

HPS&ST Newsletter
May 2024
Vol.37 (4)
ISSN: 2652-2837

CONTENTS:

# Introduction	1
# 17th International History, Philosophy and Science Teaching Conference 2-6 September 2024 - Buenos Aires, Argentina	1
# European Society for History of Science Conference, Barcelona, 4-7 September 2024	2
# 8th Panhellenic Conference on Philosophy of Science, Dec. 5-7 2024	2
# Fourth World Conference on Physics Education, 26-30 August, Krakow	3
# 2024 Du Châtelet Prize in Philosophy of Physics	3
# 27th International Congress of History of Science and Technology, Dunedin, June 29-July 5, 2025	4
# Opinion Page: Is Bad Philosophy Responsible for the Climate Crisis? NICHOLAS MAXWELL, University College, London.	5
# Varia	11
# Featured Book: <i>Recipes for Science: An Introduction to Scientific Methods and Reasoning</i> (2023)	11
# Recent HPS&ST Research Articles	12
# Recent HPS&ST Related Books	13
# AAAS <i>Science</i> Editorial: 'Teach Philosophy of Science'	17
# PhD Award in HPS&ST	18
# Coming HPS&ST Related Conferences	18
# HPS&ST Related Organisations and Websites	19
# HPS&ST Newsletter Personnel	19

Introduction

The HPS&ST Newsletter is sent monthly to about 11,000 emails of individuals who directly or indirectly have an interest in the contribution of history and philosophy of science to theoretical, curricular and pedagogical issues in science teaching, and/or interests in the promotion of innovative, engaging and effective teaching of the history and philosophy of science. The newsletter is sent on to different international and national HPS lists and international and national science teaching lists. In print or electronic form, it has been published for 40+ years.

The Newsletter, along with RESOURCES, OBITUARIES, OPINION PIECES and more, are lodged at the website: [HERE](#)

The newsletter seeks to serve the diverse international community of HPS&ST scholars and teachers by disseminating information about events and publications that connect to concerns of the HPS&ST community.

Contributions (publications, conferences, Opinion Piece, etc.) are welcome and should be sent direct to the editor: Michael R. Matthews, UNSW, m.matthews@unsw.edu.au .

**# 17th International History, Philosophy and Science Teaching Conference
2-6 September 2024 - Buenos Aires,
Argentina**



Conference e-mail: ihpst2024@gmail.com

Conference Theme: **Trusting school science again**

Conference Chair: Agustín Adúriz-Bravo,
Facultad de Ciencias Exactas y Naturales,
Universidad de Buenos Aires

Invited Speakers

2024 Springer Lecturer: **Cyrus Mody**, Maastricht University, The Netherlands

[HERE](#)

2024 Latin-American Lecturer: **Olimpia Lombardi**, CONICET, Argentina

[HERE](#)

Important Dates

Submission of proposals: Until 20th May 2024

Early registration: Until 30th June 2024

Ordinary registration: From 1st July 2024 until the first day of the Conference

Registration fee:

IHPST members: early (till June 30) USD165;
after July 1, USD200

Non-members: USD260 & USD320

Argentina participants: USD20 discount on above.

Details of online registration and payment will be given soon.

European Society for History of Science Conference, Barcelona, 4-7 September 2024

The 11th ESHS conference will take place in Barcelona (Spain), from 4 to 7 September 2024. The theme will be **Science, Technology,**

Humanity, and the Earth. Science is the primary means by which mankind understands, represents and intervenes in the world. Humanity is facing challenges that can threaten its future and the future of the planet where it lives. As historians of science, we are committed to understand how epidemics, wars and climate change are connected. We invite the community of European historians of science to look at the object of their historical research with a view to the great challenges that humanity has been facing both nowadays and throughout its history. The aim is to distance the conference from a specific methodological approach, and to establish a dialogue between different historiographies, perspectives and topics.

The main venue of the conference will be the [Campus Ciutadella](#) of the [Pompeu Fabra University](#) (UPF).



More details can be found [HERE](#) .

8th Panhellenic Conference on Philosophy of Science, Dec. 5-7 2024

The Department of History and Philosophy of Science of the National and Kapodistrian University of Athens organises the 8th Panhellenic Conference on Philosophy of Science to be held in Athens on December 5-7, 2024.

The thematic sections of the conference include all areas of philosophy of science (general philosophy of science, philosophy of special sciences), as well as areas of philosophy (metaphysics, epistemology, ethics, philosophy of language, philosophy of mind, history of

philosophy, political philosophy) to the extent that they are related to issues concerning science.



Keynote Speakers:

Stéphanie Ruphy (Ecole normale supérieure (ENS Paris) - Université PSL)

James Ladyman (University of Bristol)

Abstracts for contributed papers should be between 500 and 700 words, not including references (up to 5 references can be included). The allocated time for delivering contributed papers will be 30 minutes, including discussion. Submissions of a symposium proposal must include a general description of the topic and its significance (between 500 and 700 words) and summaries (up to 250 words) for each contribution. Symposia will be allocated 2 hours, and can include 3 to 5 talks. They can have any format.

Deadline for submission of abstracts: 30 June 2024
Notifications of abstract acceptance: August 2024

For submission guidelines and to submit your abstract : [HERE](#)

For questions about the conference, please contact: phos@phs.uoa.gr

Fourth World Conference on Physics Education, 26-30 August, Krakow

The 4th WCPE is organized by the Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University, Kraków, Poland, in cooperation with the International Research Group on Physics Teaching (GIREP vzw), The International Conference on Physics Education (ICPE), and the Faculty of Physics and Astronomy, University of Wrocław, Poland.

Keynote Speakers:

Marisa Michelini, University of Udine, Italy
Paula R. L. Heron, University of Washington, United States of America

Claudio Fazio, University of Palermo, Italy

Lama Jaber, Florida State University, United States of America

Magdalena Kersting, University of Copenhagen, Denmark

Andreas Mueller, University of Geneva, Switzerland

Thomas Schubatzky, University of Innsbruck, Austria

Details: [HERE](#)

2024 Du Châtelet Prize in Philosophy of Physics

Submissions are invited for the 2024 [Emilie Du Châtelet](#) Prize in Philosophy of Physics

Submissions are invited on the writings of women in the nineteenth century that discuss or otherwise engage with the concepts, foundations, or methods of any area of physics, or with the nature and scope of physics itself. The topic should be construed broadly to include: any genre in which the women were writing; “physics” as understood then and/or now; both the experimental and the theoretical; and physics in relation to other areas of inquiry. Submissions may address the work of a single figure or multiple figures.

The winner will receive \$1000, an invitation to participate in a workshop on the topic of this year’s prize, and an invitation to have their paper considered for publication in *Studies in History*

and *Philosophy of Science*. The prize is open to graduate students and to scholars within 5 years of PhD as of the submission deadline. Submissions should not exceed 10,000 words.

Deadline for submissions is September 8th, 2024. For more details of the prize and of submission requirements, see below.

The Du Châtelet Prize in Philosophy of Physics is supported by Duke University and *Studies in History and Philosophy of Science*.

Committee

The members of this year's prize committee are:

Katherine Brading, Professor of Philosophy,
Duke University

Joshua Eisenthal, Research Assistant Professor
of Philosophy, California Institute of
Technology, and 2020 Du Châtelet Prize
winner

Samuel C. Fletcher, Associate Professor of
Philosophy, University of Minnesota, Twin
Cities; from Sept. 1, Professor of Philosophy
of Physics, University of Oxford

Lydia Patton, Professor of Philosophy, Virginia
Tech

Jennifer Whyte, Postdoctoral Associate in
Philosophy, Duke University

Workshop

A workshop honoring this year's prize winner, and including talks by members of the committee, will be held at Duke University on November 9-10, 2024. If you would like to join the mailing list to receive registration information for this workshop, please email Katherine Brading at katherine.brading@duke.edu.

Submission requirements

- Submissions must be in English.
- Submissions must be prepared for blind review.
- Submissions must be no longer than 10,000 words in length, including footnotes and references.
- Submitted work must be unpublished and must not be under consideration for publication.

The Du Châtelet Prize in Philosophy of Physics celebrates excellence in philosophy of physics and promotes breadth across the field both historically and philosophically. Each year, a prize committee of scholars in the field invites submissions on a particular topic. The prize winner receives feedback and support from the committee, and the paper is considered for publication in *Studies*. The goals of the prize are to support young scholars working in philosophy of physics, to strengthen the historical and philosophical breadth of the field, and to promote some of the very best work being done by students and junior scholars.

The submission portal will open in August. For details of the submission process, and for any other questions, please contact Katherine Brading (katherine.brading@duke.edu)

[Editor: For sections of two texts of Du Châtelet, and an Introduction to her life and contributions to physics and philosophy, see M.R. Matthews (ed.) *The Scientific Background to Modern Philosophy*, Chap. X.]

27th International Congress of History of Science and Technology, Dunedin, June 29- July 5, 2025



The 27th International Congress of History of Science and Technology will be held from **29 June - 5 July 2025** at the University of Otago in Dunedin, New Zealand.

Symposium Proposals due by 1 May 2024.
Standalone Papers due by 1 December 2024.

The International Congress of History of Science and Technology (ICHST), held every four years, is the world's premier meeting for history of science and technology. The 27th Congress will be held as a hybrid in-person and online event at the University of Otago's Dunedin campus in June-July 2025. Delegates registered for virtual participation will be able to both present and

attend online. The Congress will bring together a diverse group of the world's leading scholars and students in the fields of history of science, technology, and medicine as well as related disciplines. It will be the first time the Congress has been held in Australasia and only the second time in the Southern Hemisphere.

The **theme** of the 27th ICHST is "Peoples, Places, Exchanges, and Circulation."



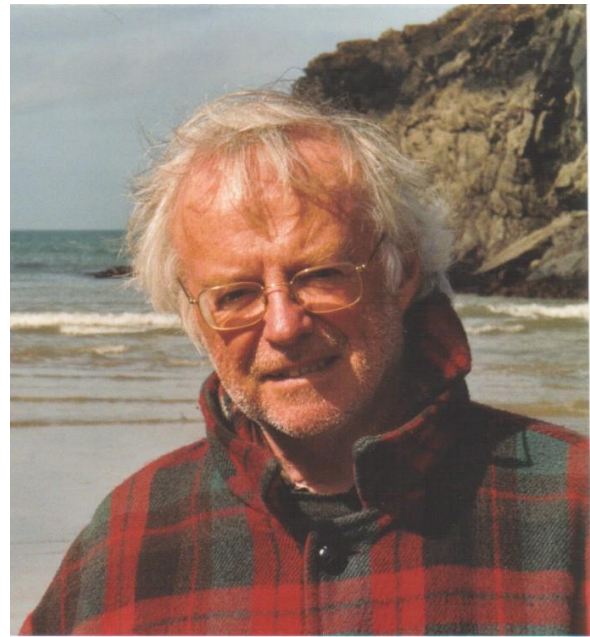
Details [HERE](#)

Opinion Page: Is Bad Philosophy Responsible for the Climate Crisis?

NICHOLAS MAXWELL, Science & Technology Studies Dept., University College, London.

[Nicholas Maxwell](#) completed an undergraduate course in philosophy at Manchester University, where he obtained a BA. He then spent two years at Manchester working on a thesis entitled "Physics and Common Sense", and obtained his MA. There was an interlude in which he was an occasional student at the LSE attending Karl Popper's lectures and seminar. He then became a lecturer in philosophy of science in the Philosophy Department at Manchester University for a year, before taking up a position in the Department of History and Philosophy of Science at University College London in 1966. There he taught

philosophy of science for just under thirty years and is now an Emeritus Reader in the Department.



He has published fifteen books and over eighty papers in scientific and philosophical journals on problems that range from consciousness, free will, value, and art; to the rationality of science, simplicity, scientific realism, explanation, time and quantum theory.

He was a visiting research fellow at the Center for the Philosophy of Science, University of Pittsburgh, from 1987 to 1988, and then again a visiting scholar at the Center in 1999. He was an academic visitor in the Department of Philosophy, Logic and Scientific Method at the LSE from 1994 to '97, a tutor in the Department of Continuing Education at Oxford University from 2000 to 2003, and an honorary senior research fellow in the Department of Education and Professional Development at UCL, from 2002 to 2005. In 2003 he founded Friends of Wisdom. For more about his education and research see [HERE](#).

This Opinion Piece is the Preface to:

Nicholas Maxwell, *The Philosophy of Inquiry and Global Problems*, Palgrave Macmillan, 2024; ISBN 978-3-031-49490-1; ISBN 978-3-031-

Introduction

I have recently published a book to which I gave the title: *Is Bad Philosophy Responsible for the Climate Crisis?* But this proved to be too inflammatory for the publisher, who changed it to the anodyne [*The Philosophy of Inquiry and Global Problems: The Intellectual Revolution Needed to Create a Better World*](#). In the book I argue that academic philosophy has a certain responsibility for the failure of humanity to put a stop to the climate and nature crises, in failing even to notice that a bad philosophy of inquiry dominates academic inquiry – one that prevents universities from engaging actively with the public domain to ensure action is taken to prevent the climate and nature crises from developing, or intensifying. *The Philosophy of Inquiry and Global Problems* spells out what has gone wrong that has reduced academic philosophy to its present pitiful state, and what needs to be done to restore philosophy so that it becomes again a discipline with profoundly fruitful intellectual and humanitarian implications. This Opinion Piece is the Preface to the published book.

Nicholas Maxwell, *The Philosophy of Inquiry and Global Problems*, Palgrave Macmillan, 2024; ISBN 978-3-031-49490-1; ISBN 978-3-031-49491-8; <https://doi.org/10.1007/978-3-031-49491-8>.

It is thankfully reproduced with permission of Springer Nature.

Science and the Situation of the World

The world is in a state of crisis. This all too apparent in the impending catastrophe of climate change. But it is also manifest in other environmental crises: the destruction of natural habitats, the devastating loss of wildlife, the impending mass extinction of species. And there are other global problems that threaten our future: lethal modern war; the spread of modern armaments; the menace of nuclear weapons; pollution of earth, sea and air; rapid rise in the human population; increasing antibiotic resistance; the degradation of democratic politics, brought about in part by the internet.

It is not just that universities around the world have failed to help humanity solve these global problems; they have made the genesis of these problems possible. Modern science and technology, developed in universities, have made possible modern industry and agriculture, modern hygiene and medicine, modern power production and travel, modern armaments, which in turn made possible much that is good, all the great benefits of the modern world, but also all the global crises that now threaten our future.

What has gone wrong? The fault lies with a bad philosophy of inquiry – a bad view as to what the aims and methods of inquiry ought to be – built into universities around the world. The basic idea of this bad philosophy is that universities should help promote human welfare by, in the first instance, acquiring scientific knowledge and technological know-how. First, knowledge is to be acquired; once acquired, it can be applied to help solve social problems, and promote human welfare. We may call this bad philosophy of inquiry *knowledge-inquiry*.

What is Wrong with Knowledge Inquiry in the Academy?

Knowledge-inquiry is an intellectual disaster. Judged from the standpoint of promoting human welfare, it is profoundly and damagingly irrational, in a structural way. Three of the four most elementary rules of rational problem solving are violated. Reason is betrayed and, as a consequence, humanity is betrayed as well. As a result of being restricted to the tasks of acquiring and applying knowledge, universities are prevented from doing what they most need to do to help humanity solve global problems, namely, *engage actively with the public to promote action designed to solve global problems*. Universities do not take their basic task to be public education about what our problems are, and what we need to do about them. As a result of giving priority to the pursuit of knowledge, universities do not even give priority within academia to the vital tasks of articulating problems of living, local and global, and proposing and critically assessing possible solutions – possible and actual *actions*, policies, political programmes, ways of living.

A bad philosophy of inquiry, built into universities around the world is, in short, in part responsible for the genesis of many of our global problems, and our persistent failure subsequently to solve them. Bad philosophy is, in short, responsible in part for many of the ills of the modern world.

But if that really is the case, why has academic philosophy not highlighted this disastrous state of affairs long ago, and spelled out for everyone to understand what needs to be done to put matters right?

Academic philosophy has become esoteric, effete, lost in intricate puzzle solving, remote from the burning issues of the times, blind and dysfunctional – so outrageously blind and dysfunctional, indeed, that it hasn't even noticed that universities are dominated by a profoundly irrational and damaging philosophy of inquiry.

Once upon a time, philosophy was a profoundly significant, potent discipline. It made discoveries that transformed the path of human history. In the 16th and 17th centuries, natural philosophy – the philosophical study of nature – discovered the secret of how to improve dramatically our knowledge and understanding of the natural world, and in doing so, created modern science, a creation that transformed subsequent history, and made possible the modern world.

Three Philosophical Blunders

But then philosophy made three monumental intellectual blunders: The post-Cartesian blunder, the post-Newtonian blunder, and the Enlightenment blunder, all still unacknowledged and uncorrected right down to today.

These three blunders, unacknowledged and uncorrected, had a devastating effect on philosophy. They trivialized the discipline, or reduced it to a discipline that peddled obscure absurdity and fantasy. Philosophy lost its way. And because the three intellectual blunders, made long ago, have still not been acknowledged and corrected today, philosophy still remains locked in trivial puzzle-solving, or bombastic obscurity, hopelessly dysfunctional, blind to the bad philosophy of inquiry of knowledge-inquiry that, built into universities, prevents them from

devoting themselves, rigorously and effectively, to helping humanity learn how to make progress to a better world.

Correct the three intellectual blunders made by philosophy long ago, put right the bad repercussions that stem from these blunders, and extraordinarily fruitful consequences emerge, for philosophy itself, but also for domains that lie far beyond what would ordinarily be thought to be the territory of philosophy: For physics, for natural science, for social science, for academic inquiry as a whole, for education, for our social and cultural life, for our capacity to solve grave global problems that at present we seem incapable of resolving. And, ultimately, for our capacity to make progress towards a genuinely good, civilized world.

Correcting the three intellectual blunders properly, so that all the implications and repercussions are corrected as well, has profoundly fruitful implications for our entire social and cultural landscape. Philosophy becomes again the potent enterprise it once was. And, in particular, correcting the three ancient blunders would enable us to reshape universities so that they become actively, rationally and effectively devoted to helping humanity learn how to put a stop to the disaster of climate change.

Here, in brief, is an indication of what correcting these three ancient intellectual blunders would accomplish.

Post-Cartesian Blunder

First, correcting the post-Cartesian blunder has fruitful consequences for philosophy itself. It leads to a new kind of philosophy, *Critical Fundamentalism*, that takes, as its basic task, to promote imaginative and critical – that is, rational – thinking about how to solve our most urgent and fundamental problems of thought and life. A basic job of the academic philosopher is to promote this imaginative and critical speculative thinking, this fundamental problem-solving, so that it becomes a part of such fields as: education; science; academic thought more generally; and entirely generally, personal and public life, so that anyone in many a context may feel free to do philosophy in this way, not obsessively, but from time to time.

Critical fundamentalism, puts centre stage our fundamental problem – the problem that encompasses all others of thought and life: How can our human world, the world we see and touch, the world of consciousness, free will, meaning and value, exist and best flourish embedded as it is in the physical universe?

Critical Fundamentalism has further fruitful implications for philosophy itself. It leads to the solution to one of the most substantial, long-standing problems of philosophy, the philosophical problem of consciousness – what has been called “the hard problem of consciousness”.

But fruitful implications of Critical Fundamentalism go far beyond philosophy itself. There are implications for the fields I have already mentioned, but also for much more: natural science; social science; the humanities; the arts; education; personal, social and political life; our capacity to achieve civilization.

Post-Newtonian Blunder

Second, correcting the post-Newtonian blunder, adds to, and reinforces the fruitful implications and repercussions of correcting the post-Cartesian blunder. It leads immediately to a new conception, and kind of, theoretical physics. Physics becomes a modern version of what it once was, *natural philosophy*, a synthesis of physics, metaphysics, methodology, epistemology, and philosophy. It emerges that rigour requires that physics must make explicit, and so criticizable, a problematic, influential but at present implicit metaphysical – i.e. untestable – assumption about the nature of the physical universe: it is such that physical laws governing the way physical phenomena occur are (more or less) *unified*. In other words, the universe is *physically comprehensible*.

In order to facilitate criticism of this substantial, highly problematic assumption, that influences discovery, interpretation and acceptance of physical theories, physics needs to adopt a new meta-methodology, *aim-oriented empiricism*, which represents the metaphysical assumption of unity of physics in the form of a hierarchy of assumptions, these assumptions becoming

increasingly insubstantial as one goes up the hierarchy, and so increasingly likely to be true, and increasingly such that their truth is required for science, the pursuit of knowledge, or life, to be possible at all.

As we go down the hierarchy, assumptions become increasingly substantial, and thus increasingly likely to be false. It is here that physics needs to concentrate criticism in an attempt to improve the assumption that is adopted, so that it does better justice to the actual lawful structure of the physical universe.

At the two lowest levels in the hierarchy, we have accepted fundamental physical theories (today, general relativity and the quantum field theory of fundamental particles and the forces between them), and then, at the bottom, accepted experimental and observational results.

Associated with each metaphysical assumption there is a methodological rule which asserts: In order to be acceptable, an assumption, or physical theory, next down in the hierarchy, must (as far as possible) accord with the assumption above it. The metaphysical assumption accepted at the lowest level in the hierarchy must, in addition, be associated with the most empirically successful physical theories. The hope is that, as a result of subjecting the lowest level metaphysical thesis to sustained criticism, taking these two considerations into account, an improved metaphysical thesis will be adopted which, when made precise, becomes a new, revolutionary, empirically successful, unifying physical theory.

The key idea of aim-oriented empiricism is, indeed, that as physics advances, metaphysical assumptions and associated methods improve as well. As our knowledge, improves, our knowledge about how to improve knowledge improves too. As we learn more about the universe, we learn more about how to learn about it.

Aim-oriented empiricism has a number of fruitful implications. It clarifies and specifies accurately actual methods employed in physics. It solves the problem of what it means to say that a physical theory is *unified* (a problem that even Einstein did not know how to solve). It solves a long-standing and absolutely fundamental problem of

philosophy: Hume's Problem of Induction. And it has fruitful implications for physics in that it provides a rational, if fallible, method of discovery for physics, exploited by Einstein in discovering special and general relativity, but still not recognized and understood by physicists today. Einstein exploited the method of discovery successfully, but failed to articulate it properly.

Finally, aim-oriented empiricism has vital, fruitful implications, not just for physics, but for the whole of science. For it is not just in physics that basic assumptions, or aims, are problematic. This is the case for the whole of natural science. All scientific disciplines, in their choice of research aims, inevitably make problematic assumptions about (a) what is unknown but discoverable (b) what it is of value to discover, and (c) how discoveries that are made can be of benefit to social life.

These assumptions are inevitable, influential, and often highly problematic. They concern the metaphysics, values and social use inherent in research aims. They need to be made explicit within science, so that they can be subjected to sustained criticism in the hope of improving them.

We need to see science as consisting of three domains of discussion: evidence, theory, and *aims*. Subjecting problematic aims of scientific disciplines to sustained critical scrutiny in this way, within the framework of aim-oriented empiricism, enhances the likelihood that science will discover that which is genuinely of value and use to humanity.

Third, aim-oriented empiricism, when generalized, has even broader, fruitful implications, as becomes apparent now as we consider the consequences of correcting the third monumental blunder, perhaps the most serious blunder of all.

The Enlightenment Blunder

Correcting this third, Enlightenment blunder has, potentially, enormously fruitful implications and repercussions for almost everything. The 18th century Enlightenment, especially the French Enlightenment, made a discovery of profound significance. It can be put quite simply like this. *We can learn from scientific progress how to*

make social progress towards an enlightened world.

In their lives, the *philosophes*, Voltaire, Diderot, Condorcet and the rest, did what they could to put this idea into practice. They fought dictatorial authority, dogma, and injustice with weapons no more lethal than argument and wit. Whenever possible, they promoted the virtues of doubt, criticism, learning from experience. They did what they could to get knowledge and reason taken seriously in public and personal life.

But in developing their profound discovery intellectually, the *philosophes* made three disastrous mistakes. In order to develop their discovery correctly, three things need to be got right.

- (1) The progress-achieving methods of science need to be correctly specified.
- (2) These methods need to be correctly generalized, so that they become fruitful, potentially, to any worthwhile human endeavour with problematic aims.
- (3) These progress-achieving methods, generalized from those of science, need to be got into the fabric of social life, into politics, industry, economics, finance, business, the media, the law, and above all into the endeavour to make progress towards an enlightened world, so that we may make in social life some of the progress towards enlightenment that science makes towards greater knowledge.

The Enlightenment *philosophes* got all three steps wrong. They got the first step wrong. Misled by pronouncements of their intellectual hero, Isaac Newton, they thought that *evidence alone* is what matters as far as scientific method is concerned, and thus failed to conceive of, adopt and implement aim-oriented empiricism. Having failed to get the first step right, they naturally failed at the second step.

But it is when we come to the third step that the Enlightenment *philosophes* made their most disastrous mistake. In order to develop correctly their magnificent idea of learning from scientific progress how to achieve social progress towards an enlightened world, what they ought to have done is get a generalized version of scientific progress directly into social life itself.

In their lives the *philosophes* did indeed attempt to do something like that, and for that they should be forever honoured. But when it came to developing their idea intellectually, they did something quite different. They sought to apply progress-achieving methods of natural science, not to social life directly, but rather to the task of improving *knowledge* of the social world. They set about creating the social sciences: economics, psychology, sociology, anthropology, political science.

This malformed version of the profound Enlightenment idea was then developed throughout the 19th century, by Auguste Comte, J.S. Mill, Karl Marx, Max Weber, Emile Durkheim and. in the late 19th and early 20th centuries, it was built into universities with the creation of departments and disciplines of social science. The outcome is what we still have today, *knowledge-inquiry*; that is, academic inquiry devoted to the acquisition and application of knowledge.

But this damagingly irrational kind of academic enterprise of knowledge-inquiry fails disastrously – as I have already pointed out – to help humanity learn how to solve global problems it has helped to create: The climate crisis, the ecological crisis, lethal modern war, the menace of nuclear weapons, pollution of earth, sea and air, rapid population growth increasing antibiotic resistance, degradation of democratic politics brought about in part by the internet.

In order to correct this third, devastating. blunder, all three steps of the profound Enlightenment idea of learning from scientific progress how to make social progress towards an enlightened world need to be put properly into practice. That requires that we do the following.

- (1) We need to characterise the progress-achieving methods of natural science correctly, In terms of aim-oriented empiricism.
- (2) Aim-oriented empiricism needs to be correctly generalized to form aim-oriented rationality, fruitfully applicable to any worthwhile human endeavour with problematic aims.
- (3) Aim-oriented rationality needs to be got into the fabric of social life, into all our other social and institutional endeavours besides science –

into government, politics, industry, agriculture, business, economics, finance, the law, the media, personal and social life – so that something of the astonishing success of science in making intellectual progress towards greater knowledge may be got into the endeavour to make social progress towards an enlightened world.

The consequences of correcting the Enlightenment blunder in this way are dramatic and far-reaching. To begin with, social inquiry is transformed. Social inquiry is not social *science*; the disciplines of social inquiry are not, primarily, devoted to the pursuit of *knowledge* of social phenomena.

The primary task of social inquiry – economics, sociology, psychology, anthropology, political science and the rest – becomes to help humanity get aim-oriented rationality into the fabric of social life – above all, get aim-oriented rationality into powerful and influential institutions, businesses, organizations and activities that have worthwhile but problematic aims and methods, above all into those that have *harmful* aims and methods.

In other words, as a result of correcting the Enlightenment blunder, and correcting its implications and repercussions, social *science* becomes social *methodology* or social *philosophy*. What philosophy of science is to science (according to aim-oriented empiricism) so social inquiry is to social life: that enterprise which helps diverse aspects of social life improve aims and methods as life goes on.

Transforming the Academy

But correcting the Enlightenment blunder leads to far more than a transformation in the nature of social inquiry. It leads, as we shall see, to a transformation in the entire academic enterprise. Almost every department and aspect of knowledge-inquiry is transformed. I have already mentioned that, judged from the standpoint of helping to promote human welfare, knowledge-inquiry violates three of the four most conceivable basic rules of reason.

Modify knowledge-inquiry just enough to ensure that these three rules are not violated, ensure that aim-oriented rationality is put into practice

throughout, and a new kind of inquiry emerges, wisdom-inquiry as it may be called, designed and devoted to help people tackle problems of living, local and global, rationally and effectively.

Wisdom-inquiry actively engages with the social world to help people learn how to resolve conflicts and problems of living in increasingly effective and cooperatively rational ways. The basic aim of inquiry is to seek and promote wisdom, conceived of as the capacity, active endeavour, and perhaps desire to realize what is of value in life for oneself and others. Wisdom in this sense, includes knowledge and technological know-how, but much more.

Instead of helping to create global problems and subsequently failing to help solve them, as knowledge-inquiry has done, wisdom-inquiry would do all that it could to help humanity solve global problems that threaten our future, above all the climate and ecological crises. It would devote itself to helping humanity learn how to make progress towards a good, civilized, wise world.

We urgently need to bring about a revolution in our universities around the world, wherever possible, so that knowledge-inquiry becomes the more intellectually rigorous and far more humanly valuable wisdom-inquiry.

Invitation to Submit Opinion Piece

In order to make better educational use of the wide geographical and disciplinary reach of this *HPS&ST Note*, invitations are extended for readers to contribute opinion or position pieces or suggestions about any aspect of the past, present or future of HPS&ST studies.

Contributions can be sent direct to editor. Ideally, they might be pieces that are already on the web, in which case a few paragraphs introduction, with link to web site can be sent, or else the pieces will be put on the web with a link given in the Note.

They will be archived, and downloadable, in the OPINION folder at the HPS&ST web site [HERE](#).

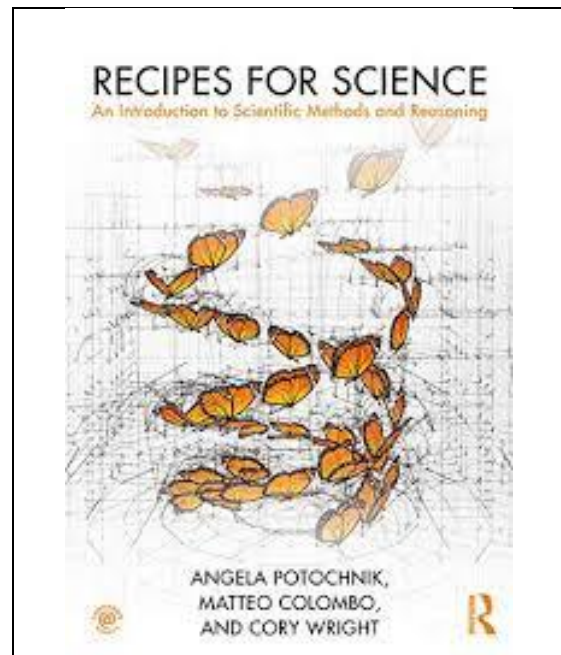
Varia

- Vale, Frans De Vall (1948-2024) [HERE](#)
- Vale, Ian Charles Jarvie (1937-2023) [HERE](#)

- Vale, Daniel Dennett (1942-2024) [HERE](#)
- HPS&ST books, downloadable files [HERE](#)
- *Science & Education* Open Access articles (138) [HERE](#)
- Bayesian statistics demystified [HERE](#)

Featured Book

Potochnik, Angela, Colombo, M. & Wright, C.: 2023, *Recipes for Science: An Introduction to Scientific Methods and Reasoning*, Routledge, New York.



Scientific literacy is an essential aspect of any undergraduate education. *Recipes for Science* responds to this need by providing an accessible introduction to the nature of science and scientific methods appropriate for any beginning college student. The book is adaptable to a wide variety of different courses, such as introductions to scientific reasoning, methods courses in scientific disciplines, science education, and philosophy of science.

Special features of *Recipes for Science* include contemporary and historical case studies from many fields of physical, life, and social sciences; visual aids to clarify and illustrate ideas; text boxes to explore related topics; plenty of exercises to support student recall and application of concepts; suggestions for further readings at the end of each chapter; a glossary with helpful definitions of key terms; and a companion website with course syllabi, internet resources, PowerPoint

presentations, lecture notes, additional exercises, and original short videos on key topics.

Chapter One (26pp), is an excellent introduction to core issues in philosophy of science, is available [HERE](#)

Authors or publishers of suitable HPS&ST books who would like an appropriate Preface, Introduction or First Chapter of their book featured in the newsletter, and placed in the [RESOURCE](#) folder of the HPSST website, should contact newsletter editor [Michael R. Matthews](#)

Recent HPS&ST Research Articles

Foundations of Science (Vol. 29, Issue 1, March 2024)

Special Issue: Findings of History of Mechanism Science

Editors: Marco Ceccarelli, Rafael López García

Arévalo, D.F.G., Peñaloza, G. (2024). Exploring Gender Constructs: Colombian and Mexican Biology Teachers' Perspectives. *Sci & Educ*, 1-23. <https://doi.org/10.1007/s11191-024-00516-0>

Billingsley, W. (2023). The Practical Epistemologies of Design and Artificial Intelligence. *Sci & Educ*, 1-18. <https://doi.org/10.1007/s11191-024-00517-z>

Bugingo, J.B., Yadava, L.L., & Mashood, K. K. (2024). Effect of explicit and reflective activity-based instruction on senior secondary physics students' views towards Nature of Science. *International Journal of Science Education*. <https://doi.org/10.1080/09500693.2024.2346621>

Chamizo, J.A., Ortiz-Millán, G. (2024). Ethics of the future of chemical sciences. *Found Chem*, 1-11. <https://doi.org/10.1007/s10698-024-09500-6>

Dunlop, L., Atkinson, L., Malmberg, C. et al. (2024). Treading carefully: the environment and political participation in science education. *Cult Stud of Sci Educ*, 1-23. <https://doi.org/10.1007/s11422-024-10215-5>

Erenler, S., Cetin, P.S. & Eymur, G. (2024). Impact of Argument-Driven Inquiry Activities on Pre-service Science Teachers' Views of the Nature of Scientific Inquiry in the Context of

Climate Change Education. *Sci & Educ*, 1-31. <https://doi.org/10.1007/s11191-024-00512-4>

Feinstein, N. W., & Baram-Tsabari, A. (2024). Epistemic networks and the social nature of public engagement with science. *Journal of Research in Science Teaching*, 1–20. <https://doi.org/10.1002/tea.21941>

Lam, V., Rousselot, Y. (2024). Anthropocene, planetary boundaries and tipping points: interdisciplinarity and values in Earth system science. *Euro Jnl Phil Sci*, 1-21. <https://doi.org/10.1007/s13194-024-00579-4>

Mamlok, D. (2024). Landscapes of Sociotechnical Imaginaries in Education: A Theoretical Examination of Integrating Artificial Intelligence in Education. *Found Sci*, 1-12. <https://doi.org/10.1007/s10699-024-09948-x>

Mi, S., Zong, T., Yang, X. et al. (2024). Physics Pre-service Teachers' Conceptual Understanding of Scientific Literacy. *Sci & Educ*, 1-27. <https://doi.org/10.1007/s11191-024-00520-4>

Newton, M.H., Annetta, L.A. (2024). The Influence of Extended Reality on Climate Change Education. *Sci & Educ*, 1-21. <https://doi.org/10.1007/s11191-024-00518-y>

Oh, P.S., Lee, GG. (2024). Confronting Imminent Challenges in Humane Epistemic Agency in Science Education: An Interview with ChatGPT. *Sci & Educ*, 1-27. <https://doi.org/10.1007/s11191-024-00515-1>

Rusmana, A.N., Aini, R.Q., Sya'bandari, Y. et al. (2024). The attitude of Korean and Indonesian scientists toward Merton's scientific norms. *Cult Stud of Sci Educ*, 1-22. <https://doi.org/10.1007/s11422-023-10204-0>

Soltani, A. (2024). Portrayals of Scientists in Science Textbooks of Secondary Schools in Iran: A Qualitative Study in the History of Science. *Sci & Educ*, 1-23. <https://doi.org/10.1007/s11191-024-00522-2>

Souza, K.F., Porto, P.A. (2024). Interaction, interpretation and representation: the construction and dissemination of chemical knowledge from a Peircean semiotics perspective. *Found Chem*, 1-19. <https://doi.org/10.1007/s10698-024-09506-0>

Recent HPS&ST Related Books

Allamel-Raffin, C., Gangloff, J.-L., & Gingras, Y. (Eds.) (2024). *Experimentation in the Sciences: Comparative and Long-Term Historical Research on Experimental Practice*. Dordrecht: Springer Cham. ISBN: 978-3-031-58507-4

“This book takes a novel approach by highlighting comparative and long-term historical perspectives on experimental practice. The juxtaposition of accounts of natural, social, and medical experimentation is very enlightening, especially because the authors put the emphasis on the different kinds of objects of experimentation (physical matter, chemical reagents, social groups, organizations, sick individuals, archeological remains) and demonstrate how much the kinds of objects matter for the practice of experimentation, its methods, tools, and methodologies.

“Taken together, the chapters raise several fascinating questions for further study: What do these different approaches have in common? Why do we call them “experimentation”? What are the intersections among the fields and their developments? The volume engages philosophical approaches that are not well known to Anglophone readers (Bachelard, Bergson, Bernard, Canguilhem, among others) and brings to attention a wealth of Francophone secondary literature on past and present scientific experimentation.

“The collection fills a yawning gap in science, science studies, and philosophy of science teaching, making it particularly valuable philosophers and historians of science in all subfields.” (From the Publishers)

More information [HERE](#)

Ambrosio, C., & Sánchez-Dorado, J. (Eds.) (2024). *Abstraction in Science and Art: Philosophical Perspectives*. Abingdon, UK: Routledge. ISBN 9781032462875

“This volume explores the roles and uses of abstraction in scientific and artistic practice. Conceived as an interdisciplinary dialogue between experts across histories and

philosophies of art and science, this collection of essays draws on the shared premise that abstraction is a rich and generative process, not reducible to the mere omission of details in a representation.

“When scientists attempt to make sense of complex natural phenomena, they often produce highly abstract models of them. In the history and philosophy of art, there is a long tradition of debate on the function of abstraction, and – more recently – its relation with theories of depiction. Adopting a process-oriented perspective, the chapters in this volume explore the epistemic potential of a diversity of practices of abstracting. The systematic analysis of a wide range of historical cases, from early twentieth-century abstractionist painting to contemporary abstract photography, and from nineteenth-century physics to recent research in biology and neurosciences, invites the reader to reflect on the material lives of abstraction through concrete artefacts, experimental practices and theoretical and aesthetic achievements.

“*Abstraction in Science and Art* will be of interest to scholars and advanced students working in aesthetics, philosophy of science, and epistemology, as well as to historians of science and art, and to practicing artists and scientists interested in exploring foundational questions at the heart of the creative practice of abstracting.” (From the Publishers)

More information [HERE](#)

Beisbart, C. & Frauchiger, M. (2024). *Scientific Theories and Philosophical Stances: Themes from van Fraassen*. Berlin, Boston: De Gruyter. ISBN: 9783111019802

“Since the publication of his seminal monograph “The scientific image”, Bas van Fraassen is a key figure in philosophy of science. In this book, other philosophers with various outlooks critically discuss his work on theories, empiricism and philosophical stances.

“The book starts with a new article by van Fraassen on his preferred account of theories, the so-called semantic view. This account is now 50 years old, and van Fraassen takes this

anniversary as an opportunity to review the account, its history and the philosophical discussion about it.

“In the main part of the book, Nancy Cartwright, Finnur Dellsén, Matthias Egg, Steven French, Michael Friedman, Milena Ivanova and Michela Massimi discuss van Fraassen's contributions to philosophy. Three chapters focus on his engagement with realism (French, Friedman, Ivanova). Others study his voluntarism (Cartwright) and his view on representation (Massimi). Finally, there are contributions about his elaboration of empiricism (Dellsén) and his proposal to consider philosophical positions as stances (Egg).

“The volume includes a *laudatio* written by Steven French and finishes with a reply by van Fraassen to his critics.” (From the Publishers)

More information [HERE](#)

Currie, Adrian (2024). *Rock, Bone, and Ruin: An Optimist's Guide to the Historical Sciences*. Cambridge, MA: The MIT Press. ISBN: 9780262552035.

“The ‘historical sciences’—geology, paleontology, and archaeology—have made extraordinary progress in advancing our understanding of the deep past. How has this been possible, given that the evidence they have to work with offers mere traces of the past? In *Rock, Bone, and Ruin*, Adrian Currie explains that these scientists are “methodological omnivores,” with a variety of strategies and techniques at their disposal, and that this gives us every reason to be optimistic about their capacity to uncover truths about prehistory. Creative and opportunistic paleontologists, for example, discovered and described a new species of prehistoric duck-billed platypus from a single fossilized tooth. Examining the complex reasoning processes of historical science, Currie also considers philosophical and scientific reflection on the relationship between past and present, the nature of evidence, contingency, and scientific progress.

“Currie draws on varied examples from across the historical sciences, from Mayan ritual sacrifice to giant Mesozoic fleas to Mars's mysterious watery past, to develop an account of the nature of, and resources available to, historical science. He presents two major case studies: the emerging explanation of sauropod size, and the “snowball earth” hypothesis that accounts for signs of glaciation in Neoproterozoic tropics. He develops the Ripple Model of Evidence to analyze “unlucky circumstances” in scientific investigation; examines and refutes arguments for pessimism about the capacity of the historical sciences, defending the role of analogy and arguing that simulations have an experiment-like function. Currie argues for a creative, open-ended approach, “empirically grounded” speculation.” (From the Publishers)

More information [HERE](#)

Dachun, D., Zhiqiang, A., & Huili, Y. (2024). *Reconsideration of Science and Technology II: Scientism and Anti-Scientism*. Abingdon, UK: Routledge. ISBN: 9781032298993

“In reviewing and reconsidering the intellectual history of scientism and antiscentism, the authors assess the process of reasoning and prejudices of these contrasting viewpoints, while discussing the repercussions of scientific hegemony and its contemporary criticism.

“As the second volume of a three-volume set that proposes to reconsider science and technology and explores how the philosophy of science and technology responds to an ever-changing world, this title focuses on ideological trends centering around scientism and anti-scientism since the 19th century. The six chapters look into the emergence of scientism, instrumental reason, scientific optimism, scientific pessimism, scientific crisis and irrationalism and finally the deconstruction of scientism. The authors provide insight into the connections and biases of these disparate views and critiques, explore the influences of the hegemony of science and contemporary critique of science and evaluate the value of postmodernism and deconstructivism.

“The volume will appeal to scholars and students interested in the philosophy of science and technology, the ideology of scientism and anti-scientism, modernism and postmodernism, Marxist philosophy and topics related to scientific culture.” (From the Publisher)

More information [HERE](#)

Harel, Kay (2024). *Darwin's Love of Life: A Singular Case of Biophilia*. New York, NY: Columbia University Press. ISBN: 9780231216708

“Biophilia—the love of life—encompasses the drive to survive, a sense of kinship with all life-forms, and an instinct for beauty. In this unconventional book, Kay Harel uses biophilia as a lens to explore Charles Darwin’s life and thought in deeply original ways. In a set of interrelated essays, she considers how the love of life enabled him to see otherwise unseen evolutionary truths.

“Harel traces the influence of biophilia on Darwin’s views of dogs, facts, thought, emotion, and beauty, informed by little-known material from his private notebooks. She argues that much of what Darwin described, envisioned, and felt was biophilia in action. Closing the book is a profile of Darwin’s marriage to Emma Wedgwood, his first cousin, a woman gifted in music and medicine who shared her husband’s love of life.

“Harel’s meditative, playful, and lyrical musings draw on the tools of varied disciplines—aesthetics, astronomy, biology, evolutionary theory, history of science, philosophy, psychiatry, and more—while remaining unbounded by any particular one. Taking unexpected paths to recast a figure we thought we knew, this book offers readers a different Darwin: a man full of love, joy, awe, humility, curiosity, and a zest for living.” (From the Publishers)

More information [HERE](#)

Johnson, A., & Lenhard, J. (2024). *Cultures of Prediction: How Engineering and Science Evolve with Mathematical Tools*. Cambridge, MA: The MIT Press. ISBN: 9780262548236

“The ability to make reliable predictions based on robust and replicable methods is a defining feature of the scientific endeavor, allowing engineers to determine whether a building will stand up or where a cannonball will strike. *Cultures of Prediction*, which bridges history and philosophy, uncovers the dynamic history of prediction in science and engineering over four centuries.

“Ann Johnson and Johannes Lenhard identify four different cultures, or modes, of prediction in the history of science and engineering: rational, empirical, iterative-numerical, and exploratory-iterative. They show how all four develop together and interact with one another while emphasizing that mathematization is not a single unitary process but one that has taken many forms.

“The story is not one of the triumph of abstract mathematics or technology but of how different modes of prediction, complementary concepts of mathematization, and technology coevolved, building what the authors call “cultures of prediction.” The first part of the book examines prediction from early modernity up to the computer age. The second part probes computer-related cultures of prediction, which focus on making things and testing their performance, often in computer simulations.

“This new orientation challenges basic tenets of the philosophy of science, in which scientific theories and models are predominantly seen as explanatory rather than predictive. It also influences the types of research projects that scientists and engineers undertake, as well as which ones receive support from funding agencies.” (From the Publishers)

More information [HERE](#)

Kampourakis, Kostas (Ed.) (2024). *Darwin Mythology Debunking Myths, Correcting Falsehoods*. Cambridge, MA: Cambridge University Press. ISBN: 9781009375719

“Many historical figures have their lives and works shrouded in myth, both in life and long after their deaths. Charles Darwin (1809–82) is

no exception to this phenomenon and his hero-worship has become an accepted narrative. This concise, accessible and engaging collection unpacks this narrative to rehumanize Darwin's story and establish what it meant to be a 'genius' in the Victorian context.

“Leading Darwin scholars have come together to argue that, far from being a lonely genius in an ivory tower, Darwin had fortune, diligence and – crucially – community behind him. The aims of this essential work are twofold. First, to set the historical record straight, debunking the most pervasive myths and correcting falsehoods. Second, to provide a deeper understanding of the nature of science itself, relevant to historians, scientists and the public alike.” (From the Publisher)

More information [HERE](#)

Morris, P.T., & Reed, P. (2024). *Henry Enfield Roscoe: The Campaigning Chemist*. Oxford, UK: Oxford University Press. ISBN: 9780190844257

“Little known today, Henry Enfield Roscoe was one of the most prominent chemists and educational reformers in Victorian Britain. Having studied in Heidelberg, he worked to transform English education by using Germany as a model. He made Owens College, Manchester, viable and converted it into Victoria University (now the University of Manchester).

“He then campaigned for the reform of technical education in an alliance with like-minded campaigners which resulted in the Technical Instruction Act of 1889. Roscoe was also the Liberal MP for South Manchester between 1885 and 1895, one of the few academic chemists to become a member of the House of Commons. In his "retirement," he helped found the Lister Institute of Preventive Medicine.

“Yet, despite his extensive impact on Britain at the time and our society today, he remains largely forgotten. In this detailed biography, authors Morris and Reed provide a timely and original contribution to the history of nineteenth-century British science and its

relation to education, industry, and government policy, highlighting Roscoe's significant contributions and legacy as one of the leading scientists of his generation.” (From the Publisher)

More information [HERE](#)

Nelson, William M. (2024). *Enlightenment Biopolitics: A History of Race, Eugenics, and the Making of Citizens*. Chicago, IL: The University of Chicago Press. ISBN: 9780226825588

“In *Enlightenment Biopolitics*, historian William Max Nelson pursues the ambitious task of tracing the context in which biopolitical thought emerged and circulated. He locates that context in the Enlightenment when emancipatory ideals sat alongside the horrors of colonialism, slavery, and race-based discrimination. In fact, these did not just coexist, Nelson argues; they were actually mutually constitutive of Enlightenment ideals.

“In this book, Nelson focuses on Enlightenment-era visions of eugenics (including proposals to establish programs of selective breeding), forms of penal slavery, and spurious biological arguments about the supposed inferiority of particular groups. The Enlightenment, he shows, was rife with efforts to shape, harness, and “organize” the minds and especially the bodies of subjects and citizens. In his reading of the birth of biopolitics and its transformations, Nelson examines the shocking conceptual and practical connections between inclusion and exclusion, equality and inequality, rights and race, and the supposed “improvement of the human species” and practices of dehumanization.” (From the Publishers)

More information [HERE](#)

Varga, Somogy (2024). *Science, Medicine, and the Aims of Inquiry: A Philosophical Analysis*. Cambridge, MA: Cambridge University Press. ISBN: 9781009449977

“After its unparalleled rise and expansion over the past century, medicine is increasingly criticized both as a science and clinical practice

for lacking scientific rigor, for contributing to overmedicalization, and for failing to offer patient-centered care. This criticism highlights serious challenges which indicate that the scope and societal role of medicine are likely to be altered in the 21st century. Somogy Varga's ground-breaking book offers a new perspective on the challenges, showing that they converge on fundamental philosophical questions about the nature and aim of medicine.

“Addressing these questions, Varga presents a philosophical examination of the norms and values constitutive of medicine and offers new perspectives on how to address the challenges that the criticism raises. His book will offer valuable input for rethinking the agenda of medical research, health care delivery, and the education of health care personnel.” (From the Publisher)

More information [HERE](#)

Authors of HPS&ST-related papers and books are invited to bring them to attention of the Newsletter’s assistant editor Paulo Maurício (paulo.asterix@gmail.com) for inclusion in these sections.

AAAS *Science* Editorial: ‘Teach Philosophy of Science’

[H. Holden Thorp](#),

Science 11 April 2024, vol.384, no. 6692, p.141

<https://www.science.org/doi/10.1126/science.adp7153>

DOI:10.1126/science.adp7154

Much is being made about the erosion of public trust in science. Surveys show a modest decline in the United States from a very high level of trust, but that is seen for other institutions as well. What is apparent from the surveys is that a better explanation of the nature of science—that it is revised as new data surface—would have a strong positive effect on public trust. Because scientists are so aware of this feature, it is often taken for granted that the public understands this too. A step toward addressing this problem would be revising

undergraduate and graduate curricula to teach not just theories and techniques but the underlying philosophy of science as well.

As Pew studies have [shown](#), trust in scientists and medical scientists in the US is higher than for all other institutions surveyed except the military. There was a modest decline over the past 4 years, but a similar decrease was seen for other professions. In absolute terms, trust in scientists is at 73%, whereas trust in most other institutions is far lower, with business leaders at 35% and elected officials at 24%.

Despite this relatively high level of trust, Lupia *et al.* found ways that it could be enhanced. Most prominently, the study showed that 92% of respondents felt it important that scientists show they are “open to changing their minds based on new evidence,” which is of course what they must do.

Many scientists would be surprised to find that this idea needs to be reinforced. Science is, after all, a work in progress that changes as new findings cause revision and refinement of held interpretations. The history of science is a powerful narrative of this culture of self-correction, and it is the essence of science to attempt to make discoveries that change the way scientists think. But whenever science becomes important in the public eye, as with climate change and the pandemic, the continuous revision can become a target for those who wish to undermine scientific knowledge.

French sociologist Pierre Bourdieu coined the term [“scholastic fallacy”](#) to describe the tendency of academics to assume that everyone thinks about problems in the way that scientists do. As Bourdieu points out, most people do not have the time and effort to spend thinking about these issues in the same way as those for whom this is a full-time job. Academics often fail to recognize this and are mystified when the public doesn’t understand that interpretations are continually revised in light of new data, as has happened across history.

Such revisions are the most reliable way for a scientist to get published in high-profile journals and gain scientific recognition, such as when [footprints are found](#) that change our idea about

when humans were present in the US or when a [diabetes drug is found to have many other uses](#).

The scientific community has generally done a poor job of explaining to the public that science is what is known so far. There are many reasons that make this difficult. The way scientific findings are reported in the media, particularly outlets that do not specialize in science journalism, is often highly simplified without the caveats that would give a more realistic picture while making the stories seem less compelling to some readers.

Another obstacle is that, because of the scholastic fallacy, scientists tend to take for granted that their findings could be updated and forget to explain this to the public. And when scientists talk to each other, they tend to be passionate about their ideas and disagreements. When those conversations are processed by the public, they can easily be misinterpreted.

Resetting the public's understanding of how science works will be a big job, but a good place to start is with students who get science degrees. Unfortunately, most programs are full of didactic classes about scientific principles, with few if any requirements on the history and philosophy of science. Because many undergraduate science majors pursue careers outside of science, including medicine, a shift in curricula would ultimately produce a public that is more literate in the way that science works.

This means making hard decisions about how to fit a broader, deeper perspective into curricula that are already jammed tight with the necessary basics. However, it's urgent for scientists to make compromises in the way they teach for the greater good.

PhD Award in HPS&ST

We welcome publishing details of all PhDs awarded in the field of HPS&ST. Send details (name, title, abstract, supervisor, web link) to editor: m.matthews@unsw.edu.au

Coming HPS&ST Related Conferences

May 16-18, 2024, Society for Philosophy of Science in Practice (SPSP) Tenth Biennial

Conference, University of South Carolina, Columbia, SC USA

Details [HERE](#)

May 29-31, 2024, Italian Society for the History of Science, conference, Bari

Details [HERE](#)

June 13-15, 2024, XXXI Baltic Conference on the History and Philosophy of Science, Tartu

Details: [HERE](#)

June 26-28, 2024, Singapore National Institute of Education, STEM conference

Details [HERE](#)

July 1-5, History and Pedagogy of Mathematics Conference, University of New South Wales, Sydney.

Details: [Jim Pettigrew](#), UNSW

July 4-14, 2024, International Congress on Mathematical Education, Sydney

Details [HERE](#)

July 8-10, 2024, Science in Public, annual conference, University of Birmingham.

Details: [HERE](#)

August 1-8, 2024, 25th World Congress of Philosophy, Rome

Details [HERE](#)

August 28-30, 2024, European Network for Philosophy of the Social Sciences (ENPOSS), 13th Conference, University of Bergen, Norway

Details: [HERE](#)

September 2-6, 2024, International History, Philosophy and Science Teaching Group

Details: ihpst2024@gmail.com

September 16-20, 2024, Eighth International Conference on the History of Mathematics Education (ICHME-8), Warsaw

Details: Organiser [Karolina Karpinska](#)

September 17-19, 2024, Forum on Philosophy, Engineering and Technology, Karlsruhe Institute of Technology

Details: [HERE](#)

October 28-30, 2024, Conference on Philosophy of Technology, Maastricht University, the Netherlands

Details: either

darryl.cressman@maastrichtuniversity.nl or

massimiliano.simons@maastrichtuniversity.nl

September 4-7, 2024, 11th European Society for History of Science conference, Barcelona

Details [HERE](#)

December 5-7, 2024, 8th Panhellenic Conference on Philosophy of Science, Athens

Details: [HERE](#)

March 6-10, 2025, US Philosophy of Education Society, PES, annual conference, Baltimore.

Details: [HERE](#)

June 29-July 5, 2025 International Congress of Science and Technology, Dunedin, New Zealand

Details: [HERE](#)

HPS&ST Related Organisations and Websites

[IUHPST](#) – International Union of History, Philosophy, Science, and Technology

[DLMPST](#) – Division of Logic, Mathematics, Philosophy, Science, and Technology

[DHST](#) – Division of History, Science, and Technology

[IHPST](#) – International History, Philosophy, and Science Teaching Group

[NARST](#) - National Association for Research in Science Teaching

[ESERA](#) - European Science Education Research Association

[ASERA](#) - Australasian Science Education Research Association

[ICASE](#) - International Council of Associations for Science Education

[UNESCO](#) – Education

[HSS](#) – History of Science Society

[ESHS](#) – European Society for the History of Science

[AHA](#) – American History Association

[FHPP APS](#) - Forum on History and Philosophy of Physics of the American Physical Society

[HAD AAS](#) - Historical Astronomy Division of the American Astronomical Society.

[ACS HIST](#) – American Chemical Society Division of the History of Chemistry

[GWMT](#) - Gesellschaft für Geschichte der Wissenschaften, der Medizin und der Technik

[ISHEASTME](#) – International Society for the History of East Asian History of Science Technology and Medicine

[EASE](#) - East-Asian Association for Science Education

[BSHS](#) – British Society for History of Science

[EPSA](#) - European Philosophy of Science Association

[AAHPSSS](#) - The Australasian Association for the History, Philosophy, and Social Studies of Science

[HOPOS](#) – International Society for the History of Philosophy of Science

[PSA](#) – Philosophy of Science Association

[BAHPS](#) - Baltic Association for the History and Philosophy of Science

[BSPS](#) – The British Society for the Philosophy of Science

[SPSP](#) - The Society for Philosophy of Science in Practice

[ISHPSB](#) - The International Society for the History, Philosophy, and Social Studies of Biology

[PES](#)– The Philosophy of Education Society (USA)

The above list is updated and kept on the HPS&ST website at: [HERE](#)

HPS&ST related organizations wishing their web page to be added to the list should contact assistant editor Paulo Maurício: paulo.asterix@gmail.com

HPS&ST NEWSLETTER PERSONNEL

Editor

Assistant Editor (Publications & Website)

Regional Assistant Editor (North America)

Regional Assistant Editor (Latin America)

Regional Assistant Editor (Asia)

Regional Assistant Editor (Europe)

[Michael Matthews](#)

[Paulo Maurício](#)

[Sophia Jeong](#)

Vacant (inquiries welcome)

[Huang Xiao](#)

Vacant (inquiries welcome)