HPS & ST

HISTORY, PHILOSOPHY, SCIENCE & TEACHING

NEWSLETTER

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Ideas, debates and opportunities across the HPS&ST community

A monthly international digest of scholarship, events, publications and teaching in the history and philosophy of science.

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EDITORIAL

Introduction

The HPS&ST Newsletter is sent monthly to about 12,000 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.

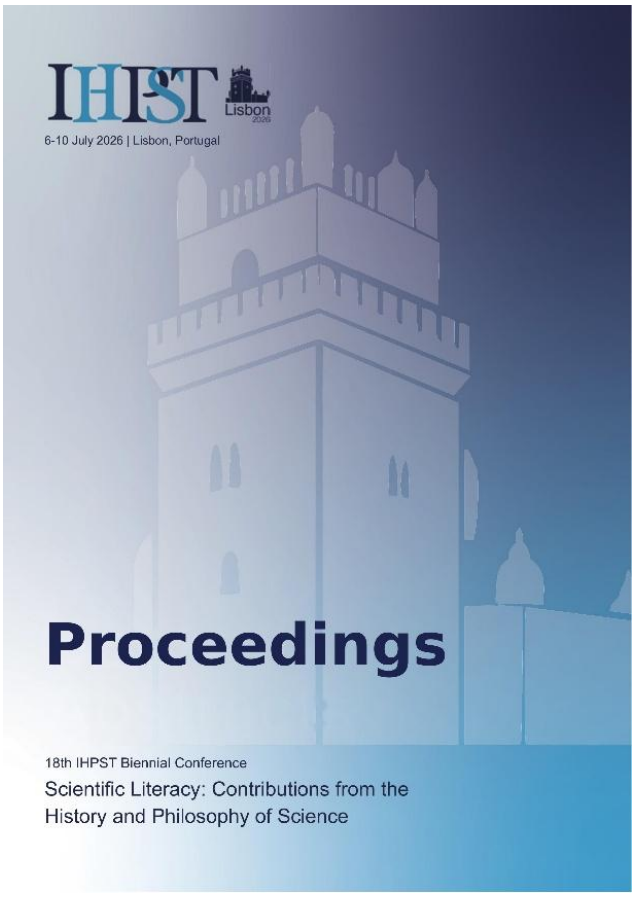
Contributions (publications, conferences, Opinion Piece, etc.) are welcome and should be sent direct to the editor: Michael R. Matthews, UNSW, **m.matthews@unsw.edu.au** .

HPS&ST

IHPST 18th Biennial Conference,

Lisbon, Portugal, *Proceedings*

The 400 page, 60 contributions, Proceedings of the IHPST Lisbon, April 2026, conference are available on the web **HERE**.



Cited as:

Cláudia Faria, Bianor Valente, Paulo Maurício & Joana Torres (eds) *Proceedings*: 18th IHPST Biennial Conference, Universidade de Lisboa, ISBN 978-989-9296-07-7

CALLS & EVENTS

IV CEFIEC Conference: Science and Interculturality, 20 November 2026, Buenos Aires

Is modern science, in any important sense, distinctively “Western”, rather than an achievement (and a resource) of humanity as a whole? Do the criteria and practices of knowledge production currently employed in modern science have universal value, or is that value merely “particular”? How should we understand the relationship between science and different epistemic systems, such as the belief systems of Indigenous peoples or so-called “popular knowledge”, that is, forms of knowledge produced outside professional settings? How should knowledge-production practices in fields such as

archaeology (particularly in relation to the legacy of colonized peoples) and history (especially the history of non-Western societies) take colonial legacies into account? How should science education reflect these issues?

CONICET

Consejo Nacional de Investigaciones Científicas y Técnicas

The IV CEFIEC Conference aims to address these and other questions.

Note: All presentations will be delivered in Spanish. Registration link: https://forms.gle/SHVARjALfjU5dvQm8

Contact information: Agustín Adúriz Bravo (CONICET, CEFIEC): adurizbravo@yahoo.com.ar Valeria Edelsztein (CONICET, CEFIEC): valearvejita@gmail.com

Confirmed participants: - Leonardo González Galli (CONICET, CEFIEC) - Claudio Cormick (CONICET, CEFIEC) - Matías Blaustein (CONICET, iB3-UBA) - Alejandra Pupio (UNS, UBA, CIC-PBA) - Camila Marinetti (UNS, UBA, CONICET) - Rodrigo Cabrera Pertusatti (UBA, UNLZ)

CALLS & EVENTS

Conference: Objectivity across the Sciences The Hong Kong University of Science and Technology, 23–25 June 2027

Submissions welcome for abstracts for the conference “Objectivity across the Sciences,” to be held on 23–25 June 2027 at The Hong Kong University of Science and Technology.

Keynote Speakers

Stephen John (University of Cambridge) Inkeri Koskinen (University of Helsinki) Jan Sprenger (University of Turin)

Objectivity is an important topic in the philosophy of science with implications for many debates, including scientific confirmation, scientific realism, measurement, values in science, and theory choice. However, defining scientific objectivity is not easy. Its meaning varies radically from different contexts. Objectivity can be a property of a product of science (e.g. scientific claims), or of a process of science (e.g. scientific methods). It can also be a virtue or ideal of scientific practice. This conference aims to examine the notion of objectivity across the natural and social sciences. In particular, it will scrutinise the nature, role, and significance of objectivity in scientific practice. Questions to be addressed include but are not limited to:

Selected papers will be included in an edited volume to be published by Springer (part of the Asian Studies in the Philosophy of Science).

For more information **HERE**

Submission Guidelines Please submit a 500-word abstract for blind review via Oxford Abstracts **HERE** by 31 December 2026.

Contact If you have any questions, please contact Qiyue Zhang **HERE**

HPS&ST

Workshop: Material Culture in the History of Physics, Deutsches

Museum, Feb. 22-26, 2027

Applications are invited for the next international seminar on **Material Culture in the History of Physics** funded by the Wilhelm and Else Heraeus Foundation.

The workshop consists of a self-organized theoretical part, an essay part, and an attendance part, which will take place from

February 22 to 26, 2027 at the

Deutsches Museum in Munich.

Accommodation for five nights will be covered as well as travel expenses up to 100€ for participants from Germany, up to 300€ for students from Europe and up to 1000€ for students from overseas.

The seminar is aimed at M.A. and Ph.D. students in the history of science and physics as well as physics education. We would also like to encourage trainees in science and technology museums including respective university collections to apply.

For further details on the structure of the seminar, deadlines, etc., please see **HERE**.

OPPORTUNITIES

Fellowships, Center for Philosophy of Science, University of Pittsburgh

The Center for Philosophy of Science at the University of Pittsburgh, invites applications for visiting fellowships for the fall and/or spring term of the 2027-2028 academic year. These fellowships allow philosophers of science to work on their nominated research projects in a supportive academic environment. Ten fellowships are offered each year.

Eligibility:

- Applicants must hold a doctoral degree, preferably in philosophy or history and philosophy of science, or have an established position in the philosophy of science community.
- We particularly encourage applications from underrepresented groups.

Support:

- Research must be funded by the applicant's university, a foundation, or a governmental agency.
- A stipend of $2,500 per month will be provided to help cover relocation costs.

Expectations:

- Visiting Fellows have no formal duties but are expected to reside in Pittsburgh and engage in full-time research in their designated office at the Center for Philosophy of Science.
- Fellows should participate in the Center’s activities by attending and giving talks and contributing to discussion groups.

Required Documents for Application:

- **Cover Letter**: A letter indicating your interest in a Visiting Fellowship that includes the proposed period of residence, details of any previous

Fellowships at the Center, the source and amount of anticipated funding, and a statement regarding the need for supplementary funds.

- **Project Description**: A 500-1000-word description of the project you intend to undertake during your residency.
- **Curriculum Vitae**: A current CV detailing your academic background and experience.
- **Writing Sample**: A sample of your written work that showcases your research and writing abilities.
- **Letters of Reference**: Three letters of reference from knowledgeable scholars. We recommend that these letters be blinded to the applicant. Please email all letters directly to pittcntr@pitt.edu.

Applications are due by **December 7th, 2026**, and must be submitted electronically on the University of Pittsburgh jobs portal. Apply Here: Visiting Fellowship (26006397)

CALLS & EVENTS

IHPST University of Toronto, Graduate Conference, April 2-3, 2027

The Institute for the History and Philosophy of Science and Technology (IHPST) at the University of Toronto is pleased to announce the call for papers for our annual graduate conference. This year our theme is **Janus-Faced Science:**

Models, Metaphors, and (Mis)representations.

Please see below for details. Submissions are due **December 4, 2026** via this form.

We welcome proposals related to models, metaphors, and (mis)representations from graduate and early-career scholars in history, philosophy, and broader humanistic studies of science. Below are questions we are interested in:

- Are idealizations just stepping stones towards the truth, or are they themselves ever the end goal?
- How does acknowledging false assumptions change the ways in which science is viewed, used, or practiced?
- When have scientists explicitly decided to make assumptions in their work and how did they justify their decisions?
- How do measurements or representations of invisible phenomena influence our understanding of processes we cannot directly observe?
- How can we think critically about the relationship between theoretical or idealized constructs, and reality?
- How are specific communities differentially impacted by the benefits or harms of scientific idealisation?
- How does the use of idealizations in science impact science communication, funding, or policy?

If you have any questions, please reach out to hapsatconference@gmail.com.

OPINION

Opinion Page: There Are Absolute Necessities

JAMES FRANKLIN, School of Mathematics, University of New South Wales

James Franklin is an Honorary Professor in the School of Mathematics and Statistics at the University of New South Wales, Sydney. His other books in philosophy and the history of ideas include *The Science of Conjecture: Evidence and Probability before Pascal* (2001); *Corrupting the Youth: A History of Philosophy in Australia* (2003); *An Aristotelian Realist Philosophy of Mathematics* (2014); and *The Necessities Underlying Reality,* (Bloomsbury, 2026). The last book (with Jeremiah Joaquin) is available open access **HERE.**

In October 2021, he contributed a HPSST Newsletter Opinion Piece: *Mathematics as a science of the real world: Aristotelian realist philosophy of mathematics* **HERE**

The following OP was given at the launching of his 2026 *Necessities* book.

Sometimes, a book comes along that captures the spirit of the age. It gives voice to the received ideas of the time and expresses them in digestible form, with a superficial novelty of packaging. It has the wind of the Zeitgeist in its sails and goes on to glory. My *Necessities* book (Bloomsbury, 2026) is not that book.

The book *is* in the spirit of a century. Unfortunately, the century it's in the spirit of is not the 21st, or even the 20th. Perhaps the 14th (and if you can't recall much about the intellectual highlights of the 14th century, that just goes to show; think Duns Scotus's Oxford). Or possibly the 4th century BC, when Aristotle attuned to necessities and Euclid wrote the *Elements* as a course on the necessities of geometry.

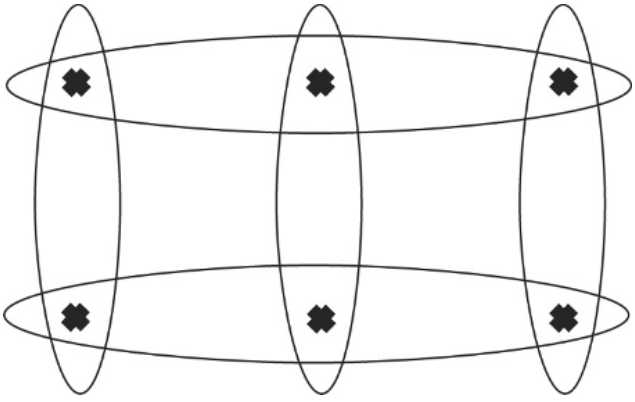
But not now. We've lost contact with the world of necessities and we have to start from scratch.

Here's what the book is about: we know many contingent facts, of history and biography, geography and local laws and customs. "Contingent" means: they could have been otherwise. And that's their attraction: the point of biographies is that everyone's life story is different, and we travel to foreign parts to see something new and not like here.

But there are also some truths that are the same the world over, such as scientific laws. If you are an Australian physicist, you're qualified to work in French physics, in a way you aren't if you're an Australian lawyer or Australian historian. French law and history are different, French physics isn't.

But though the laws of physics are true all over the world, they are not *necessarily t*rue, true in all possible worlds. That was the point of the early Royal Society calling the regularities of nature "*laws*", to suggest they were laid down by God, and he could have made them different and could make exceptions to them.

Beyond those, however, or deeper than those, is a more basic level of reality where the laws are absolutely necessary: "the necessities underlying reality", in the book's title. They are true in all possible worlds, and if you are expert in them, as mathematicians among others are, you are assured employment anywhere in this world, or in any other. The book describes four kinds of such absolute necessities: mathematical ones, ethical ones, logical ones, and ones concerned with the relation of evidence to conclusion. Let me demonstrate a simple one of the necessities I am talking about.



Here are 6 stars. They're arranged in two rows of 3, i.e. 2 x 3. You can also see them as three columns of 2, i.e. 3 x 2. They're the same stars, therefore 2 x 3 = 3 x 2. 2 x 3 *must be* 3 x 2; it's a necessity; it can't be otherwise, not by changing the laws of nature, not by miracle. It is not a triviality: 2 x 3 does not *mean* the same as 3 x 2: on the contrary, one means taking 2 lots of 3 and the other means taking 3 lots of 2. But the results *must* be the same. It is not about a world of formulas or disconnected from the physical world we live in either – it applies to the

real physical stars on paper, or any other six beings whatsoever, whether physical, mental, electronic, astral or anything else.

Furthermore, once you've grasped that, with your faculty of understanding or intuition, you can see that it doesn't matter if the numbers are 2 and 3. What if there were 4 across and 5 down? Are you sure that 4 x 5 = 5 x 4? Sure, for the same reason. 2 million x 3 million = 3 million x 2 million? Absolutely. Your understanding has given you access to an infinite number of necessary truths.

There are plenty more mathematical necessities where that came from. The celebrated Königsberg bridges example is another, where Euler proved that it was impossible to walk over all seven bridges once and once only.

So now you can see the metaphor of "underlying" in the book's title. It's like this: you have a building site. You could leave it empty, but if you do build, there are some constraints. The foundations, columns and girders have to be a certain way. They underlie what you can make choices about later. Then you can clothe them in cladding and windows, with a certain amount of flexibility but not too much. Then you're free to fit out the inside with human choices of décor, artworks, water coolers and signage.

Similarly, if you're creating a world: you have to start with the absolute necessities, which you can't choose; then you can choose the laws of nature around them; then the contingent facts of history, the decorative detail, wrap around *them*.

I will deal more briefly with some of the other main controversial themes of the book. One is the objectivity of ethics, which is as strong as the objectivity of mathematics. It is easy to think of ethics as a set of customs evolved to ensure cooperation in tribes so we can all get on with our business – in Annette Baier's words, "traffic rules for self-assertors".

That sort of naturalistic, transactional view of ethics corrupts the youth. Anyone can see it doesn't give a good reason why you should act ethically, if you can get away with acting unethically. When you face a tough ethical choice, where it's going to cost something to do the right thing, if you believe in that weak view of ethics you'll take the easy course. You can see the results in the newspapers every day, and that's just the ones who get caught.

So, what is the right view of ethics? First, it is *fundamentally* not about actions or what to do at all. It is about what kinds of things have moral worth – what kinds of things matter when something happens to them. People, for instance. As I wrote in the book:

What happens to humans can be a tragedy. What happens to rocks cannot. When we see pictures of atrocities, we understand that the victims were people like us, people who until their end possessed reason, apprehensions, personal unity, hopes, loves, suffering and individuality as we do. That is what makes their death a tragedy and not, like the explosion of a lifeless galaxy, a firework. Gross metaphysical differences like that between humans and rocks imply gross moral differences.

That "imply" is an absolute necessity, as strong as those of mathematics.

Another theme is the necessary connection between evidence and conclusion. Given a body of evidence, such as in scientific experiments or in a court of law, and a possible conclusion, such as the guilt of the accused, does the evidence make the conclusion highly probable? That is a matter of absolute necessity, and there is a right and a wrong answer in any case. The jury who convicted Australian Cardinal George Pell got the wrong answer, and the High Court of Australia had to tell them that the relation between the evidence and the conclusion was otherwise.

A last theme is about the problem of evil. As everyone knows, one of the main reasons for not believing in God is that surely a good and omnipotent God would not create a world with the terrible evils we see in it – a very fair question. But someone with a good understanding of absolute necessities may grasp that, so to speak, omnipotence is not all it's cracked up to be. Absolute necessities constrain even God, and in a complex world like ours there are very many of them. If you are omniscient, you see how hard it is to manage the trade-offs. Creating a perfect world is something like trying to cross all the Königsberg bridges just once.

What is there in this rarefied air of absolute necessities for those who are not professional philosophers and live in the so-called "real" world? I have two answers. The first is the reply Euclid is said to have given to the student who asked what he would get out of studying geometry – "Give him a

three-obol coin, since he has to make gain out of what he learns." The point is to have a break from making gain and giving practical opinions and frenetically organising, and just contemplate, as you do when you enter an art gallery.

Having said that, and since you insist, I have a second answer. There are a few practical and political consequences, mainly about the attitude you take to matters of controversy. If you have a solid grasp of necessities, you will be confident in doing what's right and won't think all values are equally worthy of respect and anything goes. In ethics and in evidence evaluation, as in mathematics, there are easy questions and hard ones, but there is a right answer each time. You won't be intimidated by political correctness or any other fads in ideas – you'll go and evaluate the evidence yourself, according to rational principles. You won't be intimidated from looking into questions you don't yet know about either: logic and evidence work the same in all subjects, you just have to put in the work.

Now get out there, think straight, and behave virtuously.

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**.

RESOURCES

HPS&ST Resources for Science Teaching

Each month, this section will highlight a freely accessible resource that brings the history, philosophy, and sociology of science into K–12 science teaching. The aim is to build, over time, a curated collection of classroom materials, teaching ideas, historical case studies, and other resources developed by the HPS&ST community, bringing them together in one place to support engaging and reflective science education. The growing collection of featured resources is available HERE under the HPS&ST resources for science teaching separator

Resource #2: SHiPS Education Resources SHiPS Education is a teacher-centered network offering a substantial online library of resources for teaching the history and nature of science and the personal and social dimensions of science. Rather than a simple "click-and-go" collection, its Resource Center is designed to support lesson planning, curriculum development, and teachers' professional learning. The site is aimed mainly at secondary school and college science teachers, while also offering materials that may be useful at earlier levels.

Explore the SHiPS resources HERE.

NOTES

Varia

● CLMPST (Congress for Logic, Methodology, Philosophy of Science & Technology), Kobe Japan, 23-28 August 2027, Call for Papers expires 15 November.

See **HERE**

● PSA 2026 conference program available at: PSA26 website

● *Metascience* Open Access articles (57) **HERE**.

● Ten downloadable HPS&ST books HERE

● *Science & Education* Open Access articles (257) HERE

● *Philosophy of Science* journal, most cited articles HERE

● Royal Society, History of Science Resources

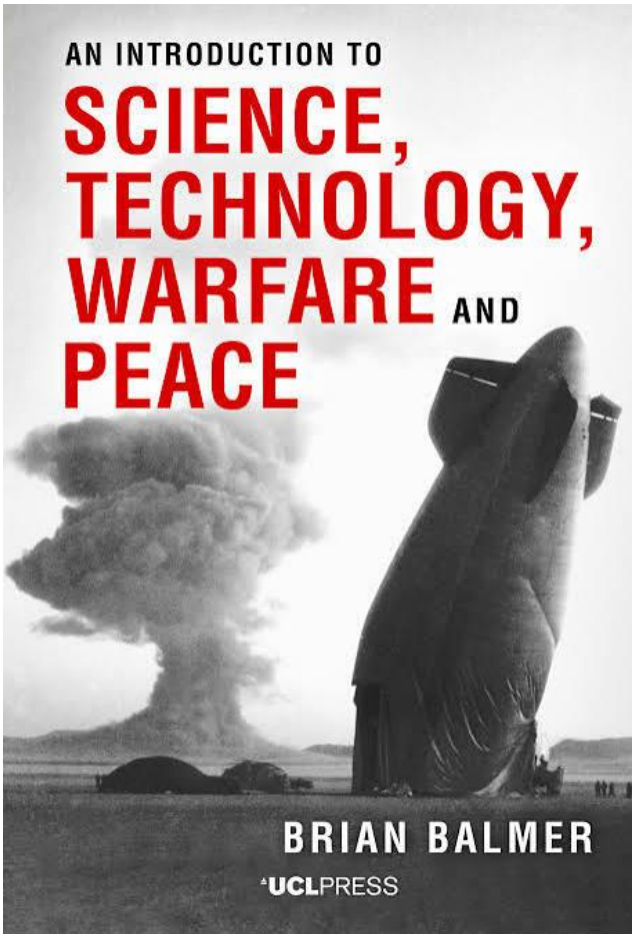
HERE

FEATURED BOOK

Featured Open-Access Book

Brian Palmer *An Introduction to Science,*

Technology, Warfare & Peace (UCL Press)



“This textbook introduces how sociology, history and philosophy of science and technology (Science and Technology Studies or STS) approach the topic of war and security. It covers key concepts and theoretical approaches in STS and how they offer new insight into critical security, war and peace studies. To make the theory accessible, the book draws on seminal and contemporary empirical case studies, from weapons of mass destruction to everyday security and surveillance.

“This textbook is ideal for students with no background knowledge of STS or as an introduction for more advanced researchers in other fields that study war and security, including politics and international relations, history, geography, sociology and anthropology.

“Designed to support both independent and classroom learning, each carefully structured chapter begins by listing its key features and concepts so that readers understand the coverage at a glance. Chapters end with discussion questions to encourage critical thinking and suggested further readings. Online resources offer additional support in the form of learning activities and answer prompts for the discussion questions.” (From the Publishers)

Book 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

REPOSITORY

Philosophy of Science Association (PSA) PhilSci Archive

PhilSci-Archive is the official preprint repository for the PSA and the best place to host your philosophy of science preprints. It offers a free, stable, and openly accessible archive for scholarly articles and monographs. With PhilSci-Archive, researchers can search the open-access repository and get curated alerts about new work delivered to their inboxes.

Many journals encourage authors to post preprints on archives like the PhilSci-Archive in order to increase readership, and historical data suggests that posting to the archive increases a published paper's citation rates (see https://philsci-archive.pitt.edu/20778/). Visit philsci-archive.pitt.edu today to create a free account and post your preprints.

The most downloaded preprints for the last six months of articles deposited in the previous two years are:

Zahavy, Tom (2026) LLMs can't jump.

Tsou, Jonathan Y. (2025) Hacking on Looping Effects and Kinds of People.

Fortin, Sebastian and Lombardi, Olimpia (2024) What is the electron density?

Haider, Sawsan (2024) The Impossibility of AI Containment: Logical, Mathematical, and Computational Limits to Control.

Covoni, Niccolò and Rovelli, Carlo (2026) Tractatus Quanticus.

Open Access books already deposited at the Phi-Sci Archive: **HERE**

RESEARCH

Recent HPS&ST Research Articles

Alisir, Z. N., & İrez, S. (2026). Integrating the history of science into science teaching: Teachers' purposes, practices, and challenges in the Turkish context. *Science & Education*, 1-43. h https://doi.org/10.1007/s11191-026-00793-x

Barandes, J.A. (2026). Historical debates over the physical reality of the wave function *EPJ H*, 1-20. https://doi.org/10.1140/epjh/s13129-026-00129-x

de Jesús, D. J., Herman, B. C., Pérez, G. E., et al. (2026). Promoting scientific literacy in a South American rural school through a place-based and socioscientific issues context. *Science & Education*, 1-33. https://doi.org/10.1007/s11191-026-00794-w

Doose, K. (2026). The Red Thaw: Soviet climate science and the politics of global warming, 1950s–1991. *The British Journal for the History of Science*, 1–17. https://doi.org/10.1017/S0007087426102155

Fehige, Y. (2026). Science education vs. religious education in democratic society? A belated response to Mahner and Bunge (1996). *Science & Education*, 1-13. https://doi.org/10.1007/s11191-026-00788-8

Gjengset, F., & Kersting, M. (2026). Embodied cognition in science teacher education: A phenomenographic analysis of science teachers' experiences when using role-play to engage with different philosophical traditions of embodiment. *Science & Education*, 1-40. https://doi.org/10.1007/s11191-026-00781-1

Gyllenpalm, J., Arvanitis, L., & Almlöv, M. Å. (2026). An analysis of laboratory manuals for upper secondary school: their potential for teaching students about the nature of scientific inquiry. *International Journal of Science Education*, 1–20. https://doi.org/10.1080/09500693.2026.2742393

Heering, P., Silva, C. C., & Metz, D. (2026). The Relationship Between the History of Physics and the Teaching of Physics. In B. Foster (Ed.), *Oxford Research Encyclopedia of Physics.* Oxford University Press. https://doi.org/10.1093/acrefore/9780190871994.013.154

Heering, P. (2026). Zombies in Physics Education—How Teaching Demonstrations Based on Historical Experiments Can Be Misleading in Teaching the Nature of Science. *Sci & Educ*, 1-20. https://doi.org/10.1007/s11191-026-00787-9

Hugerat, M., Elhega, E.A., Basheer, A. et al. (2026). Science and Religious Education Teachers' Views of Argumentation and Its Teaching: A Comparative Study. *Sci & Educ*, 1-18. https://doi.org/10.1007/s11191-026-00785-x

Lorduy, D. J., Flórez-Nisperuza, E., & Adúriz-Bravo, A. (2026). Navigating knowledge systems in intercultural science education. *Science & Education*, 1-33. https://doi.org/10.1007/s11191-026-00786-w

Martin, P. P., Rost, M., Koenen, J., et al. (2026). Amid an epistemic iteration: How AI methodologies may transform the nature of science education research. *Science & Education*, 1-27. https://doi.org/10.1007/s11191-026-00789-7

Medh, P., & Padalkar, S. (2026). Exploring the intersection of teachers' aims, storytelling practices, and understanding of nature of science in Indian middle school classrooms. *Cultural Studies of Science Education*, 1-22. https://doi.org/10.1007/s11422-026-10302-9

Mitsch, C. (2026). Unconceived alternatives, scientific instrumentalism, and the methodology of pragmatist philosophy of science. *Euro Jnl Phil Sci*, 1-31. https://doi.org/10.1007/s13194-026-00785-2

Okan, B., & Kaya, E. (2026). Nature of science in pre-service science teacher education: A need analysis. *Science & Education*, 1-37. https://doi.org/10.1007/s11191-026-00796-8

Salimpour, S., Prain, V., & Tytler, R. (2026). Integrating inquiry and explicit teaching in school science: The key role of guided exploration. *International Journal of Science and Mathematics Education*, 1-27 https://doi.org/10.1007/s10763-026-10735-2

Saribas, D. (2026). Understanding scientific credibility: graduate students' reasoning about epistemic practices and social certification of scientific knowledge. *International Journal of Science Education*, 1–20. https://doi.org/10.1080/09500693.2026.2746790

Shinar, I., & Blonder, R. (2026). Context matters: Developing NOS understanding in authentic science learning settings. *Science & Education*, 1-42. https://doi.org/10.1007/s11191-026-00792-y

Todorović, T., & Bregant, J. (2026). The limits of critical thinking: climate skepticism, epistemic trespassing, and the understanding that grounds trust. *Euro Jnl Phil Sci*, 1-22. https://doi.org/10.1007/s13194-026-00796-z

Yeo, R. (2026). John Herschel's *Preliminary discourse* (1830) and *Manual of scientific enquiry* (1849): The question of amateur contributions to elite science. *Studies in History and Philosophy of Science*, 1-10. https://doi.org/10.1016/j.shpsa.2026.102234

BOOKS

Recent HPS&ST Related Books

Balmer, B. (2026). *An introduction to science, technology, warfare and peace*. London, United Kingdom: UCL Press. [Open Access] https://doi.org/10.14324/111.9781800089549

"This textbook introduces how sociology, history and philosophy of science and technology (Science and Technology Studies or STS) approach the topic of war and security. It covers key concepts and theoretical approaches in STS and how they offer new insight into critical security, war and peace studies. To make the theory accessible, the book draws on seminal and contemporary empirical case studies, from weapons of mass destruction to everyday security and surveillance.

"This textbook is ideal for students with no background knowledge of STS or as an introduction for more advanced researchers in other fields that study war and security, including politics and international relations, history, geography, sociology and anthropology.

"Designed to support both independent and classroom learning, each carefully structured chapter begins by listing its key features and concepts so that readers understand the coverage at a glance. Chapters end with discussion questions to encourage critical thinking and suggested further readings. Online resources offer additional support in the form of learning activities and answer prompts for the discussion questions." (From the Publishers)

More information HERE

Bengtsson, B. O. (2026). *The political gene: Ideological reactions to a powerful science*. Lund, Sweden: Arkiv förlag. [Open Access] https://doi.org/10.13068/9789179244057

"A new science focused on the gene – a term coined in 1909 – entered the Western intellectual scene at the start of the twentieth century. It was based on the rediscovery of Gregor Mendel's experiments and soon attracted popular and political attention. Since then, the gene has been variously embraced and rejected, honoured and ignored as the crucial factor behind social inequality, racial differences, individual intelligence and much more. Today, we all talk about what is in our DNA.

"In this extended personal essay, Bengt Olle Bengtsson reflects on the power of the gene. He does this via a thorough analysis of the how the five main ideologies of our time – conservatism, social

democracy, communism, Nazism and liberalism – have reacted to, and acted on, genetic ideas and results. As he shows, this has been a controversial and often passionate relationship. It has shaped politics, justified both social exclusion and unjust hierarchies and inspired ideas of community and identity.

“Bengt Olle Bengtsson (1946–2025) was professor emeritus of genetics at Lund

University, Sweden.” (From the Publisher)

More information HERE

Bod, R., Hammar, I., & van Dongen, J. (Eds.). (2026). *Epistemic transfer in the history of the humanities and sciences*. Amsterdam, Netherlands: Pallas Publications. ISBN 9789048565351.

“*Epistemic Transfer in the History of the Humanities and Sciences* brings together experts from the history of science, the humanities and the social sciences, investigating the mechanisms and conditions of epistemic transfer across disciplinary domains.

“This book addresses the major challenge of understanding why disciplines borrow from one another and why some transfers spark innovation while others fail. Through rich case studies spanning the history of science, humanities and social sciences, it reveals the practices, infrastructures and institutional conditions that enable successful knowledge circulation. Contributors revisit the concept of discipline itself, demonstrating how knowledge transforms as it crosses intellectual boundaries and providing fresh perspectives on contemporary interdisciplinary debates.

“An essential reference for historians of science, intellectual historians and scholars in science and technology studies, this book will also appeal to researchers across the humanities and social sciences interested in interdisciplinarity, knowledge production and the history of scholarly inquiry.” (From the Publishers)

More information HERE

Boscarino, G. (2026). *For a new cultural axis, In memory of Lucio Lombardo Radice, Mario Geymonat, and Giuseppe Peano*. Varese, Italy: PM Edizioni. ISBN: 979-12-5534-106-2 [In Italian]

As a young teacher at a classical high school during the 1970s and 1980s, I grew dissatisfied with an educational system rooted in a rhetorical-humanistic tradition—stemming from the Gentile reform—that denied science any cognitive or educational value, reducing it instead to mere technique. This sparked a journey of inquiry into scientific language and its formative significance, leading me— alongside physicists Salvatore Notarrigo and Angelo Pagano —to discover Peano, a great mathematician and sophisticated thinker. It also led to an engagement with Lucio Lombardo Radice regarding the vision of a new kind of school: one where science serves as a tool of knowledge for all, rather than merely a productive force driving profit and inequality. My study of Archimedes, conducted in dialogue with Mario Geymonat, ultimately convinced me that a critical consciousness suited to the age of technology and democracy cannot rest solely on historical, philosophical, and literary knowledge, but requires a genuine scientific education. (Abstract provided by the author)

More information HERE

Carton, Y. (2026). *Jean-Baptiste Lamarck in the whirlwind of history: The origin of a scientific work*. London, United Kingdom: ISTE Press / Wiley. ISBN 9781836691082.

“The life of Jean-Baptiste Lamarck (1744– 1829) was a true odyssey, unfolding during a pivotal period in French history. Born under Louis XV, he lived through eight political regimes and died under Charles X. A passionate botanist and member of the Academy of Sciences, he eventually became a professor of zoology at the Natural History Museum. Both his financial situation and his scientific standing evolved in tandem with the political upheavals of the time. It is therefore illuminating to understand the context in which his works – which address fundamental questions in biology – were conceived.

“This book does not offer a detailed analysis of Lamarck’s works. Its purpose is different: it seeks to examine at what points in his life and under what circumstances Lamarck was led to produce his various works.

As much as possible, the book "gives voice" to Lamarck by presenting his own writings, which reveal his projects – whether successful or not – as well as his doubts and hopes, during a period when he was often ahead of the prevailing view." (From the Publishers)

More information HERE

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de Felipe, P. (2026). *Flattening the medieval Earth: Seeking the early modern origins of the idea of an historical conflict between science and Christianity*. Abingdon, United Kingdom: Routledge. ISBN 9781032899961.

"*Flattening the Medieval Earth* explores the origin of the 'flat error', i.e. the false accusation that ancient and medieval Christians believed in a flat Earth, and what this implies in terms of a conflict between science and Christianity. Engaging with scientific and religious debates, this book includes a reception study of two key figures of the 4th century AD, Lactantius and Augustine.

"This study demonstrates that the mistaken 'dark' image of medieval scholars as flat-earthers started very early, c. 1600, as an internal Christian debate in the context of new geographical and astronomical views. The author draws on extensive research including many primary and secondary sources from different countries and languages not previously put into conversation.

"Combining history of science, church history, science and religion, history of navigation, and historiography, this book gives the most updated explanation of the origin of the flat error, finding paradoxes and unexpected answers along the way to understand the past and to reflect on some current approaches in science and religion." (From the Publishers)

More information HERE

García Naharro, F. (2026). *The Spanish National Research Council and the shaping of science in Franco's Spain*. Cardiff, United Kingdom: University of Wales Press. ISBN 9781837723997.

"This book delivers on the promise of a new direction in the study of science by focusing on the political influence of dictatorial ideology on scientific publishing. While restricting the scope of the study to the Spanish National Research Council (CSIC), the objectives are broadened by analyzing the criteria applied by Franco's Spain to define both science and scientific authority. This study also examines how such criteria determined which social actors were able to participate in the production and validation of scientific and theoretical knowledge, in both practical and discursive terms.

"Contextualized by a scientific field shaped under dictatorship, epistemological questions are explored through a fragmentary analysis of specific sites and social actors, political discourses, and scientific publications within the spatiotemporal framework of Franco's Spain." (From the Publishers)

More information HERE

Göbel, C. (2026). *Inclusion in science: The social architecture of science-public relations*. Bielefeld, Germany: transcript publishing. ISBN 9783837682236.

"Relations between science and publics are tricky affairs. While public participation in science is expanding, it regularly falls short of emancipatory hopes. Claudia Göbel analyzes these tensions as an important feature of contemporary society. She develops an extended model of inclusion in science by bringing science and technology studies, sociology of science and science communication studies into conversation. Popular science audiences and amateur researchers are conceptualized as integral to science, showing how these precarious roles complement professional scientists. The model offers a versatile framework for empirical research and new comparative perspectives on the multiple publics of science and their intricate relations." (From the Publisher)

More information HERE

Hermida, M., & Ladyman, J. (Eds.). (2026). *The philosophy of biophysics*. Cambridge, MA: The MIT Press. ISBN 9780262056274. [Open Access]

"*The Philosophy of Biophysics* brings together contributions from leading philosophers of biology across the globe to address the conceptual, foundational, and philosophical issues raised by biophysics. The contributions shed light on how

physics and biology are integrated in scientific practice and contribute to a better understanding of the relationship between biology and other sciences. With chapters authored by experts in a number of fields, the book will inform debates on interdisciplinarity, causal explanation at different scales, the question of how biology relates to the physical sciences, and the unity of science." (From the Publishers)

More information HERE

Högselius, P. (2026). *Atomic disenchantment: A global history of nuclear energy*. Cambridge, MA: The MIT Press. ISBN 9780262056892. [Open Access]

"Nuclear energy is once again being promoted as the means to phase out fossil fuels and solve environmental problems. Yet nuclear energy has rarely delivered on its past promises. Instead, attempts to harness the atom have led to some of the most severe tensions and political struggles in modern history. In *Atomic*

Disenchantment, Per Högselius argues that the failure of nuclear energy is best explained by the clashes and contradictions in the nuclear industry's attempts to connect with older technological traditions and practices. He looks not only at the Western great powers and larger non-Western countries but also at smaller countries in Western and Eastern Europe and in the Global South.

"Högselius examines the global history of nuclear energy from 1945 to today. Viewing nuclear power as a hybrid technology that combines new nuclear science discoveries with a range of older technological practices, he considers the history of nuclear power to be one of broken promises and unfulfilled visions and ambitions. Analyzing nuclear energy from a global historical perspective provides a necessary tool for understanding the ongoing nuclear debate." (From the Publishers)

More information HERE

McCaskey, J. P. (2026). *Induction: Socrates to Popper*. Chicago, IL: University of Chicago Press. ISBN 9780226854137.

"The problem of induction continues to vex and beguile. How can we reliably draw universal conclusions from limited observations? In *Induction*, John P. McCaskey steps back and rethinks long-held assumptions, tracing the ideas of Socrates and Aristotle in ancient Greece to those of Karl Popper in the twentieth century.

"This comprehensive account does not look at how people of the past answered the questions we ask today. Instead, it asks: How did they understand the very meaning of the words *epagōgē* in Greek, *inductio* in Latin, *istiqrāʾ* in

Arabic, *Induktion* in German, and *induction* in English? McCaskey's careful treatment of texts in their context dispels many long-standing myths, and importantly, he introduces us to a now-unfamiliar way to think about what induction is—a way in which there simply is no "problem of induction." McCaskey reveals that the problem was one of our own making and that an accurate history may help us recover old ways—and thereby introduce new ways—to think about the whole idea. A must-read for philosophers, historians of ideas, and anyone interested in the scientific method. (From the Publishers)

More information HERE

Meloni, M. (2026). *Coloniality and structural othering in European thought: A racialized canon.* Abingdon, United Kingdom: Routledge. ISBN 9781041008675.

"This book provides a historical and conceptual analysis of patterns of racialized otherness in European thought, traversing primary sources, historical periods, and national archives, to show that the longue durée of structural othering beyond individual disciplinary canons is essential to making sense of epistemic violence and structural coloniality in the European canon.

"Through the analysis of published texts and personal letters, the book brings to light racializing tropes and patterns of othering in four canonical authors each representing a different Western European country: Italian father of humanism

Francesco Petrarca (Petrarch), Charles Darwin, Norbert Elias and Michel Foucault. The chapters on Italian humanism begin by highlighting how one of the founding myths of European modernity was shaped by a protocolonial mentality and the violent excision of Arabic sources, whilst the chapter on Darwin analyses the importance of shooting and frontier wars in the Beagle voyage and the vicissitudes of the term 'extermination' in Darwin's thought. Elias's civilizing narrative is unpacked to highlight his omission of colonial violence in parallel to the development of court etiquette in the metropoles. Finally, Foucault's belief in the uniqueness of the Greek experience goes in parallel with his deletion of Islamic presence in the genealogy of modern governmentality. The initial and final chapters offer an ethnography of forgotten ethnic violence and racialized monuments in Italy linked with the distinctive history of Italian colonialism and 'eternal fascism'.

"It will appeal to scholars, researchers and students with interests in social theory, sociology, political theory, cultural studies, history, history of science, and postcolonial and ethnic studies." (From the Publishers)

More information HERE

Papineau, D. (2026). *Causation: Science, statistics and metaphysics.* Cambridge, United Kingdom: Cambridge University Press. ISBN 9781009703338.

"Most philosophical work on causation is divorced from scientific practice, but in this book David Papineau develops a metaphysical theory designed to provide a principled grounding for the science of causal inference. The book first introduces non-specialists to the techniques of causal inference, and then shows how the resulting theory can account for all aspects of causation.

"While Papineau draws on a wide range of scientific and philosophical sources, everything is explained from first principles and will be accessible to readers from all backgrounds. The resulting theory marks a new departure in the philosophy of causation, and will be of interest not only to philosophers but also to anybody interested in the statistical techniques that are widely used throughout science to analyse causal structures." (From the Publishers)

More information HERE

Verhaegh, S. (2026). *Logical positivism: An American history*. Oxford, United Kingdom: Oxford University Press. ISBN 9780197537961.

"*Logical Positivism: An American History* tells the remarkable story of a group of European philosophers and scientists who fled fascism and reshaped American philosophy. Drawing on extensive archival materials, it traces the conflicted reception of their ideas—at once hailed as a model of scientific clarity and yet condemned as a sterile and reductive approach to philosophy.

"Rather than treating logical positivism as a purely European export, this book argues that it was a product of transatlantic exchange. It reconstructs the rise of an American network of scientists and philosophers whose ideas were defined by twentieth-century revolutions in logic and modern physics; and it shows how their encounters with European émigrés helped shape a new 'analytic' style of philosophy that has dominated the field ever since.

"Combining narrative reconstruction with innovative digital humanities methods, this book illuminates the intellectual, institutional, and cultural conditions that enabled logical positivism's ascent. It offers a fresh perspective on the history of U.S. philosophy, showing how a movement defined by global crises and intellectual controversy became engrained in American thought and philosophical practice." (From the Publishers)

More information HERE

Werkheiser, I. (2026). *Environmental justice in digital worlds: The philosophy of mixed reality technologies*. Oxford, United Kingdom: Oxford University Press. ISBN 9780197788257.

"Mixed Reality technologies, in which our physical world is intertwined with elements of digital, virtual "worlds," are on the cusp of widespread adoption. However, important questions about what these technologies will do to the world around us, how we will move through these new environments, and how we will interact with each other remain under-examined. In *Environmental Justice in Digital*

Worlds, Ian Werkheiser uses theories of environmental philosophy and related fields to explore how Mixed Reality technologies will reshape our environment. How, and how much, can the risks of this new technology be avoided? To what extent are they inherent in technology, and are those costs worth the potential benefits? Through conversations with engineers and designers working at the cutting edge of these technologies, and with activists working on issues of environmental justice, Werkheiser takes the reader on a journey into what kind of future these new technologies may create." (From the Publishers)

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.js.mauricio@uac.pt) for inclusion in these sections.

ARCHIVE

Golden Oldie: HPS&ST Research from 30+ Years Ago

Good HPS&ST research is clearly written, philosophically informed, well-argued, and has enduring value. Clarity encourages critique and evaluation so that flaws can be identified and corrected. This is a condition for the advance of knowledge.

Much education research is timely. This is useful. But an unfortunate consequence can be that what is timely today might not be timely tomorrow. Circumstances change. The research might leave no trace. Conversely, some research can leave a big trace but be philosophically flawed and so do educational and, ultimately, cultural damage.

Good HPS&ST research has a long shelf-life. In defence of this claim, the HPS&ST Newsletter will identify 30+ years-old articles that had, and still have, philosophical, historical and educational value. These Golden Oldies are available, month-by-month HERE

22nd in the series:

Birch, L.Charles: 1988, `Whitehead and Science Education', *Educational Philosophy and Theory* 20(2), 33-41. **Charles Birch** (1918-2009) was an Australian biologist and theologian. He was a founder of the modern science of ecology. His book *The Distribution and Abundance of Animals* (co-authored with H.G. Andrewartha), was pivotal in the development of the discipline. It influenced generations of ecologists by shifting focus toward external environmental factors in population dynamics.

Alongside pioneering ecological research, Birch had life-long engagements with philosophy and theology. Both his biological and religious beliefs were at home with, and strengthened by, Alfred North Whitehead's Process Philosophy. His 1988 Whitehead paper was published in the first of the seven HPS&ST journal thematic issues that were intellectual foundation of the first IHPST international conference held at Florida State University in November 1989.

ABSTRACT *Alfred North Whitehead's theory of education is explicitly stated in 160 pages of one book The Aims of Education published first in 1929 and in six essays in his Essays in Science and Philosophy (Whitehead 1947, 151-224). The Aims of Education was for the most part addressed to school children in England. The six essayswere more generally directed. However, most, if not all, of Whitehead's books have profound implications for education and particularly for the teaching of science. Whitehead believed that science had taken on a strictly mechanistic or substantialist stance in modem times. He called for a "more subtle science" (Whitehead 1933, 229) in which the organismic model would replace the strictly mechanistic … The new vision would bring back to the teaching of science a new zest and inspiration.*

The article is available **HERE**

Some 60 years ago (1965) Birch was Head of Biology at Sydney University when I was a first year student. In my Autobiography (pp.100-101) I relate a career-affecting decision he made about my missing the yearly (and only) exam. Turns out, this decision was characteristic of his orientation to students and to education.

Readers are welcome to send suggestions, including appropriately-aged own-papers, with bibliographic detail plus pdf file, for the Golden Oldie Award to the Editor.

READING

Good Read Paper

It is anticipate that each newsletter issue will feature a particular *Good Read* paper; namely one with wide relevance to research and debate in the HPS and ST communities. Being a *Good Read* does not mean conclusions have to be agreed with, or there are no faulty steps in the argument, or an author's particular interpretations cannot be disputed. But a *Good Read* needs be clearly written, well informed, and on a topic interest to a wide spread of HPS and ST scholars. The paper will be archived on the HPSST website.

The first *Good Read* paper was:

Gorelik, Gennady: 2017, 'A Galilean Answer to the Needham Question', *Philosophia Scientiæ* 21(1),

ABSTRACT To make the Needham question answerable it is extended thus—What hindered Greco-Roman and Medieval science from making the next major step after Archimedes, and what hindered Eastern scientists from contributing to modern physics for centuries after Galileo? To answer this question the key distinction between modern physics and pre-Galilean science is suggested: the right to invent "illogical" fundamental concepts which can be verified by experiments. This right is based on the belief that the Universe is governed by hidden fundamental laws which Man is capable of knowing about. The source of this belief was the biblical worldview which became the basis for European cultures by the time of the Scientific Revolution thanks to book printing and the Reformation.

The paper can be downloaded from *Philosophia Scientiæ* 21(1).

Suggestions for future *Good Read* papers are most welcome. Please send bibliographic, accessibility, connections to wider issues and such details of the the newsletter editor.

CALENDAR

HPS&ST Related Conferences

. November 19-22,2026, PSA Annual Meeting, San Diego.

Details: **HERE** January 25, 2027, Robert Boyle 400th Anniversary

Conference, Royal Society of Chemistry, London Details: Professor Michael Hunter at m.hunter@bbk.ac.uk. February 22-26, 2027, Workshop: Material Culture in the History of Physics, Deutsches Museum,

Details: **HERE** April 2-3, 2027, IHPST (Uni Toronto), Graduate Conference

Details: **HERE** June 23-25, 2027 Objectivity across the Sciences The Hong Kong University of Science and Technology,

Details: **HERE** July 18-23, 2027. International Society for the

History, Philosophy and Social Studies of Biology (ISHPSSB). Biennial congress, Buenos Aires, Argentina.

Details: **HERE** August 23-28, 2027, Congress for Logic, Methodology, and Philosophy of Science and Technology (CLMPST), Kobe, Japan

Details: HERE September 8-10, 2027, Fifth International Congress on History of Science in Science Education, UTAD, Vila Real, Portugal

Details: Isilda Teixeira Rodrigues isilda@utad.pt

NETWORK

HPS&ST Related Organisations and Websites

AAAS Section L (HPS) – American Association for the Advancement of Science, Section L (HPS)

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

MJHoS – Midwest Junto for the History of Science

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)

SHOT – Society for the History of Technology

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

EDITORIAL

HPS&ST NEWSLETTER PERSONNEL

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