

European Studies in Philosophy of Science

Uskali Mäki
Ioannis Votsis
Stéphanie Ruphy
Gerhard Schurz *Editors*

Recent
Developments in
the Philosophy
of Science:
EPSA13 Helsinki

 Springer

European Studies in Philosophy of Science

Volume 1

Series Editors

Dennis Dieks, Institute for History & Foundations of Science, Utrecht University, The Netherlands

Giovanni Gallavotti, Dipto. Fisica, Università di Roma, La Sapienza, Italy

Wenceslao J. Gonzalez, Ferrol, Spain

Editorial Board

Daniel Andler, University of Paris-Sorbonne, France

Theodore Arabatzis, University of Athens, Greece

Diderik Batens, Ghent University, Belgium

Michael Esfeld, University of Lausanne, Switzerland

Jan Faye, University of Copenhagen, Denmark

Olav Gjelsvik, University of Oslo, Norway

Stephan Hartmann, University of Munich, Germany

Gürol Irzik, Sabancı University, Turkey

Ladislav Kvasz, Charles University, Czech Republic

Adrian Miroiu, National School of Political Science and Public Administration, Romania

Elizabeth Nemeth, University of Vienna, Austria

Ilkka Niiniluoto, University of Helsinki, Finland

Samir Okasha, University of Bristol, UK

Katarzyna Paprzycka, University of Warsaw, Poland

Tomasz Placek, Jagiellonian University, Poland

Demetris Portides, University of Cyprus, Cyprus

Wlodek Rabinowicz, Lund University, Sweden

Miklos Redei, London School of Economics, UK

Friedrich Stadler, University of Vienna, Austria

Gereon Wolters, University of Konstanz, Germany

This new series results from the synergy of EPSA - European Philosophy of Science Association - and PSE - Philosophy of Science in a European Perspective: ESF Networking Programme (2008–2013). It continues the aims of the Springer series “The Philosophy of Science in a European Perspective” and is meant to give a new impetus to European research in the philosophy of science. The main purpose of the series is to provide a publication platform to young researchers working in Europe, who will thus be encouraged to publish in English and make their work internationally known and available. In addition, the series will host the EPSA conference proceedings, selected papers coming from workshops, edited volumes on specific issues in the philosophy of science, monographs and outstanding Ph.D. dissertations. There will be a special emphasis on philosophy of science originating from Europe. In all cases there will be a commitment to high standards of quality. The Editors will be assisted by an Editorial Board of renowned scholars, who will advise on the selection of manuscripts to be considered for publication.

More information about this series at <http://www.springer.com/series/13909>

Uskali Mäki • Ioannis Votsis • Stéphanie Ruphy
Gerhard Schurz
Editors

Recent Developments in the Philosophy of Science: EPSA13 Helsinki

 Springer

Editors

Uskali Mäki
University of Helsinki
Helsinki, Finland

Stéphanie Rupy
Pierre Mendés-France University
Grenoble, France

Gerhard Schurz
DCLPS
Heinrich-Heine University Duesseldorf
Duesseldorf, Germany

Ioannis Votsis
DCLPS
Heinrich-Heine University Duesseldorf
Duesseldorf, Germany

Philosophy Faculty
New College of the Humanities
London, UK

ISSN 2365-4228 ISSN 2365-4236 (electronic)
European Studies in Philosophy of Science
ISBN 978-3-319-23014-6 ISBN 978-3-319-23015-3 (eBook)
DOI 10.1007/978-3-319-23015-3

Library of Congress Control Number: 2015950931

Springer Cham Heidelberg New York Dordrecht London
© Springer International Publishing Switzerland 2015

This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made.

Printed on acid-free paper

Springer International Publishing AG Switzerland is part of Springer Science+Business Media (www.springer.com)

Preface

The European Philosophy of Science Association [EPSA] was established in 2007 to promote the philosophy of science on the European continent and beyond. One major way this is achieved is through the Association's biennial conference, which brings together hundreds of philosophers of science from numerous countries, working on a variety of sub-fields. The 2013 conference took place at the University of Helsinki, and was organized by the Academy of Finland Centre of Excellence in the Philosophy of the Social Sciences [TINT]. For the programme and other details, see www.helsinki.fi/epsa13/.

As an indication of the growing interest in EPSA and its activities, the EPSA13 Programme Committee, chaired by Stéphanie Ruphy and Gerhard Schurz, received submissions for 391 contributed papers and 21 symposia. About one third of the proposed contributed papers and one half of the proposed symposia were accepted. This resulted in a programme with 206 speakers in 47 sessions, of which 12 were symposia and 3 were invited keynote plenaries.

After each EPSA conference a corresponding Proceedings is put together. Its aim is to showcase written up versions of some of the very best work presented at that edition of the conference. The present volume contains twenty-nine peer-reviewed contributions sourced from the 2013 meeting of EPSA. The purpose of this preface is not to provide a detailed overview of each contribution – there are simply too many to do them justice here – but rather to give the reader a little foretaste of the kinds of topics on offer.

The twenty-nine contributions can be classified under the following coarsely-grained topic headings (their frequency stated within brackets): general philosophy of science (x7), philosophy of physics (x5), social epistemology (x4), philosophy of probability (x3), philosophy of chemistry (x2), philosophy of medicine (x2), philosophy of the social sciences and humanities (x2), philosophy of biology (x1), philosophy of mathematics (x1), philosophy of psychology (x1) and philosophy of science and public policy (x1). Of course this classification is imperfect, as some papers deal with more than one of the foregoing headings. Moreover some headings have not even made our list. For example, some papers have a discernible historical vein, though not discernible enough to warrant the label 'history of science papers'. In

spite of the limitations of our classification, we feel that it is adequate for the task at hand, namely to inform the reader about the distribution of topics in this collection.

A more finely-grained identification of topics demonstrates the rather broad distribution of interests: gender-specific medicine (Amoretti and Vassalo), laws of nature, partial structures and paraconsistent reasoning (Andreas), science funding (Avin), quantum field theory (Bain), fictions, explanation and thermodynamics (Bangu), causality and physics (Bartels and Wohlfarth), values and underdetermination (Bueter), debate dynamics and truthlikeness (Cevolani), judgment aggregation and wisdom of crowds (Feldbacher), Carnap's inductive logic and explications (French), local causality and Bell inequality (Gábor), concepts of emotional expression (Glazer), Bertrand's paradox and interpretations of probability (Gyenis and Rédei), chemical kinds (Hendry), manipulation, intervention and explanation (Kästner), objectivity and values in indigenous studies (Koskinen), causality, complexity and abstraction (Kronfeldner), clinical trials (Nardini), logical empiricism and structural realism (Neuber), causality and decoherence (Samaniego), measures of coherence and truthlikeness (Schippers), robustness analysis and evidential diversity (Schupbach), explanation, idealisation and reduction in quantum chemistry (Seck), scientific representation, fiction and denotation (Suárez), biological essentialism and species pluralism (Talpsepp), realism, scientific progress and verisimilitude (Tambolo), meta-induction and wisdom of crowds (Thorn), rational choice theory and normativity (Tiefensee) and definitions of chaos (Zuchowski).

We would like to extend our warmest gratitude to a number of individuals and organisations. First and foremost we would like to thank the authors whose contributions are, needless to say, the main attraction. We would also like to thank the referees most of whom served on the EPSA13 programme committee. In alphabetical order: Alban Bouvier, Ellen Clarke, Michael Cuffaro, Foad Dizadj-Bahmani, Isabelle Drouet, Kevin Elliott, Mathias Frisch, Sven-Ove Hansson, Stephan Hartmann, Janet Kourany, Bernd Lahno, Endla Lõhkivi, Kerry McKenzie, F.A. Muller, Nancy Nersessian, Wendy Parker, Tom Pashby, Helmut Pulte, Alexander Reutlinger, Bryan W. Roberts, Samuel Schindler, Sonja Smets, Katie Steele, Michael Stöltzner, Mauricio Suárez, David Teira, Charlotte Werndl and Jan Wolenski. Additionally, we would like to thank the local organising committee of EPSA13 for all the effort put into an excellently organised conference, as well as the EPSA steering committee for facilitating our work and for putting the ball in motion. Finally, we would like to thank the good people at Springer who helped make this volume a reality. Three names, in particular, deserve to be mentioned: Christi Lue, Madhuriba Subaroyalou and Ties Nijssen. We very much hope that the readers will find the contents of the Proceedings edifying and inspiring, thereby making the efforts of the above mentioned all the more worthwhile.

Helsinki, Finland
 London, UK
 Grenoble, France
 Duesseldorf, Germany
 January 2015

Uskali Mäki
 Ioannis Votsis
 Stéphanie Ruphy
 Gerhard Schurz