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Since its establishment in 1974, ESF, which has its headquarters in Strasbourg with offices in Brussels and Ostend, has assembled a host of research organisations that span all disciplines of science in Europe, to create a common platform for cross-border cooperation.

We are dedicated to supporting our members in promoting science, scientific research and science policy across Europe. Through its activities and instruments ESF has made major contributions to science in a global context. The ESF covers the following scientific domains:

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- Space Sciences

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Klimt, “Philosophy”
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A long-lasting tradition of investigations on the nature of scientific knowledge took shape in Europe at the beginning of the last century. Such a tradition started within a wide range of different disciplines, and in a number of different European countries. It included renowned scientists, such as Ernst Mach, Ludwig Boltzmann, Carl Menger, Ludwik and Richard von Mises, Otto Neurath, Albert Einstein, Max Planck, Pierre Duhem, Henri Poincaré, Karl Pearson, to mention but a few, and involved not only empirical disciplines but formal ones too (David Hilbert, Kurt Gödel, Federigo Enriques, Jan Łukasiewicz, Alfred Tarski, Bertrand Russell). This scientific movement, involving Central Logical Empiricism in Vienna, Berlin and Prague, was strongly interdisciplinary and cross-disciplinary. It produced an extended and stimulating literature and prepared the ground for a wide array of reflections on the structure of science, its aim and limits. Investigating the methods and the foundations of science from a European perspective does neither presuppose nor support or encourage chauvinist claims of superiority, but merely expresses recognition of an undeniable historical fact: European culture entered into the discourse on science from its very beginning. Until about the middle of the last century, Europe was where most of modern science underwent very decisive periods of development, and where inquiry on the aims and methods of science was begun. After all, Scientific Revolution in the 16th and 17th century took place in Europe, and the so-called ‘Second Revolution’ in natural science around 1900 had its first developments in Europe.

After such a tremendous growth, towards the end of the 1930s the movement was dissolved by the takeover of Nazism. The liberal tendencies shared by its members and the Jewish origin of some of them made its survival impossible, and its focus moved abroad, especially to the United States, where a large number of its exponents eventually settled. Even though Europe is no longer alone in setting the parameters for discourse in and about science, during the last few decades a renewed and increasing interest in foundational and methodological issues has again been shown by scholars all over Europe. The most recent stage of this revival is manifest by the remarkable number of research centres focusing on such topics, and the recent creation of the European Philosophy of Science Association (EPSA).

The ESF Research Networking Programme ‘The Philosophy of Science in a European Perspective’ (PSE) focuses on the philosophy and foundations of the natural and social sciences and aims at enhancing European tradition in the philosophy of science. Its ultimate goal is to promote exchanges between scholars from all over Europe, in order to build up a network of strong and durable relations to broaden and deepen the current debate on the topic.

The running period of the ESF Research Networking Programme PSE is five years, from May 2008 to April 2013.
Aims and Objectives

PSE is a natural development of two ESF Networks, Historical and Contemporary Perspectives of Philosophy of Science in Europe (HCPPS, 2002-2004) and Philosophical and Foundational Problems of Modern Physics (PPFMP, 2003-2005), which pointed out major trends of research and their lacunas. Building on the results of such two successful Networks, PSE focuses on foundational and methodological issues in a number of sciences, including, within the natural sciences: physics, biology, chemistry and the earth sciences, and, within the social sciences: economics, anthropology, psychology and history. A specific interest will be devoted to emerging disciplines endowed with a peculiar, so-to-speak ‘borderline’ scientific status, such as medicine, archaeology and cognitive science.

The Programme, which has a strong interdisciplinary character, intends to reinforce contacts, knit together several European research centres and encourage the mobility of scholars, especially as regards young scholars and doctoral students. Working in strict cooperation with the newly founded EPSA, it will voice European research in the field, yet be open to the contribution of overseas scholars, especially from countries such as Australia, Canada, South America and the USA, which are strongly involved in this kind of research.

Teams and Topics

PSE includes scholars from 22 countries, and is structured into five teams of researchers, focusing on five areas: A) Formal methods in the philosophy of science; B) Philosophy of the natural and life sciences; C) Philosophy of the cultural and social sciences; D) Philosophy of the physical sciences; E) History of the philosophy of science. Teams will organise workshops devoted to specific aspects of such general topics, which will constitute a common ground for debate.

Team A: Formal Methods

The toolbox of modern logic has traditionally been employed to clarify concepts such as scientific explanation, confirmation and intertheoretic reduction. Despite their merits, it is widely recognised that purely logical accounts are not flexible enough to capture the details of actual scientific practice. A variety of formal methods is currently employed in the philosophy of science, complementing purely logical accounts, including Bayesian methods, combinations of logic and probability theory and various kinds of applied logic. Team A will focus on a methodological analysis of these methods and show how they can be used to solve problems in the philosophy of science and illuminate episodes from the history of science. Such study has the potential not only to enhance our understanding of science, but also to increase productivity in science.

The activities organised by Team A will revolve around the following topics:
• Year 1. Formal Methods and their Applications to the Philosophy of Science.
• Year 2. Formal Models of Explanation and Confirmation.
• Year 3. Pluralism in the Foundation of Statistics.
• Year 4. Philosophical Problems of Computer Science and Artificial Intelligence.
• Year 5. New Directions in the Foundations of Science: Modelling Uncertainty.

Team B: Philosophy of the Natural and Life Sciences

Team B will focus on a set of specific foundational and methodological issues arising in the life sciences and medicine, with a special interest in evolutionary biology and systematics, biodiversity, genomics and proteomics, cell and molecular biology, neurobiology, systems biology, and biomedical research. Team B will be concerned also with cross-disciplinary comparisons within the natural sciences, with relations between the life sciences and the physical sciences, and with the status of chemistry.

The activities organised by Team B will revolve around the following topics:
• Year 1: Approaches to the Foundations of Science: The Place of the Life Sciences.
• Year 2. Explanation, Prediction and Confirmation.
• Year 3. Probability and Statistics in the Life Sciences.
• Year 4: The Advent of Systems Biology.
• Year 5: Pluralism in the Natural Sciences.

Team C: Philosophy of the Cultural and Social Sciences

Foundational and methodological debate has a central role in the building of the cultural and social sciences.
It follows at least three different lines: 1) the general scientific status of the social sciences, which calls attention to the different components of science, such as language, structure, knowledge, method etc.; 2) the scientific status of the social sciences as compared to that of the natural sciences; this includes methodological controversies such as Erklären-Verstehen and prediction-understanding; 3) the scientific status of each discipline. Here the foundational and methodological debate intersects with general trends (such as economic imperialism, sociologism and cognitivism).

The activities organised by Team C will revolve around the following topics:

- **Year 1:** The Present Situation of the Philosophy of the Cultural and Social Sciences: The ‘Naturalist Turn’, the ‘Social Turn’, and the Discussion on Scientific Realism.
- **Year 2:** Explanation versus Description in the Cultural Sciences, and the Realm and Limits of Explanation and Prediction in the Social Sciences.
- **Year 3:** The Debate on Mathematical Modelling in the Social Sciences.
- **Year 4:** The Sciences of the Artificial versus the Cultural and Social Sciences.
- **Year 5:** New Approaches in the Social Concern on Science: Social Constructivism and Realism on the Cultural and Social Sciences.

**Team D: Philosophy of the Physical Sciences**

Team D’s main focus will be on two related themes: probability in physics and the applications of ideas from physics to other fields. Probability is a central concept in both quantum theory and in classical and quantum statistical mechanics. It is not only used in the practical application of these theories: it is also central to the major conceptual issues surrounding them, in particular to the formulation of the quantum collapse postulate and thus to the quantum measurement problem, and to the arrow of time in statistical mechanics. Investigating these topics provides a direct line of attack on the main relationships between physics and other disciplines.

The activities organised by Team D will revolve around the following topics:

- **Year 1:** Philosophical Foundations.
- **Year 2:** Quantum Physics, Space-time Theories and Probabilities.
- **Year 3:** Statistical Mechanics.
- **Year 4:** Applications of Physics in other Sciences.
- **Year 5:** New Directions.

**Team E: History of the Philosophy of Science**

Like other fields of human endeavour, science possesses distinctive roots in the cultures to which its practitioners belong. Despite the intrinsic internationalism which determines its ethos of investigation and validation, the practice and the content of science, its dissemination and reception are not just fixed by the conscious cognitive concerns of a free-floating scientific intelligentsia. It is also influenced by distinctive, long-standing philosophical traditions, quite separate from the practical exigencies faced by their host cultures. Moreover, science has shown uneven development over its history. Team E will bring into focus, studying the history of foundational controversies, the distinctive reflection about natural and social sciences in the European tradition and explore its bearing on contemporary debates.

The activities organised by Team E will revolve around the following topics:

- **Year 1:** Foundational and Methodological Debates.
- **Year 2:** History of Explanation, Prediction and Confirmation.
- **Year 3:** Historical Debates about Probability and Statistics.
- **Year 4:** History of Philosophically Neglected, Marginalised and Recently Emergent Disciplines.
- **Year 5:** Contemporary Relevance of Neglected Approaches.
Activities

Workshops and conferences
The activities of PSE will cover a period of five years. Two big conferences will be held, one in the first and one in the fifth year; workshops will be organised in the remaining years.

The first general conference, on ‘The present situations in the philosophy of science’, will take place in Vienna from 18 to 20 December 2008 and will give an opportunity to identify specific topics on which teams can liaise thereafter.

In the second, third and fourth year, teams will organise separate workshops focused on the following topics:
- second year: ‘Explanation, prediction and confirmation’;
- third year: ‘Probability and statistics’;
- fourth year: ‘The sciences that philosophy has neglected’.

On the fifth year a closing plenary conference will be held in Bologna on ‘New directions in the philosophy of science’.

Publications
A key objective is the publication of a series of books collecting the achieved results. Such a series will reflect the articulation of scientific activities.

A joint PSE and EPSA quarterly Bulletin will appear on-line, and a website will disseminate achievements and provide up-dated information about activities and initiatives.

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- London School of Economics (LSE), United Kingdom

Anatomical theatre
PSE Teams

Team A

**Team Leader:** Stephan Hartmann, Centre for Logic and Philosophy of Science, Tilburg, The Netherlands. Email: s.hartmann@uvt.nl

**Team Co-leader:** Thomas Müller, Dept. of Philosophy, Utrecht University, Utrecht, The Netherlands. Email: thomas.muller@phil.uu.nl.

**Team members:** Gabriella Crocco, Dept. of Philosophy, University of Aix-en-Provence, France; Franz Dietrich, Dept. of Quantitative Economics, University of Maastricht, The Netherlands; Igor Douven, Institute of Philosophy, Centre for Logic, Philosophy of Science and Philosophy of Language, Catholic University of Leuven, Belgium; Adam Grobler, Dept. of Philosophy, Opole University, Poland; Vincent Hendricks, Dept. of Philosophy and Science Studies, Roskilde University, Denmark; Franz Huber, Dept. of Philosophy, University of Konstanz, Germany; Hannes Leitgeb, Dept. of Philosophy, University of Bristol, UK; Joke Meheus, Centre for Logic and Philosophy of Science, University of Ghent, Belgium; Gabriella Pigozzi, Dept. of Computer Science, University of Luxembourg, Luxembourg; Stathis Psillos, Dept. of Philosophy, University of Athens, Greece; Jan-Willem Romeyn, Dept. of Philosophy, University of Groningen, The Netherlands; Jon Williamson, Dept. of Philosophy, University of Kent, Canterbury, UK.

Team B

**Team Leader:** Marcel Weber, Science Studies Program, University of Basel, Basel, Switzerland. Email: marcel.weber@unibas.ch

**Team Co-leader:** Hanne Andersen, Steno Institute, Aarhus University, Aarhus, Denmark. Email: hanne.andersen@si.au.dk

**Team members:** Aristides Baltas, National Technical University of Athens, Greece; Raffaella Campaner, Dept. of Philosophy, University of Bologna, Italy; Martin Carrier, Dept. of Philosophy, University of Bielefeld, Germany; Mehmet Elgin, Dept. of Philosophy, Mugla University, Turkey; Anne Fagot, Collège de France, France; Jean Gayon, École Doctorale de Philosophie, Université Panthéon-Sorbonne, Paris, France; Paul Hoyningen-Huene, Centre for Philosophy and Ethics of Science, University of Hannover, Germany; Peter McLaughlin, Dept. of Philosophy, University of Heidelberg, Germany; Tim Lewens, Dept. of History and Philosophy of Science, University of Cambridge, UK; Thomas Reydon, Centre for Philosophy and Ethics of Science, University of Hannover, Germany; Arno Wouters, Heyendaal Institute, Radboud University, Nijmegen, The Netherlands.

Team C

**Team Leader:** Wenceslao Gonzalez, Dept. of Humanities, University of A Coruña, Spain. Email: wencglez@udc.es

**Team Co-leader:** Amparo Gomez, Dept. of History and Philosophy of Science, University of La Laguna, Spain. Email: agomez@ull.es

**Team members:** Daniel Andler, Dept. of Cognitive Studies, ENS, Paris, France; Marcel Boumans, Faculty of Economics and Econometrics, University of Amsterdam, The Netherlands; Paolo Garbolino, IUAV, University of Venice, Italy; Gerd Gigerenzer, Max Planck Institute for Human Development, Berlin, Germany; Bengt Hansson, Dept. of Philosophy, University of Lund, Sweden; Rainer Hegselmann,
PSE Teams

Dept. of Philosophy, University of Bayreuth, Germany; Christian List, Dept. of Government, LSE, London, UK; Katarzyna Paprzycka, Dept. of Philosophy, University of Warsaw, Poland; Arto Sintonen, Dept. of Social and Moral Philosophy, University of Helsinki, Finland; Matti Sintonen, Dept. of Philosophy, University of Helsinki, Finland; Wolfgang Spohn, Dept. of Philosophy, University of Konstanz, Germany; Antonio Zilhao, Dept. of Philosophy, University of Lisbon, Portugal.

Team D

Team Leader: Dennis Dieks,
Institute for History and Foundations of Science, Utrecht University, The Netherlands.
Email: d.dieks@uu.nl

Team Co-leader: Guido Bacciagaluppi,
Department of Philosophy, University of Aberdeen, UK.
Email: philosophy@abdn.ac.uk

Team members: Anouk Barberousse, Institut d’Histoire et de Philosophie des Sciences et des Techniques, CNRS - University Paris 1 - ENS, Paris, France; Jeremy Butterfield, Trinity College, University of Cambridge, UK; Mauro Dorato, Dept. of Philosophy, University of Rome 3, Italy; Roman Frigg, Dept. of Philosophy, Logic and Scientific Method, LSE, London, UK; Holger Lyre, Dept. of Philosophy, University of Augsburg, Germany; Fred Muller, Dept. of Philosophy, Erasmus University, Rotterdam, The Netherlands; Tomasz Placek, Institute of Philosophy, Jagiellonian University, Cracow, Poland; László E. Szabó, Dept. of Logic, Institute of Philosophy, Eotvos Monrand (ELTE) University, Budapest, Hungary; Henrik Zinkernagel, Dept. of Philosophy, University of Granada, Granada, Spain.

Team E

Team Leader: Thomas Uebel,
Philosophy, School of Social Science, University of Manchester, UK.
Email: thomas.e.uebel@manchester.ac.uk

Team Co-leader: Michael Stöltzner,
Department of Philosophy, University of South Carolina, Columbia, USA. Email: stoeltzn@sc.edu

Team members: Anastasios Brenner, Dept. of Philosophy, University of Toulouse, France; Christina Chimisso, Dept. of Philosophy, Open University, UK; Massimo Ferrari, Dept. of Philosophy, University of Turin, Italy; Michael Heidelberger, Dept. of Philosophy, Eberhard Karls University, Tübingen, Germany; Gürol Irzik, Philosophy Department, Bogazici University, Turkey; Berna Killiç, Dept. of Philosophy, Bogazici University, Turkey; Artur Koterski, Marie Curie-Sklodowska University, Lublin, Poland; Thomas Mormann, Dept. of Philosophy, Donostia/San Sebastian University, Spain; Elisabeth Nemeth, Institute of Philosophy, University of Vienna, Austria; Graham Stevens, Philosophy, School of Social Science, University of Manchester, UK; Pierre Wagner, University of Paris-Sorbonne, France.
PSE Steering Committee

Maria Carla Galavotti (Chair)
Department of Philosophy
University of Bologna
Via Zamboni 38
40126 Bologna
Italy
Tel: +39 051 2098671
Fax: +39 051 2098671
Email: Mariacarla.galavotti@unibo.it

Diderik Batens
Centre for Logic and Philosophy of Science
University of Ghent
Blandijnberg 2
9000 Ghent
Belgium
Tel: +32 9 264 37 85
Fax: +32 9 264 41 87
Email: diderik.batens@ugent.be

Claude Debru
Department of Philosophy
École Normale Supérieure
45, rue d’Ulm
75005 Paris
France
Tel: +33 1 44 32 30 77
Fax: +33 1 44 32 31 22
Email: claude.debru@ens.fr

Javier Echeverria
Instituto de Filosofía
Consejo Superior de Investigaciones Científicas (CSIC)
c/Pinar, 25
28006 Madrid
Spain
Tel: +34 91 411 7005
Fax: +34 91 564 5252
Email: j.echeverria@eresmas.net

Jan Faye
Institute for Philosophy, Pedagogy and Rhetoric
University of Copenhagen
Njalsgade 80
2300 Copenhagen
Denmark
Tel: +45 35 32 88 83
Fax: +45 35 32 80 50
Email: faye@hum.ku.dk

Olav Gjelsvik
Institute of Philosophy, Art History and Classics
University of Oslo
Postboks 1020
Blindern
0315 Oslo
Norway
Tel: +47 2285 6976
Fax: +47 2285 7551
Email: olav.gjelsvik@filkk.uio.no

Gerd Grasshoff
Institute of Philosophy
University of Bern
Länggassstrasse 49a
3012 Bern
Switzerland
Tel: +41 31 631 82 88
Fax: +41 31 631 37 79
Email: gerd.grasshoff@philo.unibe.ch

Theo Kuipers
Department of Philosophy
University of Groningen
Oude Boteringestraat 52
9712 Groningen
The Netherlands
Tel: +31 50 363 6151
Fax: +31 (50 363 6160
Email: t.a.f.kuipers@rug.nl

Ladislav Kvasz
Faculty of Mathematics and Physics
Comenius University
Mlynská dolina
842 15 Bratislava
Slovak Republic
Tel: +42 1 910 130 529
Email: ladislav.kvasz@fmph.uniba.sk

Adrian Miroiu
National School of Political Studies and Public Administration
Political Science Department
Str. Povernei, 6
Bucharest
Romania
Tel: +40 21 2690 007
Fax: +40 21 3180 858
Email: ad_miroiu@yahoo.com
PSE Steering Committee

Ilkka Niiniluoto
Department of Philosophy
University of Helsinki
PO Box 9 (Siltaavuorenpenker 20 A)
00014 Helsinki
Finland
Tel: +358 9 191 22211
Fax: +358 9 191 29229
Email: niiniluo@mappi.helsinki.fi

Demetris Portides
Department of Classics and Philosophy
University of Cyprus
PO Box 20537
1678 Nicosia
Cyprus
Tel: +357 2289 2389
Fax: +357 2275 6274
Email: portides@ucy.ac.cy

Wlodek Rabinowicz
Department of Philosophy
Lund University
Kungshuset, Lundagard
222 22 Lund
Sweden
Tel: +46 46 222 75 95
Email: wlodek.rabinowicz@fil.lu.se

Miklos Redei
Department of Logic, Methodology and Scientific Method
London School of Economics
Houghton Street
London WC2A 2AE
United Kingdom
Tel: +44 20 7405 7686
Email: m.redei@lse.ac.uk

Friedrich Stadler
University of Vienna and Institute Wiener Kreis
Spitalgasse 2 (Hof 1)
Universitätscampus
1090 Vienna
Austria
Tel: +43 1 4277 41209
Fax: +43 1 4277 9412
Email: friedrich.stadler@univie.ac.at

Greg Wheeler
Centre for AI Research (CENTRIA)
Department of Computer Science
New University of Lisbon, FCT
2829-516 Caparica
Portugal
Tel: +351 21 294 8536
Fax: +351 21 294 8541
Email: grw@fct.unl.pt

Gereon Wolters
FG Philosophie
Universität Konstanz
Universitätsstrasse 10
78457 Konstanz
Germany
Tel: +49 7531 88 2636
Email: Gereon.Wolters@uni-konstanz.de

Programme Coordinator

Cristina Paoletti
Department of Philosophy
University of Bologna
Via Zamboni, 38
40126 Bologna
Italy
Tel: +39 338 2625608
Email: cristina.paoletti@unibo.it

ESF Liaison

Monique van Donzel
Humanities Unit (SCH)
European Science Foundation
1 quai Lezay-Marnésia
BP 90015
67080 Strasbourg cedex
France
Tel: +33 (0)3 88 76 71 49
Fax: +33 (0)3 88 37 05 32
Email: mvandonzel@esf.org

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