seriously the observation that people typically indulge in many-dimensional reasoning. In particular I consider the case of two-dimensional nets, where each ‘child’ proposition is probabilistically justified by two ‘parent’ propositions. Surprisingly, it turns out that probabilistic justification in two dimensions takes on the form of Mandelbrot’s iteration. Many-dimensional trees of reasons tend to be generated by the same iterative relations as those that give rise to the familiar fractals that have been identified in ferns, clouds, and coastlines. Like so many patterns in nature, probabilistic reasoning seems in the end to be fractal in character.

CV

Jeanne Peijnenburg is professor of Theoretical Philosophy at the University of Groningen, The Netherlands. She has worked in the theory of action (considering the problem of akrasia and the question whether what is done is done). She has also written papers on thought experiments and on the philosophy of Reichenbach, many of them together with David Atkinson. At present she is interested in infinite regress and probabilistic epistemic justification. Her papers appeared in Erkenntnis, Synthese, Mind, Philosophy of Science, Kant-Studien, Studies in History and Philosophy of Science, Philosophical Studies, History of Philosophy Quarterly, Studia Logica, and Notre Dame Journal of Formal Logic.

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Tomasz Placek (University of Cracow)

Two Notions of (In)determinism

In a venerable Laplacean tradition, M. Schlick, H. Reichenbach, and K. Popper explicated the concept of indeterminism in terms of laws of nature and deducibility: roughly, a state $B$ is determined by a state $A$ if (the description of) state $B$ is deducible from (the description of) state $A$ taken together with laws of nature. With this explanation (as they observed), if laws of nature are time-reversal symmetric, it cannot be that the past is determined, but the future is not. Whether the laws of nature are time-reversal symmetric remained a point of contention between Schlick and Reichenbach, however.

In years that followed, a perception grew that epistemic notions (like “to infer”, “to predict”, “to deduce”) are misleading if applied to capture (in)determinism. The spirit of this tradition was nevertheless saved by R. Montague’s model-theoretic definition of deterministic theories. In a nutshell, according to Montague a theory (in the logic sense) is deterministic iff whenever some two models of this theory agree on some initial period of time, they agree everywhere. Montague’s formulation underlies the Lewis-Earman definition of (in)determinism, which is standardly used to adjudicate on determinism of theories of physics.

There is, however, a different intuition about (in)determinism, present in claims like “I may be able to catch this train, but not necessarily so”, or in Aristotle’s discussion of tomorrow’s sea battle. This concept is modal, as it forces one to think of alternative possible future scenario (e.g., one with me on the train, and another with me missing the train). Further, examples like those above require tenses. And to evaluate such sentences we need to take into account their moments (contexts) of use, since such sentences irrediscibly contain temporal indexicals (“now”, “tomorrow”, etc.). This intuition about (in)determinism is rigorously formalised by some logical theories that combine Kaplan’s logic of indexicals and Prior-Kripke logic of tenses and modalities (cf. Belnap, Xu, and Perloff 2001).

The two concepts of (in)determinism are used in disparate areas of discourse: the former typically in debates over (in)determinism of scientific theories and the latter in discussions concerning agency, experiments, or in some accounts of causation. Yet, the two concepts share a common core. The talk finishes with some suggestions how to unify the two concepts.

CV

Tomasz Placek is a professor of philosophy at the Jagiellonian University in Krakow (Poland). His current research concentrates on the philosophy of physics (quantum nonlocality in particular) and general philosophical issues relating to time, tense, and modalities. His earlier work is on history and philosophy of mathematics. He authored two books: Intuitionism and Intersubjectivity, Kluwer 1999 and is Nature Indeterministic? Jagiellonian UP 2001. Apart from being a recipient of scholarly prizes for his work, in 2010 he received a medal: “For stout-hearted defenders of free word”, for his involvement in samizdat’ publishing in 1982–1989.

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The Murder of Moritz Schlick in the Collective Memory of the University of Vienna

Professor Moritz Schlick (1882–1936) was murdered in the Vienna University on June 22nd, 1936, shot by Johann Neböck on the central staircase on his way to the last lecture of the summer term. Neböck, a former student, has already twice been committed to a psychiatric ward for threatening Schlick. A climate poisoned of intolerance and racism added to the crime. The murderer, mentally ill, made Schlick responsible for his personal economic and identity problems. What does it mean to the university, when one of its members was shot, for personal and/or scientific reasons? When the murderer was one of its graduates? In times of austrofascism Moritz Schlick was in part more and more hostile for his philosophical theories, his “lack of transcendency” and his enmity to the official ideology of the church bound “Ständestaat”. The reaction on his murder was therefore restricted to usual forms of courtesy but no special and empathic reactions of mourning or horror. Around his colleagues rather hostility and defamation were widespread, assisted by general statements that students should not shoot their professors. So an important reaction on the murder was to state an act of self-defense: immediately after the murder the academic senate started an initiative for a law for better protection from mentally ill persons (“gemeingefährliche Psychopathen”) – which wasn’t realized anymore because the Nazi took over power in 1938. The murderer was depromoted after he was sentenced to ten years of jail and didn’t get back his degree even after the academic senate started an initiative for a law for better protection from mentally ill persons (“gemeingefährliche Psychopathen”) – which wasn’t realized anymore because the Nazi took over power in 1938. The murderer was depromoted after he was sentenced to ten years of jail and didn’t get back his degree even after he was amnestied only two years later by the national-socialist regime. How did the university act after the end of austro-fascism and national-socialism, regarding to this murder? What kind of honoring of the intellectual person and the victim of the hostility, anti-intellectualism and anti-semitism of the interwar years existed at the Vienna University? Half a century later first serious plans for at least a commemorative plaque for Moritz Schlick arose. It took five more years before the plaque on the site of his murder was realized and intellectual debates, conferences, memorial lectures and exhibitions took place also at this institution, discussing his fate and ideas. This and other aspects of Moritz Schlick in the commemorative landscape of the Vienna University will be discussed.

CV
Herbert Posch, historian and museologist, since 2004 Institute of Contemporary History/University of Vienna and member of the Historical Commission “650 Years of University of Vienna (1365–2015)”; 1991-2009 Faculty for Interdisciplinary Research and Further Education/University of Klagenfurt (IFF)/Institute for Science Communication and Higher Education Research; 1990-2000 Institute of Sciences and Arts (IWK) in Vienna; main fields of research and teaching are contemporary history of science, history of the Vienna University and her students, history of academic degrees, promotion and depromotion; academic biographies and emigration in the 20th century; academic cultures of memory; university and film; art loss and restitution in Austrian federal collections in the national-socialism; 2009 "Memorial Book for the Victims of National-Socialism at the University of Vienna in 1938"

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What is General Philosophy of Science?

The very idea of a general philosophy of science relies on the assumption that there is this thing called science—as opposed to the various individual sciences. In this programmatic piece I make a case for the claim that general philosophy of science is the philosophy of science in general or science as such. Part of my narrative makes use of history, for two reasons. First, general philosophy of science is itself characterised by an intellectual tradition which aimed to develop a coherent philosophical view of science, qua a part of culture with distinctive epistemic features and a distinctive relation to reality. But, second, this tradition went through some important conceptual shifts which re-oriented it and made it more sensitive to the actual development of science itself. The historical narrative focuses on three such moments: the defining moment, associated with Aristotle, and two major conceptual turns, related to Kant and Duhem. The pressures on the very idea of a general philosophy of science that followed the collapse of the macro-models of science that became popular in the 1960s, the pressures that lay all of the emphasis on fragmentation and not on integration, can be dealt with by a new synthesis within general philosophy of science of the constitutive and the historical, in light of the intellectual tradition that has defined it.

CV
Stathis Psillos is Professor of Philosophy of Science and metaphysics at the University of Athens, Greece. He is the author of: Knowing the Structure of Nature (Palgrave 2009), Philosophy of Science A-Z (Edinburgh University Press, 2007); Causation and Explanation (McGill-Queens U.P. 2002); and Scientific Realism: How Science Tracks Truth (Routledge, 1999). He is also the co-editor of The Routledge Companion to Philosophy of Science (Routledge 2008). He has published more than eighty papers in learned journals and books, on scientific realism, causation, explanation and the history of philosophy of science. He has served as the President of the European Philosophy of Science Association (2007-2009) and is currently the co-editor of Metascience.

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Stathis Psillos (University of Athens)
The paper to be presented is a joint work with Lina Eriksson. It concerns the historically influential betting interpretation of subjective probabilities due to Ramsey and de Finetti. While there are several classical and well-known objections to this interpretation, the paper focuses on just one fundamental problem: there is a sense in which degrees of belief cannot be interpreted as betting rates. The reasons differ in different cases, but all these cases have in common one crucial feature: the agent’s degree of belief in a proposition /A/ need not coincide with her degree of belief in a conditional that /A/ would be the case if she were to bet on /A/, which itself is conditioned on the supposition that she will have an occasion to make such a bet. Even though the two degrees of belief sometimes can coincide (they will coincide in those cases when the bet has no expected causal bearings on the proposition /A/ and the opportunity to bet have no evidential bearings on that proposition), it is the latter belief rather than the former that guides the agent’s rational betting behaviour. Or so, at least, will be argued. The reason is that this latter belief takes into consideration potential interferences that bet opportunities and betting itself might create with regard to the proposition to be betted on. It is because of this /interference problem/ that the agent’s degree of belief in /A/ cannot be interpreted as her betting rate for /A/. This suggestion will be developed in the talk.

CV
Włodek Rabinowicz studied philosophy at the university in Warsaw and then moved to Sweden at the end of the sixties, in the aftermath of the student rebellion in Poland in March 1968. After receiving his doctorate at the Department of Philosophy in Uppsala, he remained there as an Associate Professor until 1995, when he was appointed to the Chair in Practical Philosophy in Lund. Rabinowicz has published extensively in moral philosophy, decision theory, and philosophical logic. He is an editor of /Theoria/ and a former editor of /Economics and Philosophy/. He has been President of the European Society for Analytic Philosophy and Chairman of the Swedish Philosophical Society. Visiting positions include positions as Leibniz Professor at Universität Leipzig; Adjunct Professor at the Research School for Social Sciences (RSSS) in Canberra; Visiting Fellow at All Souls College at the University of Oxford, and Long-Term Fellow of the Swedish Collegium of Advanced Study (SCAS) in Uppsala. Rabinowicz is a member of Institut International de Philosophie, the Royal Swedish Academy of Sciences, the Royal Swedish Academy of Letters, and Academia Europaea. His current areas of research are theory of value and decision theory.

Miklós Rédei (London School of Economics)

Hilbert’s 6th Problem and Axiomatic Quantum Field Theory

The talk recalls the basics of two axiomatizations of relativistic quantum field theory, the Wightman axioms and the Haag-Kastler axioms of local, algebraic relativistic quantum field theory. After pointing out a few conceptually intriguing features of these axiomatizations the question is raised in what sense are these axiomatizations realizations of the program formulated in Hilbert’s 6th problem suggesting the axiomatization of physical theories. It is argued that both the Wightmanian and algebraic quantum field theories are cases of “opportunistic, soft axiomatization”, which is a concept of axiomatization described by Hilbert and von Neumann in their 1926 axiomatization of non-relativistic quantum mechanics.

CV
Miklós Rédei studied physics and philosophy at Loránd Eötvös University in Budapest, Hungary, receiving his PhD in philosophy from Eötvös University in 1982. Currently he is Reader in the Department of Philosophy, Logic and Scientific Method in the London School of Economics. His research interests concern foundational and philosophical problems of modern physics and related more general issues in philosophy of science such as the interpretation of probability and theories of probabilistic causation. He is the author of the book Quantum Logic in Algebraic Approach (Kluwer, 1998), editor of John von Neumann: Selected Letters (American Mathematical Society, 2005) and co-editor of the two volumes of the proceedings of the first EPSA conference in Madrid 2007. He has had a number of visiting positions in the USA and in Europe, including visiting fellowship in the Center for Philosophy of Science in Pittsburgh and in the Dibner Institute for the History of Science and Technology (Boston, MIT). He was chair of the European Science Foundation (ESF) Network “Foundational and Philosophical Problems of Modern Physics” (2003–2005) and is co-chair of “The Philosophy of Science in a European Perspective” ESF Networking Programme (2008–2013). He is a founding member of EPSA and has served on its Steering Committee between 2007–2011. Personal webpage: http://phil.elte.hu/redei/

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Włodek Rabinowicz (University of Lund)
The Interference Problem for the Betting Interpretation of Subjective Probabilities

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My talk is meant as a contribution to the current debates about the relationship between philosophy of science and politics in the Vienna Circle. In the Vienna Circle’s “Manifesto” an “inner link” between philosophy and politics is mentioned, which is to be found, I will argue, in the Vienna Circle’s “scientific world-conception.” In the first part of my talk I shall offer not only an analysis, but also a new interpretation of the Vienna Circle’s “scientific world-conception”: In particular, I will emphasize its practical nature, in that I will interpret its tenets as a set of recommendations. Such recommendations express the particular epistemological attitude in which both the Vienna Circle’s philosophy of science and its political engagement were rooted.

Regarding philosophy, I shall then argue that the scientific world-conception can to a large extent be considered the origin of the way of doing philosophy which we call philosophy of science. Regarding politics, I will reconstruct how the scientific world-conception placed the Vienna Circle within a neoliberal-socialist political network which pursued concrete political aims.

In the conclusion I shall try to point out the significance of my reconstruction with respect to the more general issue of the political relevance of philosophy of science.

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Donata Romizi (University of Vienna)
The Vienna Circle’s “Scientific World Conception” and the Issue of a Politically Engaged Philosophy of Science

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Günther Sandner (University of Vienna)
Otto Neurath and Politics – A Re-evaluation

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Among the Vienna Circle’s members, it was certainly Otto Neurath who was most active and ambitious in matters of politics. His particular self-image as a “social engineer” influenced his understanding of politics to various degrees throughout his intellectual life. A biographical overview shows, however, that politics always played a special and sometimes the most important role in Neurath’s intellectual life. The orientation on social reform issues in his youth, his leading role in the Bavarian socialisation debate, his pedagogical relevance in Red Vienna and, not least of all, his contributions and interventions in the discussions on National Socialism as an émigré are perhaps the most outstanding examples.

Although political questions were never a central theme in research on Neurath (at least not to an extent comparable to very frequently addressed fields such as the philosophy of science and visual education), a number of essays and studies during the last three or four decades have addressed political issues directly.

The paper first addresses these subsequent interpretations of Otto Neurath’s political writings and activities, and discusses their different foci and perspectives as well as accordance and possible contradictions among them. Second, it re-evaluates the main lines of argumentation by looking in detail at exemplary biographical periods of special political interest. And third, it raises the question of how political elements influenced Neurath’s philosophy of science – and vice versa.

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CV
Günther Sandner studied political science, contemporary history, journalism and German literature. His dissertation was on discourses on nature in the German and Austrian social democratic working class movement until 1933. He is active as a lecturer in political science at the University of Vienna and as a teacher in civic education at the Austrian Chamber of Labour’s Social Academy. He has directed and collaborated on a number of research projects on the history of the social sciences and cultural studies, political theory and civic education. His essays and books address Austro-Marxism, cultural studies, civic education, politics of memory and questions of contemporary politics. He is currently writing a political biography of Otto Neurath.

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Georg Schiemer (Munich Center for Mathematical Philosophy (MCMP))

Semantics in Type Theory

The talk will address a critical transition phase in the history of mathematical logic. The period in question stretches from the publication of the second edition of Principia Mathematica in 1925 to the consolidation of metalogic in the 1940s. It is marked by a significant reconception of formal logic, i.e. a gradual transformation of its subject matter, its scope, and its boundaries. It eventually leads to the formation of metalogical disciplines such as formal semantics and proof theory as well as to the consolidation of first-order logic as the standard logical system. The aim here will be to discuss several transformations and non-foundational uses of logical type theory in this period. Specifically, the talk will focus on two closely related developments:

1) Transformations in the semantic conception of the universe of types;
2) Attempts to formalize metalogical concepts in type theoretic logics.

Concerning the semantics of type theory, several contributions concerning the formalization of the type-theoretic universe and the flexibilization of types will be discussed. Following this, we survey different attempts by Carnap and Tarski to express the semantic metatheory of axiomatic theories within a single type-theoretic framework. Specifically, different conventions introduced in their work to simulate domain variation for models of theories expressed in a fully interpreted type-theoretic language will be compared.

CV
Georg Schiemer is currently a post-doctoral researcher at the Munich Center for Mathematical Philosophy (MCMP) at LMU Munich as well as a Lecturer at the Department of Philosophy, University of Vienna. His research interests center on the history and philosophy of logic, early analytic philosophy, and philosophy of mathematics. In 2010, he completed his PhD at the University of Vienna with a thesis on Rudolf Carnap’s early contributions to model-theoretic semantics. He is currently involved in a research project titled “Between Logicism and Metalogic – Nonfoundational Uses of Type Theory” financed by the Austrian Science Fund (FWF).

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Matti Sintonen (University of Helsinki)

The Viennese Heritage in Finland: Kaila, von Wright and Hintikka

Modern philosophy of science as well as foundational studies were brought to Finland by Eino Kaila (1890–1958), professor of Theoretical Philosophy first at University of Turku and then, since 1930, at Helsinki. He had acquainted himself with Vienna Circle publications as well as with its leading representatives. In his book on logical neopositivism he gave an appreciating discussion of Rudolf Carnap’s Aufbau although he remained highly critical of its reductionist commitments.

Kaila’s student G. H. von Wright and “Grandstudent” Jaakko Hintikka then developed the logical theories and tools that gave rise to the Finnish school of inductive logic and philosophy of science. von Wright’s interests in the logic of norms as well as values and human action marked a departure from methodological monism. Yet his view of the aims of philosophy, very much influenced by Moritz Schlick, as well as the logical tools used in analyses of determinism (or determination), causation, or explanation and understanding, were in the Viennese spirit.

Jaakko Hintikka’s work on distributive normal forms (1953) and constituents as well as his possible worlds semantics lead to the formation of some basic tools which were applied to a variety of problems in the methodology and philosophy of science. His recent work on, e.g., the interrogative view of some basic tools which were applied to a variety of problems in the methodology and philosophy of science. His recent work on, e.g., the interrogative view inquiry show that he swims upstream. Whereas it has been fashionable to downplay the role of logic in philosophy of science, Hintikka’s message is: when in trouble, you need more (not less) logic.

CV

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Antonia Soulez (University of Paris 8 – St Denis)

The Name of Wittgenstein in the Manifesto of the VC: A Missed Encounter for Mutually Anachronic Philosophical Projects

After having recalled the reactions of the French reader I had at the time I read the Manifesto for the first time, I will elicit some aspects of the way Wittgenstein is presented and quoted in the Manifesto of the Vienna Circle in 1929. I will take into account biographic-intellectual features of Wittgenstein at that date, at what stage of his thought and work he finds himself to be while he is settling in Great Britain and comes to Vienna just for holidays, being content with meeting only Waismann and Schlick, already two dissidents of the Vienna Circle, and thereby to what extent the Vienna Circle misses the progress of its contemporaneous and so representative thinker.

By bringing out the misunderstandings that are obstacles to their encounter, I hope to make clear the reasons of that missed encounter, if not the impossibility of a successful encounter. The Vienna Circle expects something from Wittgenstein that Wittgenstein cannot not bring not only because the latter is moving towards a new grammatical conception, but also because he is at odds with the ladder of reconstruction, though not exactly in the same sense as in the Tractatus. To what extent did the Vienna Circle he inspired, indirectly contribute to Wittgenstein’s paving his own way against the scientific conception of philosophy?

CV
Born in 1943 in Paris, I am professor of philosophy of language at the University of Paris 8 – St Denis. My researches bear on language and music, in a Wittgensteinian spirit, yet orientated towards confronting heterogeneous traditions of philosophy of music continental and analytical.

My interest into the style of writing philosophy then turned into a comparative investigation into philosophy and music from the point of view of theories of composition, form and matter, understanding meaning, questions of expressivity but inexpressiveness, the relation with Kant’s conception, autonomy of the musical (Hanslick’s filiation), debates overseas about this autonomy, Schönberg and Wittgenstein1, (but also Cage and Wittgenstein2), the importance of Helmholtz’ scientific method of evaluation of consonance and dissonance etc.

In parallel, I have been directing a research seminar on these matters in association with the CICM (dealing with new technologies of composition in musical creation) in the MSH e.g.: Maitres des sciences de l’homme, Paris nord. Hence a number of publications on music: Manières de faire des sons (2010, coord. Horacio Vaggione, composer-researcher), La pensée de G. Granger (Hermann 2010, with Arley Moreno and the collaboration of the music group in the MSH). To be soon published: Autour de Wittgenstein et la musique, with the financial help of the Centre national du livre, in Delatour-France, 2011–12.

Co-founder in 1994 of a review with Jan Sebestik and François Schmitz Cahiers de philosophie du langage, with a recent volume n° 7 on Waismann, Textures logiques (2009) with Jean-Philippe Narboux, and n° 9 in preparation Grammatical et/ou Transcendental with Arley Moreno, I have also created in 2003 a collection Formel informel (also a collective book) with Horacio Vaggione (composer-researcher) and Makis Solomos (musicologist), publ. L’Harmattan.

I co-organize (since 2002) with Arild Utaker (Bergen, Norway) and Esther Ramharter a partnership for annual conference on Wittgenstein alternatively in Vienna, Paris, Bergen/Skjolden, to which young researchers of the three countries are invited to deliver papers in English and exchange ideas.

I have in addition a poetic activity with publications in the review Poésie (dir. M. Deguy) and also books (recently : Sons couleurs, Delatour-France).

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Friedrich Stadler (University of Vienna and Institute Vienna Circle)

From the Vienna Circle to the Institute Vienna Circle: On the Viennese Legacy in Contemporary Philosophy of Science

The Vienna Circle, which was part of the intellectual movement of Central European philosophy of science, is certainly one of the most important currents in the emergence of modern philosophy of science. Apart from this uncontested historical fact there remains the question of the direct and indirect influence, reception and topicality of this scientific community in general contemporary philosophy of science as well as in the philosophy of the individual sciences, including the social sciences and humanities.

In my paper I will focus on the “the present situation in the philosophy of science” (Stadler et al., eds., 2010) by indentifying relevant impacts, findings, and unfinished projects since the classical Vienna Circle. I will also address specific European features of this globalized philosophical tradition up to the present, and outline some future perspectives after the linguistic, historical and pragmatic turns.

CV

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Thomas Uebel (University of Manchester)

Name ist Schall und Rauch? On Naming a Revolutionary Philosophy

The philosophies of the Vienna Circle have been called many things—even by their own protagonists. Typical appellations are ‘Logical Positivism’, ‘Neopositivism’, ‘Logical Empiricism’. In this talk I’ll trace the history of their use and consider whether anything of significance can be derived from this either about the self-understanding of the protagonists or the reception of their philosophies by others.

CV
Thomas Uebel is Professor and Head of Philosophy at the University of Manchester, U.K. His research interests are history of philosophy of science and history of analytical philosophy and systematic issues in epistemology and philosophy of social science. Among his publications are Empiricism at the Crossroads. The Vienna Circle’s Protocol Sentence Debate (Open Court, Chicago, 2007) and the edition (with Alan Richardson) of The Cambridge Companion to Logical Empiricism (CUP, 2007). A Past President of HOPOS, he serves as one of the Team Leaders in the ESF-funded Philosophy of Science in Europe programme and as a member of the Steering Committee of the European Network for the Philosophy of the Social Sciences.

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C. Kenneth Waters (University of Minnesota)

An Argument for Complex Metaphysics Based on the Nature of Systematic Inquiry in an Ultimately Messy Biological World

Philosophers have often asked, “what is a gene?”, as if the concept ought to pick out a fundamental unit of DNA. Having failed to identify such a unit, they have concluded that gene talk is confused, and that the fundamental units of heredity must be elsewhere (perhaps in processes or in the DNA molecule or in the developmental system as a whole). I will examine conceptual practice in research genetics and argue that the gene concept is not problematic. It is both flexible and precise, and it serves the purposes of researchers extremely well. The fact that the concept does not pick out fundamental units indicates that there are no fundamental units in DNA. The metaphysical presuppositions behind questions such as ‘what is a gene?’ or ‘what is an organism’ are mistaken.

CV
C. Kenneth Waters is Professor of Philosophy and Samuel Russell Chair of the Humanities at the University of Minnesota, where he serves as the Director of the Minnesota Center for Philosophy of Science. He is author of numerous papers in the philosophy of science and the history and philosophy of biology. He has written on reductionism, pluralism, and the historical and conceptual basis of genetics. He is co-editor of Scientific Pluralism, Volume 19 of Minnesota Studies in the Philosophy of Science. He is currently writing a book on the epistemology of scientific practice in gene-centered biological sciences.

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Hans Jürgen Wendel (University of Rostock)

Moritz Schlick und die Metaphysik


CV

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When, in the course of human reasoning about events uncertain, it becomes necessary to judge whether one event is unrelated to another, we turn to the Laws of Probability and to Nature's regularity to declare the causes which impel our judgments. We hold this truth to be self-evidence, that one event is probabilistically independent of another just when the probability of both is determined by the product of each, and when the estimate of one event is unchanged given the outcome of the other, when ye outcome be positive. Prudence, indeed, will dictate that this equivalence between stochastic independence and epistemic irrelevance, long established, should not be changed for light and transient cause. Yet, to prove this cause Just, and this Decimation sound, I shall let Facts be submitted to a candid world.

Gregory Wheeler (New University of Lisbon)

The Decimation of Independence

CV

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Jan Woleński (University of Cracow)

Kazimierz Twardowski and the Development of Philosophy of Science in Poland

Kazimierz Twardowski studied with Brentano and followed his style of doing philosophy, in particular, the thesis that the method of philosophy is the same as the method of natural science. Hence, philosophy of science (Polish philosophers preferred the name “methodology of sciences”) became of a crucial importance for philosophy as well as science. Twardowski did not contribute to philosophy of science in its contemporary setting. Perhaps his definition of reasoning as based on the concept of logical consequence and his ideas related to the division between a priori and a posteriori science should be remembered.

Twardowski established so-called Lvov-Warsaw School at the beginning of the 20th century. The history of this school can be divided into two periods: before 1918 and 1918–1939. Several members of this school students intensively worked in logic and philosophy of science and achieved remarkable results, particularly in the second period when philosophy of science was influenced by logic. The (at least) following points are to be mentioned:
— the problem of induction (Jan Łukasiewicz, Janina Hossiasson-Lindenbaum);
— classifications of reasoning (Łukasiewicz, Kazimierz Ajdukiewicz);
— radical conventionalism ( Ajdukiewicz);
— applications of many-valued logic to science (Zygmunt Zawirski);
— styles of thought (Ludwik Fleck – outside of Twardowski’s school);
— operationalism (Edward Poznański, Alexander Wundheiler);
— uses of formal semantics in analysis of science (Alfred Tarski, Maria Kokoszyńska);

Polish philosophy of science was closely related to Vienna, not only via Twardowski himself, but also by close contacts and affinities with the Vienna Circle.

CV
Jan Woleński is professor emeritus since 2010. He was ordinarius for philosophy at Jagiellonian University in Cracow since 1991. He is a member of Polish Academy of Sciences, Polish Academy of Arts and Sciences (Cracow), Institut International de Philosophie (Paris), International Program Committee of the Vienna Summer University as well as numerous scientific associations. In the years 2005–2008 he was the President of European Society of Analytic Philosophy. He works in epistemology, philosophy of science, philosophy of language, philosophy of law and history of logic. He published 25 books, edited 30 collections of papers and published over 600 hundred papers.

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In this talk I would like to give a sober and unadorned analysis of the situation, and at the same time make some proposals how to improve it. An improvement of the present situation is, indeed, badly needed, for the answer to the question in the title is not an unequivocal “yes”, but rather “yes and no”. In a geographical sense there is certainly a European Philosophy of Science. Our network, EPSA and its journal are ample proof of it. So the real question is whether there exists a European philosophy of science in a qualitative sense. Here the answer is no, with some qualifications, however.

Globalization in the world of learning has led to an ever increasing use of the English language also in the humanities, and here particularly in disciplines like logic and philosophy of science. So, when I speak of “European” in my talk it is at the exclusion of the British Isles. The linguistic preponderance of English means also and most importantly that the agenda in philosophy of science is set in the Anglophone world, particularly in the US. As a consequence European approaches are largely marginalized and not even taken notice of in other European countries, since the “relay station” is the recognition and discussion of such approaches by major Anglophone figures. As some examples show that the use of the English language is, however, only a necessary condition for a European to be heard. Sufficient would be at best the complete immersion in existing Anglophone networks. But this is, of course, not a guarantee, for promoting specific European approaches. One has to have them first.

In closing Vienna Logical Empiricism with its deep enlightenment intentions (“double approach”) is described as a typical European way to conduct philosophy of science. It went lost, when the logical empiricists sought refuge in the US.

CV
Gereon Wolters, professor emeritus of philosophy at the University of Konstanz (Germany) and member of the National Academy of Science Leopoldina, at present speaker of one of its four classes. After studying at the universities of Innsbruck and Kiel he graduated in philosophy and mathematics at Tübingen. His received his PhD (with a thesis on Johann Heinrich Lambert) at Konstanz (1977). There in 1985 he also got his Habilitation (with a book about the forgery of Ernst Mach’s texts on relativity) and became professor of philosophy (1988-2009). For 25 years he also taught philosophy of biology at the Institute of Zoology at Zurich University. His main research fields are history and philosophy of biology and relativity, HOPOS, and Nazi Philosophy.

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PHILOSOPHY OF SCIENCE
IN EUROPE –
EUROPEAN PHILOSOPHY
OF SCIENCE AND THE
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