

ERNST MACH LIFE WORK INFLUENCE

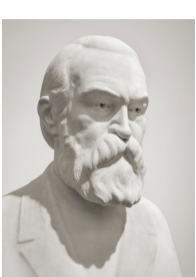
International Conference
on the Occasion of the 25th
Anniversary of the Institute
Vienna Circle

5th Anniversary as
Institute of the Faculty
of Philosophy and Education
University of Vienna
<http://mach16.univie.ac.at/>

PROGRAMME

June 15–18, 2016
Campus of the
University of Vienna
Österreichische
Akademie der
Wissenschaften
(ÖAW)

Ernst Mach



Ernst Mach (1838–1916) ranks among the most significant natural scientists and philosophers of the 19th and 20th century. In physics paving the way for Einstein's Theory of Relativity and opposing Boltzmann's Atomism, in biology, psychology and physiology pioneering with an empiricist and 'gestaltthaft' "Analysis of Sensations" in philosophy of science serving as a model for the Vienna Circle with the Ernst Mach

Society as well as paving the way for an integrated history and theory of science. His influence extends far beyond the natural sciences – to the Vienna Medical School and psychoanalysis (R. Bärány, J. Breuer, S. Freud), to literature („Jung Wien", R. Musil), to politics (F. Adler, Austro-Marxism and the Viennese adult education), to arts between Futurism and Minimal Art as well as to social sciences between the liberal school (J. Schumpeter, F. A. von Hayek) and empirical social research (P. Lazarsfeld and M. Jahoda). In today's pedagogy, his genetic theory of learning is just as respected as his method in historical epistemology. Mach's international impact already showed during his lifetime, in American Pragmatism (W. James) and French Conventionalism (P. Duhem, H. Poincaré). On the occasion of the centenary of Ernst Mach's death, the Institute Vienna Circle organizes an international symposium on the life, work and influence of this natural scientist and philosopher who worked at the University of Vienna and the Austrian Academy of Sciences for many years and who exerted significant influence on several generations of scholars and scientists as well as of cultural and political agents. The main goal is a critical inventory of Mach's lifework in line with state-of-the-art research and historiography – not least supported by the Ernst Mach Studienausgabe (study edition) and the workin the framework of the newly established Commission for the History and Philosophy of the Austrian Academy of Sciences.

Ernst Mach (1838–1916) zählt zu den bedeutendsten Naturwissenschaftlern und Philosophen des 19. und 20. Jahrhunderts. In der Physik als Wegbereiter von Einsteins Relativitätstheorie und Kontrahent von Boltzmanns Atomistik, in der Biologie, Psychologie und Physiologie als Pionier einer empiristischen und gestalthaften „Analyse der Empfindungen", in der Wissenschaftsphilosophie als Vorbild des Wiener Kreises mit dem Verein Ernst Mach sowie als Wegbereiter einer integrierten Wissenschaftsgeschichte und Wissenschaftstheorie. Seine Wirkung reicht weit über die Naturwissenschaft hinaus – in die Wiener Medizinische Schule und Psychoanalyse (R. Bärány, J. Breuer, S. Freud), in die Literatur („Jung Wien", R. Musil), in die Politik (Friedrich Adler, der Austromarxismus und die Wiener Volksbildung), in die Kunst zw. Futurismus und Minimal Art sowie in die Sozialwissenschaften zwischen der liberalen Schule (J. Schumpeter, F.A. von Hayek) und der empirischen Sozialforschung (P. Lazarsfeld und M. Jahoda). In der heutigen Pädagogik wird heute seine genetische Lerntheorie genauso beachtet seine Methode in der historischen Epistemologie. Machs internationale Wirkung zeigte sich bereits zu Lebzeiten im amerikanischen Pragmatismus (W. James) und den französischen Konventionalismus (P. Duhem, H. Poincaré). Anlässlich der 100. Wiederkehr des Todestages von Ernst Mach organisiert das Institut Wiener Kreis ein internationales Symposium zu Leben, Werk und Wirkung dieses Naturforschers und Philosophen, der an der Universität Wien und an der Akademie der Wissenschaften viele Jahre lang gewirkt hat und mehrere Generationen in Wissenschaft, Kultur und Politik maßgeblich beeinflusst hat. Zielsetzung ist eine kritische Bestandsaufnahme von Machs Lebenswerk auf dem Stand gegenwärtiger Forschung und Historiografie – nicht zuletzt unterstützt durch die Ernst Mach Studienausgabe und die Arbeit im Rahmen der neu eingerichteten Kommission für Geschichte und Philosophie der Wissenschaften an der Österreichischen Akademie der Wissenschaften (ÖAW).

Wednesday, June 15

19.00 SIDE PROGRAM / VORPROGRAMM WIENER VORLESUNGEN ZUM 100. TODESTAG VON ERNST MACH (1838–1916)
Universität Wien, Hauptgebäude, BIG 1, Universitätsring 1, 1010 Wien

Friedrich Stadler: Der „Naturforscher" Ernst Mach (1838–1916) als Grenzgänger und Grenzüberschreiter – Zum Verhältnis von Geistes- und Naturwissenschaften aus heutiger Sicht

Anschließend Podiumsdiskussion mit: **Elisabeth Nemeth, Renée Schröder, Friedrich Stadler**
Moderation: **Hubert Christian Ehalt**

Thursday, June 16

from 8.00 REGISTRATION: AULA AM CAMPUS, SPITALGASSE 2–4, CAMPUS HOF 1.11

AULA AM CAMPUS, CAMPUS
HOF 1.11, SPITALGASSE 2–4

ALTE KAPELLE, CAMPUS HOF 2.8
SPITALGASSE 2–4

SEMINARRAUM I, CAMPUS
HOF 1.6.1, SPITALGASSE 2–4

SEMINARRAUM II, CAMPUS
HOF 1.13, SPITALGASSE 2–4

9.00–09.30 **Opening:**
Anton Zeilinger (President, ÖAW),
Christa Schnabl (Vice-Rector,
University of Vienna),
Elisabeth Nemeth (Dean, Faculty
of Philosophy and Education),
Markus Aspelmeyer (Co-Chair
of PC)
Friedrich Stadler
(Local Organizer, Co-Chair of PC)

CHAIR: Friedrich Stadler

9.30–10.30 **Plenary Lecture: Don Howard**
(*University of Notre Dame*): Back
to the Future: Ernst Mach and
Integrated History and Philosophy
of Science for the Twenty-first
Century

CHAIR: Bastian Stoppelkamp

CHAIR: Christoph Limbeck-Lilienau

CHAIR: Hayo Siemsen

SYMPOSIUM: MACH AND
THE SCHOOL OF BRENTANO

10.30–11.10 **Avril Styrman** (*University of
Helsinki*): Economical Unification in
Philosophy of Science

Kevin Mulligan (*University of
Geneva*): Claims and their Cash
Value

Miloš Kratochvíl (*University of
West Bohemia, Pilsen*): Mach and
Czech Positivism

11.10–11.30 **COFFEE BREAK**

SYMPOSIUM: MACH, BRNO, AND
PRAGUE

11.30–12.10 **Sandy Berkovski** (*Bilkent
University*): Some remarks on
Mach's Philosophical Doctrines

Denis Fiset (*University of
Quebec at Montréal*): Brentano's
Lecture on Positivism and Monism
(1893–1894) and his Criticism of
Ernst Mach

Martin Černohorský (*Masaryk
University Brno*): Ernst Mach's
Early Childhood in Brno and in Zlín.
Adolescence in Křemšir

12.10–12.50 **Elena d'Amore** (*University of
Pisa*): Mach's Criticism, or, a
Discourse on the Method

Guillaume Fréchette (*University
of Salzburg*): From Brentano to
Mach. Carving Austrian Philosophy
at Its Joints

Emilie Těšinská (*Academy of
Sciences of the Czech Republic*):
Ernst Mach as an Applicant and
the Candidate secundo loco for two
Professorships of Physics in Prague
in 1866/67

12.50–13.30 **Carl Henning Reschke** (*IMFK,
Cologne*): Links between Mach's
Functional Relations, the Systems
Approach and the Complexity
Perspective

Denis Seron (*University of Liège*):
Intentionality vs. psychophysical
Identity

**Martin Černohorský, Marie
Fojtíková, Jana Musilová**
(*Masaryk University Brno*):
Ernst-Mach Days, Brno 1938,
1988, 2008, 2016

13.30–14.30 **LUNCH BREAK**

CHAIR: Gerhard Benetka

CHAIR: Günther Sandner

CHAIR: Christian Damböck

14.30–15.10 **Ursula Baatz** (*Wien*): Ernst Mach:
Naturwissenschaft und Buddhismus.
Ein Missverständnis unter
dem Vorzeichen der Globalisierung

David Romand (*Université
Paris Diderot*): Mach's ‚sensati-
on', Gomperz's ‚feeling', and the
Positivist Debate about the Nature
of the Elementary Constituents of
Experience. A Comparative Study in
Psychological and Epistemological
Context

Klemens Rumpf (*Karl-Franzens-
University, Graz*): The First Profes-
sorship of Ernst Mach at the Graz
Karl-Franzens-University

15.10–15.50 **Gerhard Donhauser** (*Wien*):
Das bedrängte Ich. Ich-Konzepte
bei Freud und Mach

John Preston (*The University of
Reading*): Ernst Mach and the Re-
marks on Science in Wittgenstein's
Tractatus

Petra Granitzer (*Karl Franzens
University, Graz*): The Graz Physical
Institute after Ernst Mach

15.50–16.30 **Tomáš Hříbek** (*Academy of Fine
Arts*): Mach as a Panqualityst

Rudolf Dvořák (*Czech Academy
of Science, Prague*): Ernst Mach
in Prague and the Dawn of Gas
Dynamics

16.30–16.50 **COFFEE BREAK**

CHAIR: Richard Staley

CHAIR: Hans-Joachim Dahms

16.50–17.30 **Iulian Toader** (*University of
Bucharest*): On the Principle of
Burchanest as a Principle of
Rationality

CHAIR: Josef Pircher

Sandro Caparrini (*University of
Torino*): Mach in Italy: Giovanni
Vailati (1863–1909) as Reader and
Interpreter of Ernst Mach

17.30–18.20 **Lydia Patton** (*Virginia Tech*):
Spatiotemporal Continuity in
Mach's Economy of Science

Katherine Arens (*University
of Texas at Austin*): The Specter
of 'Austrian Philosophy': Ernst
Mach and a Modern Tradition of
Post-Philosophy

Michael Stöltzner (*University
of South Carolina*): A History of
Divided Reception: The Austrian
and the German Mach

19.00 RECEPTION: RATHAUS/TOWN HALL, LICHTENFELSGASSE 2, 1010 WIEN (REGISTRATION REQUIRED)

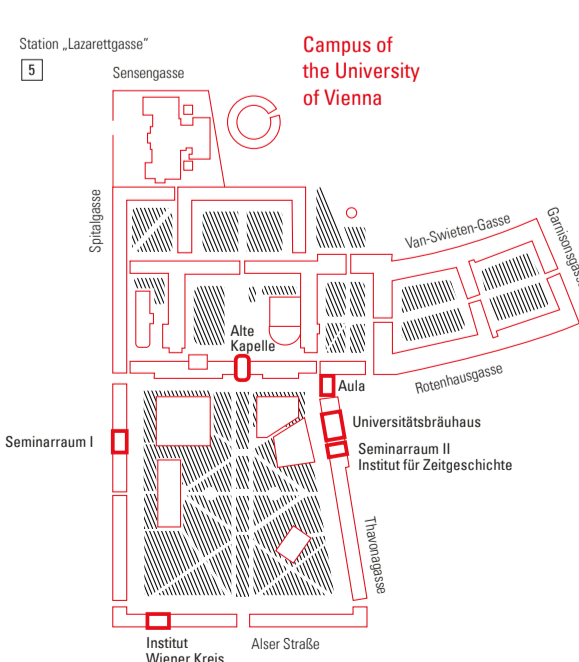
ERNST MACH LIFE WORK AND INFLUENCE

MAIN ORGANIZERS

University of Vienna:
Institute Vienna Circle and Department of Philosophy /
Faculty of Philosophy and Education / Faculty of
Historical and Cultural Studies (Research Focus
"History of Science – Cultures of Knowledge –
Knowledge Societies") / Faculty of Physics, Faculty
of Mathematics / Faculty of Life Sciences / Faculty of
Social Sciences / Faculty of Psychology

**Österreichische Akademie der
Wissenschaften (ÖAW):**
Commission for History and Philosophy of Science /
Institute of Culture Studies and Theatre History

Together with: Max Planck Institute for the History
of Science, Berlin / Deutsches Museum (German
Museum), Munich / Masaryk University, Brno (Ernst
Mach-Days, Brno, February 18–20, 2016) / Université
Paul-Valéry, Montpellier / Moritz Schlick-Forschungs-
stelle, University of Rostock



→ 10 Min.
Station „Stubentor“

Friday, June 17

from 8.00	REGISTRATION: AULA AM CAMPUS, SPITALGASSE 2–4, CAMPUS HOF 1.11		
	AULA AM CAMPUS, CAMPUS HOF 1.11, SPITALGASSE 2–4	ALTE KAPELLE, CAMPUS HOF 2.8, SPITALGASSE 2–4	SEMINARRAUM 1, CAMPUS HOF 1.6.1, SPITALGASSE 2–4
	CHAIR: Katherine Arens	CHAIR: Erik C. Banks	CHAIR: Anastasios Brenner
9.00–9.50	Michael Heidelberger (<i>University of Tübingen</i>): What Mach Owes to Fechner and what he Made of it	Thomas Uebel (<i>University of Manchester</i>): Mach, Jerusalem and Pragmatism	Elisabeth Nemeth (<i>University of Vienna</i>): ‘Variation’ and ‘Elements’ in Ernst Mach and Otto Neurath
9.50–10.30	Gerhard Benetka, Thomas Sluneko (<i>Universität Wien</i>): Ernst Machs Bedeutung für die Herausbildung einer naturwissenschaftlichen Psychologie – Ein Missverständnis mit Folgen?	Pietro Gori (<i>Universidade Nova de Lisboa</i>): What does it Mean to Orient Oneself in Science? On Ernst Mach’s Pragmatism	Günther Sandner (<i>Universität Wien</i>): Spätaufklärung und exakte Wissenschaft. Der Verein Ernst Mach und die Berliner Gesellschaft für empirische/wissenschaftliche Philosophie
10.30–11.10	René J. Campis (<i>Universidad del Atlántico, Barranquilla</i>): The Transdisciplinary Legacy of Ernst Mach	Mariana Valente (<i>University of Évora, Portugal</i>): “The most artistic lesson I ever heard” – A Contribution to The reflection on the Comment Made by William James Regarding a Lesson by Ernst Mach	Hans-Joachim Dahms (<i>Berlin</i>): Ernst Mach and Wilhelm Ostwald: Two kinds of Neopositivism and their Influence on the Vienna Circle
11.10–11.30	COFFEE BREAK		
11.30–12.10	Markus Schrenk (<i>University of Düsseldorf</i>): Ernst Mach on the Self: The Deconstruction of the Ego as an Attempt to avoid Solipsism	Bastian Stoppelkamp (<i>University of Vienna</i>): “He hits the target but misses the bull’s eye”: Ernst Mach, Charles Sanders Peirce und die pragmatische Maxime	Germinal Ladmiral (<i>Université Paris 1 Panthéon-Sorbonne</i>): Le monisme peut-il être «neutre»? Les raisons épistémologiques du refus chez Schlick du monisme de Mach
12.10	POSTER SESSION: ERNST MACH AND EDUCATION / MACH AND PHYSICS		
12.10–12.50	LUNCH BREAK		
13.15	GUIDED WALK TO ÖSTERREICHISCHE AKADEMIE DER WISSENSCHAFTEN (ÖAW)		
from 13.00	REGISTRATION: AULA, ÖSTERREICHISCHE AKADEMIE DER WISSENSCHAFTEN, DR. IGNAZ SEIPEL-PLATZ 2, 1010 WIEN		
	POSTER SESSION CONTINUED (ÖAW): ERNST MACH AND EDUCATION / MACH AND PHYSICS		
	SITZUNGSSAAL, ÖAW DR. IGNAZ SEIPEL-PLATZ 2	JOHANNESSAAL, ÖAW DR. IGNAZ SEIPEL-PLATZ 2	CLUBRAUM, ÖAW DR. IGNAZ SEIPEL-PLATZ 2
	CHAIR: Markus Aspelmeyer	CHAIR: Petra Granitzer	CHAIR: Martin Černohorský
14.00–14.50		SYMPOSIUM: MACH AND VIENNESE MEDICINE	
	Peter Christian Aichelburg (<i>University of Vienna</i>): Mach’s influence on Einstein’s ‘biggest blunder’ and the Consequences for Modern Cosmology	Herwig Swoboda (<i>Krankenhaus Hietzing, Wien</i>): Ein Ohr für Leibniz und Newton – Ernst Machs Beiträge zur Otologie	Michael Matthews (<i>University of New South Wales</i>): On Mach and Education
14.50–15.30	Dennis Lehmkühl (<i>California Institute of Technology</i>): The Connection Between Mach’s Principle and the Relativity Principle in Einstein’s work	Ruediger Hoffmann (<i>Dresden University of Technology</i>): Ernst Mach and Johannes Kessel in Prague	Gerd-Bodo von Carlsburg (<i>Pädagogische Hochschule Heidelberg</i>) / Karl-Hayo Siemsen (<i>University of Applied Sciences, Emden</i>): Joachim Thiele: Machs Pädagogik in Briefen und Dokumenten
15.30–16.10	Theodore L. Kneupper (<i>California Institute of Technology</i>): Mach’s Views on Physical Space and Time and their Grounding in Perceptual Space and Time	Stefan Hegemann (<i>Universitäts-spital Zürich</i>): Ernst Mach und das Gleichgewicht	Igal Galili (<i>The Hebrew University of Jerusalem</i>): On the Influence of Ernst Mach on Contemporary Physics Curriculum at Schools: The Concept of Weight
16.10–16.30	COFFEE BREAK		
	CHAIR: Klaus Hentschel		CHAIR: Klemens Rumpf
16.30–17.10	Klaus Robering (<i>University of Southern Denmark</i>): Ernst Mach’s Geometry of Solids		Josef Pircher (<i>University of Vienna</i>): Ernst Mach’s Didactics in Context
		CHAIR: Chantal Ferrer-Roca	
17.10–17.50	Milena Ivanova (<i>Ludwig-Maximilians University of Munich</i>): Mach, Duhem and the Limits of Scientific Knowledge	Josef Hlade (<i>Karl Franzens University, Graz</i>): Ernst Mach und die Wiener Hirnanatomie	Clemens Ulrich (<i>Höhere Graphische Bundes-Lehr- und Versuchsanstalt, Wien</i>): Machs und Salchers Schlierenphotographien inspirieren ein Multimedia-Projekt an der „Graphischen“
17.50–18.40	Robert M. Wald (<i>University of Chicago</i>): On Mach’s Principle and General Relativity Theory	Manfred Laubichler (<i>Arizona State University</i>) / Jürgen Renn (<i>Max Planck Institute for the History of Science, Berlin</i>): Plenary Lecture: Mach’s Evolutionary Conception of Knowledge	Hayo Siemsen (<i>University of Applied Sciences, Emden</i>): The Psychology of Education from Beneke to Mach
			CHAIR: Wolfgang Reiter
19.00–20.00			Gereon Wolters (<i>University of Konstanz</i>): Plenary Lecture: Mach and Relativity – A Never-ending Story?

Saturday, June 18

from 8.00	REGISTRATION: AULA, ÖSTERREICHISCHE AKADEMIE DER WISSENSCHAFTEN, DR. IGNAZ SEIPEL-PLATZ 2, 1010 WIEN		
	SITZUNGSSAAL, ÖAW DR. IGNAZ SEIPEL-PLATZ 2, 1010 WIEN	JOHANNESSAAL, ÖAW DR. IGNAZ SEIPEL-PLATZ 2 1010 WIEN	CLUBRAUM, ÖAW DR. IGNAZ SEIPEL-PLATZ 2 1010 WIEN
	CHAIR: Michael Stöltzner	CHAIR: Elisabeth Nemeth	CHAIR: David Romand
9.00–9.50		SYMPOSIUM: MACH, DUHEM AND FRENCH PHILOSOPHY OF SCIENCE	
	Dieter Hoffmann (<i>Max-Planck-Institut für Wissenschaftsgeschichte, Berlin</i>): On Mach’s Principle and Experimentalphysiker – Ein Überblick	Anastasios Brenner (<i>Université Paul-Valéry, Montpellier</i>): Mach, Duhem and the Historical Method in Philosophy of Science	Eduardo Bermúdez Barrera (<i>Barranquilla</i>) / René J. Campis , David Dahmen , Ronald Villa , (<i>Universidad del Atlántico, Barranquilla</i>): Appraisal and Influence of Mach’s Works in South America
9.50–10.30	Johannes-Geert Hagmann (<i>Deutsches Museum, Munich</i>): Light and Shadow: the Experimental Collaboration between Ernst and Ludwig Mach, Father and Son	Marco Buzzoni (<i>University of Macerata</i>): Mach and Duhem about Thought Experiments	Daniela Steila (<i>Università di Torino</i>): Mach’s Reception in Pre-Revolutionary Russia
10.30–11.10	Eva-Maria Jung (<i>University of Münster</i>): Experiencing and Experimenting. Mach’s Theory of Scientific Experiment in Context	Laurent Clauzade (<i>Université de Caen Comte</i>): Mach and Duhem on Scientific Explanation	Maja Soboleva (<i>University of Marburg</i>): Vom Empiriekritizismus zum Empiriomonismus: Aleksander Bogdanovs Rezeption der Epistemologie von Ernst Mach
11.10–11.30	COFFEE BREAK		
11.30–12.10	Ana Alebić-Juretić (<i>University of Rijeka, Croatia</i>): Peter Salcher – The Mach’s Corresponding Collaborator	Cristina Chimisso (<i>The Open University, UK</i>): Scientific Concepts and the (Dis)continuity of History of Science: Hélène Metzger as Reader of Pierre Duhem	Jean-Philippe Martinez (<i>University of Geneva</i>): The ‘Mach Argument’ and its Use by Vladimir Fock to Criticize Einstein in Soviet Union
12.10–13.00	Karl Sigmund (<i>University of Vienna</i>): Ernst Mach and Geometry	Erik C. Banks (<i>Wright State University, Dayton, OH</i>): “The Land of my Deepest Longing”. The American Reception of Ernst Mach’s Ideas	Martin Černohorský (<i>Masaryk University, Brno</i>): The Principle of Inertial Rotatory Motion in Newton’s Lex I and Ernst Mach
13.00–14.00	LUNCH BREAK		
	CHAIR: Michael Heidelberger	CHAIR: Guillaume Fréchette	CHAIR: Dieter Hoffmann
14.00–14.50	Wolfgang Reiter (<i>Universität Wien</i>): Mach, Boltzmann und die Wiener Akademie der Wissenschaften	Richard Staley (<i>University of Cambridge</i>): Revisiting Einstein’s Happiest Thought: From Physiology of Perception to Experimental Propositions and Principles in the History of Relativity	Christoph Hoffmann (<i>University of Lucerne</i>): Paris vs. Prague: On Photographs and Epistemological Prerequisites
14.50–15.30	Christian Bracco (<i>Université de Nice Sophia-Antipolis</i>) / Jean-Pierre Provost (<i>Université de Nice Sophia-Antipolis</i>): L’influence de Mach, via Michele Besso, sur les jeunes années d’Einstein	Minwoo Seo (<i>University of Cambridge</i>): Ernst Mach and the Rise of Theoretical Physics	Stefano Salvia (<i>Università di Pisa</i>): Ernst Mach’s Historical Epistemology of Pre-Classical Mechanics
15.30–16.10	Alexandre Couture-Mingheras (<i>Université de Liège</i>): L’empirisme post-kantien de Mach: la conquête d’un nouveau concept de «donné»	Marij van Strien (<i>University of Wuppertal</i>): Determinism and Indeterminism in the Philosophies of Mach, Boltzmann and Poincaré	Regina Jonach (<i>University of Vienna</i>): Ernst Mach und Kinematographie
16.10–16.30	COFFEE BREAK		
16.30–17.20	Mihalis Dafermos (<i>Princeton University</i>): Dynamics and Determinism in General Relativity	Klaus Hentschel (<i>University of Stuttgart</i>): The Project of a Complete Online Edition of Ernst Mach’s Correspondence	Chantal Ferrer-Roca (<i>University of Valencia</i>): Otto Blüh and Ernst Mach’s Legacy: Inheritance and Task. Followed by a Performance*
			CHAIR: Johannes Feichtinger
17.30–18.30			Manfred Laubichler (<i>Arizona State University</i>) / Jürgen Renn (<i>Max Planck Institute for the History of Science, Berlin</i>): Plenary Lecture: The Extended Evolution of Knowledge
18.30			Friedrich Stadler (<i>University of Vienna</i>): Closing Remarks

* Followed by the Performance of a Short Skit by Otto Blüh / Gefolgt von der Aufführung einer kurzen Parodie von Otto Blüh: Ernst Mach’s ‚Conversion‘ to Atomism – A Conversation Between Ernst Mach and Josef Popper-Lynkeus / Ernst Machs ‚Bekehrung‘ zum Atomismus. Ein Gespräch zwischen Ernst Mach und Josef Popper-Lynkeus. Presented by **RRemi Brandner** and **Wolfgang Nitsch**. The English translation will be provided by **Pamela Blüh**. Scientific revision by **Chantal Ferrer-Roca**.

Sunday, June 19

9.00–21.00	SIDE PROGRAM CULTURAL TOUR TO BRÜNN/BRNO (REGISTRATION REQUIRED)		
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