

HPS&ST Newsletter
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CONTENTS

# Introduction	1
# Support for Turkish University Students	1
# Vale: Joseph Agassi (1927-2023)	2
# Vale: Thomas McLeish (1962-2023)	3
# DHST Commission on Science & Literature	4
# International Society for History, Philosophy and Social Studies of Biology (ISHPSSB) biennial conference, 9-15 July 2023, Toronto	5
# European Philosophy of Science Association, Belgrade Conference, 20-23 September 2023	5
# HPS&ST in Latin America	5
# HPS&ST in Asia	6
# Editorial Preamble to Opinion Page	6
# Opinion Page: Open Letter to New Zealand Prime Minister Opposing the Inclusion of Mātauranga Māori as Science in the School Curriculum ELIZABETH RATA, PETER SCHWERDTFEGER, DAVID LILLIS AND RAYMOND RICHARDS	8
# Varia	11
# PhD Award in HPS&ST	11
# Recent HPS&ST Research Articles	11
# Recent HPS&ST Related Books	12
# Third International Congress on the History of Science in Education, University of Algrave, Portugal, 4-6 September 2023	18
# Ninth Norwegian Conference on History of Science, 29 November – 2 December 2023, Trondheim, Norway	19
# Coming HPS&ST Related Conferences	20
# HPS&ST Related Organisations and Websites	20

Introduction

The HPS&ST Newsletter is sent monthly to about 10,300 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 .

Support for Turkish University Students

The 6 February earthquake that devastated the country forced our university community to take action in response. Particularly demonstrated by the decision to make the spring term online for all universities so as to empty the dormitories. The vulnerability of the university students is not one of the priorities of the state and many of our students are directly affected by the earthquake.

Motivated by this Boğaziçi University International Community (BOYUT) has launched a fundraiser to support university students.

The relief campaign is for Bogazici University, Middle East Technical University, Istanbul Technical University, Yıldız Technical University, Ankara University and Hacettepe University students, directly affected by the February 6th earthquake.

These universities are all well known to international HPS and science education scholars. Many of their faculty and graduates are prominent researchers in the disciplines.

The aim to reach 400 students with a one-time stipend worth €250 per person in aid. This humble support will address their immediate needs and help them start rebuilding their lives post-disaster.

The audited GoFundMe site for donations is [HERE](#)

Vale: Joseph Agassi (1927-2023)

Joseph Agassi, the prolific Israeli historian, philosopher and sociologist of science, a noted student of Karl Popper, and a scholar with the widest political, cultural and educational interests—died on 22 January aged 95.

Agassi graduated in physics and philosophy from The Hebrew University, then completed the MSc degree in physics (1951). In 1952 he went to London University (the LSE) to study, and work as a research assistant, with Karl Popper. He

graduated PhD in 1956. An account of Agassi's career and publications is [HERE](#). A Wikipedia entry, that usefully has 50+ downloadable Agassi papers, is [HERE](#).

Agassi articulated, refined, expanded and defended Popper's research programme of [Critical Rationalism](#). He thrived on intellectual exchange, through publications, in conferences and in animated conversations. He had continuing engagements with a range of top-rank philosophers and social scientists, and with any student who wanted a serious communication or asked a probing question.

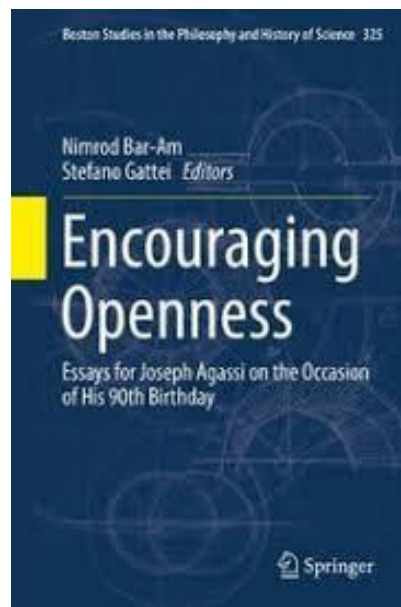
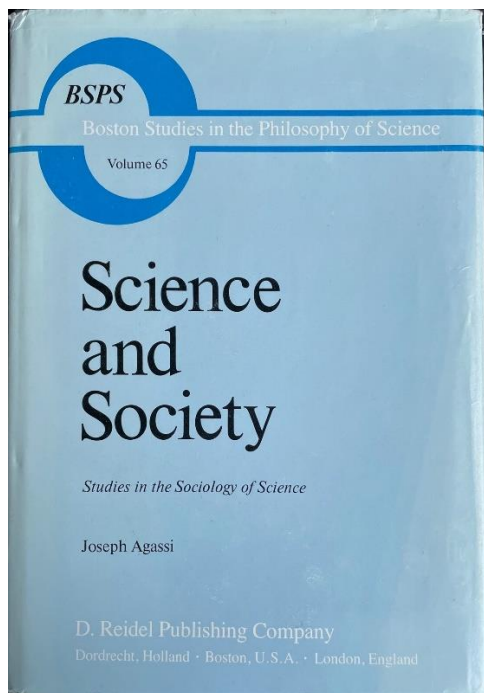
Among numerous philosophers with whom he engaged was [Mario Bunge](#) who also spent time in Popper's LSE department and who became a personal friend. Bunge, in his so-informative [Memoirs](#), says of Agassi: 'I believe Joseph is Popper's best pupil, and one of the few who neither flattered nor betrayed him' (p.139). And 'He was Popper's most lucid, loyal, and yet independent student' (p.368).



*Marx Wartofsky, Joseph Agassi, Mario Bunge.
Boston University HPS Department, 1978.*

Photo: Charlie Sawyer

[Robert Cohen](#) was another philosopher friend and colleague was with whom Agassi taught and researched at Boston University's HPS Centre. He contributed a number of important volumes to Cohen's *Boston Studies* series, and gave presentations in the Boston Colloquium.



Agassi had life-long interests in education: both the improvement of science teaching and learning, and the wider Enlightenment Project's justification of science education as the prime vehicle for cultural and social betterment. He wrote pieces for children that cultivated scientific interest and competence. A collection of 25 of his education papers published over a 45-year period was published in 2014: [The Hazard Called Education](#) (Springer).

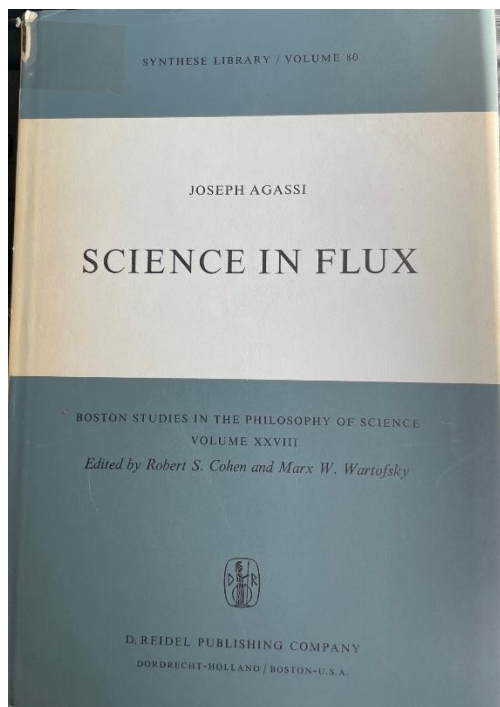
Ian Winchester, in his essay '[Joseph Agassi's Educational Thoughts](#)', published in the above *Encouraging Openness*, writes: 'For over 50 years, Joseph Agassi has thought and written about education'. And observes:

... what struck me most about Joseph's educational thinking was its being direct and to the point.

Vale: Thomas McLeish (1962-2023)

[Tom McLeish](#) FRS died peacefully at home on 27 February after a months-long debilitating illness. He was Professor of Natural Philosophy in the Department of Physics at the University of York in the UK. His broadly interdisciplinary research ranged from the theoretical physics of soft and biological matter to the medieval history of science, and the theology, sociology and philosophy of science.

He authored *Faith and Wisdom in Science* (Oxford University Press 2014); *Let There Be Science: Why God loves Science and Science needs God* (Lion, 2016); and *The Poetry and*



One of the twenty papers in the second collection well captures Agassi's orientation to HPS:

'The Nature of Scientific Problems and Their Roots in Metaphysics' (pp.208-239).

A 580-page, 42-chapter *Boston Studies* volume, [Encouraging Openness](#), commemorated his 90th birthday.

Music of Science: Comparing Creativity in Science and Art (Oxford University Press 2019).

He contributed two Opinion Pages to this newsletter.

Creativity and Constraint in Science and the Arts
(May 2022)
Science + Religion (November 2019)



His wife, Julie, posted the following the day after he died:

As you may well be aware, when Tom received his diagnosis last August, he was immersed (often in a leadership capacity) in an extraordinary plethora of projects - some at their birth and some in a later stage of their life. Passing on his previous responsibilities and opportunities to others and ensuring that younger colleagues were looked after was a great concern to Tom and it was, last week, just as he finished the last 'job' on his list that his health took a significant dive.

It was clear to all of us involved in caring for Tom that being able to pass on his responsibilities and complete his part of work in progress gave him both joy and great peace of mind and we are so grateful that he was given the time he needed and that he retained the mental capacity to do this. To the last he also showed love, care and gratitude towards

all around or in contact with him. Tom loved widely and was widely and deeply loved.

DHST Commission on Science & Literature

The AGM of the Commission was held 17 February. New committee membership was finalised.

Executive Committee:

President: John Holmes, University of Birmingham, UK (j.holmes.1@bham.ac.uk)
Secretary: Kostas Tampakis, National Hellenic Research Foundation, Greece (ktampakis@eie.gr)
Communications Officer: Helen Goodman, Bath Spa University, UK (h.goodman@bathspa.ac.uk)
Early Career Officer: Konstantinos Konstantopoulos, Hellenic Open University, Greece (kkonstantopoulos@eap.gr)

Regional Representatives:

Neil Addison, Japan Women's University, Japan/Asia (naddison43@gmail.com)
Vanessa Costa e Silva Schmitt, Brazil/South America (vanessa.costa.schmitt@gmail.com)
Dustin Hellberg, University of the Bahamas, Caribbean/North America (dchellberg@gmail.com)
Isabel Jaén Portillo, Portland State University, USA/North America (jaen@pdx.edu)
Brahim Karoui, Institute of Languages, Gafsa, Tunisia/Africa (brahimkaroui@yahoo.fr)
Alessio Mattana, University of Turin, Italy/Europe (alessio.mattana@unito.it)
Pirjo Suvilehto, University of Oulu, Finland/Europe (pirjo.suvilehto@oulu.fi)
Laurence Talairach, University of Toulouse Jean Jaurès, France/Europe (laurence.talairach@univ-tlse2.fr)
Maria Zarimis, Australia (zarimismaria06@gmail.com)

New members are sought and welcomed. Please contact the president or secretary.

International Society for History, Philosophy and Social Studies of Biology (ISHPSSB) biennial conference, 9-15 July 2023, Toronto

Keynote speaker, [Deborah McGregor](#) (York University) will present on climate and environmental justice, and an interdisciplinary public panel will discuss how environmental degradation, indigeneity, human right to water and health all intersect in and around the Great Lakes. The panelists are Patricia Corcoran (University of Western Ontario), Blaire Morseau (University of Massachusetts Boston), Jennifer Read (University of Michigan), and Marsha Richmond (Wayne State University).

These conversations will be complemented with a tour of the Royal Ontario Museum natural history and world cultures collections, walking through the causes, consequences and solutions to climate crisis.

Please visit the [conference website](#) to submit abstracts.

European Philosophy of Science Association, Belgrade Conference, 20-23 September

The European Philosophy of Science Association invites submissions for its next conference, EPSA23, to be held in Belgrade (Serbia) from **20 to 23 September 2023**. You will find all the details regarding submission guidelines and rules on our [dedicated webpage](#).

Please note that the deadline for all submissions is by **1 March 2023**, 11:55pm GMT.

HPS&ST in Latin America

Colloquium to celebrate the 50 years of collaboration of Hugh Lacey and the Philosophy Department of the University of São Paulo (USP) October 18-21, 2022.

The colloquium was held to mark the launching of Hugh Lacey's new book, *Valores e Atividades Científicas 3*. This completed the trilogy that was largely written in Brazil and in interaction with professors and students of philosophy of USP; and to celebrate his introduction of the philosophy of

science into the program of USP's Philosophy Department during the years, 1970-71, and Lacey's 50 years of collaboration that has been decisive for the consolidation of philosophy of science in Brazil.

Programme and details available [HERE](#)

Latin American Studies on the Life Sciences and Medicine

We are pleased to announce the publication of the book *Handbook of the Historiography of Latin American Studies on the Life Sciences and Medicine*, edited by Professor Ana Barahona, with an introduction by Professor Kapil Raj and the editor.

Details [HERE](#)

5th International Conference on History, Philosophy and Science Teaching in Latin America (IHPST-LA 2023)

History, Philosophy, Sociology and Science Teaching in times of Scientific Denial

The IHPST-LA will be held in Porto Alegre (Brazil) from August 9th to 11th, 2023. It will gather researchers from all Latin America to discuss HPS&ST and its contemporary challenges. More information is available [HERE](#).

The event will take place at the headquarters of the Institute of Physics of the Federal University of Rio Grande do Sul, in Porto Alegre. Paper submissions will be accepted until April 2nd, 2023. registration, submission rules, dates, are available on the event website: www.ufrgs.br/ihpstla2023/.

The IHPST-LA 2023 event will provide space for dialogue, communication, meeting, in which we can overcome barriers and difficulties to further strengthen our research community. In difficult times like the ones we are experiencing, consolidating and advancing the promotion of research and research and teaching institutions is a powerful way of contributing to building a better and fairer world. We are waiting for everyone in August in Porto Alegre for this moment.

Do you have any contributions about HPS&ST in Latin America?

Do you have any contributions about HPS&ST in Latin America? If you have any information about events, publications, research groups, books about HPS&ST in Latin American and want to submit a brief note to be published in the HPS&ST Newsletter, please contact first Nathan Lima [here](#) or secondly Michael Matthews [here](#).

HPS&ST in Asia

If you have any information about events, publications, research groups or books about HPS&ST in Asia and want to submit a brief note to be published in the HPS&ST Newsletter, please contact first Xiao Huang (Zhejiang Normal University) [HERE](#) or secondly Michael Matthews [Here](#).

Editorial Preamble to Opinion Page

Michael R. Matthews

Issues related to the appropriate recognition of indigenous knowledge in school and university programmes, which are the subject of the following OP, have previously been examined in the newsletter.

In the [November 2019](#) OP, [Michael Corballis](#), [Robert Nola](#) and Elizabeth Rata outlined the central ontological, methodological and institutional differences between [Mātauranga Māori](#) (Māori knowledge of nature) and science. They argued that the two are not equivalent and that the first should not be included as science in school or university programmes. Nor should it be funded from the nation's competitive science research budget. Rather it should be funded from the humanities or social sciences budget.

In the [March 2022](#) OP, I described the [heated NZ national debate](#) occasioned by publication of a letter by seven University of Auckland professors (the so-called 'Defenders of Science'), to a national magazine, urging the separation of Mātauranga Māori from science [HERE](#).

The professors argued that the former should be taught, but in social studies, anthropology, or comparable programmes. They pointed out that parts of Mātauranga Māori, and its accomplishments, might have an illustrative,

motivational, or pedagogical function in a science lessons, but cannot be the science lesson.

Within days of the letter being published, a petition demanding retraction and condemning the professors was signed by 2,000 NZ academics (including a Vice-Chancellor), school principals, teachers and graduate students. The gravamen of the petition was the charge that, contrary to the professors:

Mātauranga is far more than just equivalent to or equal to 'Western' science. ,,,,

This is a major philosophical claim for which no evidence is provided or even mentioned. The petitioners depended upon an unstated, Kuhn-sourced, philosophical relativism. Something that has taken wide roots in New Zealand, and elsewhere [HERE](#).

Among other things, the professors were accused of was 'causing untold harm and hurt'. One, a professor of evolutionary theory, was removed from teaching as he was deemed 'unsafe for students'.

The controversy was not just national, but became international when disciplinary proceedings against three of the professors were instituted within the Royal Society New Zealand against three of the professors who were RSNZ Fellows – [Robert Nola](#), [Michael Corballis](#), [Garth Cooper](#). The last was the nation's most prominent, and internationally awarded, Māori medical researcher.

Pleasingly the charges were dropped. The three professors then resigned from RSNZ dismayed by its failure to defend the defenders of science. A less than glorious moment in the history of the RSNZ. The controversy has continued right through to the present. In the 4 March 2023 [issue](#) of *The Spectator* magazine, Richard Dawkins writes:

Origin myths are haunting and poetic, but they belong elsewhere in the curriculum. The very phrase 'western' science buys into the 'relativist' notion that evolution and big bang cosmology are just the origin myth of white western men, a narrative whose hegemony over 'indigenous'

alternatives stems from nothing better than political power.

My own connection to the debate began thirty years ago when, in 1992, I was appointed the Foundation Professor of Science Education at the University of Auckland. At my first science faculty meeting, a motion was moved that completion of the Anthropology Department's course on Mātauranga Māori should satisfy the long-held requirement that all primary teacher-education students complete at least one science subject. I opposed the motion, arguing that, in New Zealand, there might be grounds for making Mātauranga Māori a compulsory subject for education students, but not in lieu of a faculty of science subject. The convincing educational and cultural arguments for the latter still stood.

The scientific tradition is simply unequalled in the knowledge of nature that it has produced ranging from details of the subatomic world to the structure and history of the cosmos, the self-correcting critical procedures it has embraced, and the power that it has given humanity to deal with illness, pandemics and disasters of the greatest magnitude. Can any serious education be carried on without attention to science? And this attention can and should begin in primary school.

My objections notwithstanding, the motion to abandon the science requirement was carried. Consequently, the proportion of NZ primary school teachers with any knowledge of, and confidence about, science is vanishingly small. I published a book, *Challenging NZ Science Education*, on the state of NZ science education in the mid-1990s. The problems I identified have only worsened. Likewise vanishing, is NZ's [once high standing](#) in international education assessments.

The educational, philosophical, cultural, legal and political dimensions of the New Zealand debate are mirrored in many other countries and provinces where there are vigorous traditions of indigenous knowledge. Importantly, and oft overlooked, most countries have competing, and conflicting, cultural knowledge traditions.

In New Zealand, the cohort of mixed-Asian ethnicity (15%) is almost the same as Māori (16%). Their cultural worldviews do not coincide. And neither coincide with much of the

worldviews of the multi-racial, multi-religious European (Pakeha) cohort (70%). The last will include Special Creation, fundamentalist Christians. And Mormons. All these cultures have variously articulated worldviews and understandings of nature.

NZ has a significant [Hindu population](#) (nearly 3%), with Hinduism being the country's second largest religion. Many Hindus embrace [Vedic Science](#) with its own distinct ontology and florid cosmology. The Indian nationalist BJP government finances Vedic science research and has established astrology chairs in university astronomy departments.

NZ has a robust Muslim population (50,000+) spread across many ethnicities. Islam has its own distinct worldview and ontology. And it has a long history of cultivating [Islamic science](#) and natural philosophy both of which are taught and funded in many Muslim countries. The worldview accommodates entities such as [Jinn](#) that are active in nature and daily life.

In NZ there might be upwards of twenty local, non-Western knowledges. Across the world there are thousands of local or indigenous knowledge traditions about nature. These are documented in [multi-volume encyclopedias](#).

In all international cases, the question of whether indigenous knowledge, or lore, is science, how much of it is scientific, how much is antithetical to science, and whether the particular local knowledge should be funded, taught, promoted, and staffed in science departments—have arisen.

That there are overlaps, that science can learn from indigenous traditions, and that there is pedagogical value in contrasting one with the other—is not contended. But this does not make both science. Informative lessons for everyone can be drawn from the NZ debate and policy history.

New Zealand is a textbook case of the requirement to combine philosophy of education and philosophy of science in the determination of national education policy. More is the pity that the first discipline, along with all other foundation subjects (psychology, history, sociology), has largely disappeared worldwide from teacher

education. Consequently, education is prey to whatever might seem a good idea at the time. It is left prone to faddism – behaviourism, constructivism, technologism, managerialism, economism, jobism, pragmatism, student-centeredism, and whatever other *ism* is currently popular. Too easily education takes the shape of the last political foot that trod upon it.

Many have convincingly argued for the importance of [philosophy in teacher education](#). I have argued that the [liberal tradition in education](#) provides countervailing perspectives and resources for teachers and administrators. This tradition needs to be much more energetically embraced in New Zealand.

Opinion Page: Open Letter to New Zealand Prime Minister Opposing the Inclusion of Mātauranga Māori as Science in the School Curriculum

ELIZABETH RATA, PETER SCHWERDTFEGER, DAVID LILLIS AND RAYMOND RICHARDS

Elizabeth Rata is a professor of sociology in education and a Fulbright Senior Fellow. She is the Director of the Knowledge in Education Research Unit at the University of Auckland. She was an English teacher and member of the Auckland Runanga which campaigned for [Kura Kaupapa Māori education](#) (Māori language immersion schools). Her research is in two main areas: the connection between knowledge and democracy, and how a knowledge-rich curriculum is aligned with the best teaching methods from New Zealand's progressive tradition.

Peter Schwerdtfeger holds a chair in theoretical chemistry at Massey University New Zealand, he is Director of the Centre for Theoretical Chemistry and Physics, is the Head of the New Zealand Institute for Advanced Study, and is a former president of the [Alexander von Humboldt Foundation](#).

David Lillis is a retired Senior Academic Manager and former lecturer in statistics and research methods. He trained in physics and mathematics for his BSc (Hons) and MSc degrees and earned a PhD at Curtin University (Perth, Australia). His career experience includes work in

research evaluation, statistics and data analysis, science policy, lecturing and academic management.

Raymond Richards is a Research Associate and retired senior lecturer in history at the University of Waikato. He graduated from the University of Waikato before earning his PhD in History at the University of California, Santa Barbara. His book *Closing the Door to Destitution* (Penn State University Press, 1994) was nominated for five awards in the United States. His biography of Sir Geoffrey Palmer, *Palmer, the Parliamentary Years* (Canterbury University Press, 2011) was nominated for a NZ Post Book Award.

The Rt Hon Chris Hipkins
Parliament Office
Wellington 6160
chris.hipkins@parliament.govt.nz

cc. Hon Jan Tinetti
Minister for Internal Affairs
j.tinetti@ministers.govt.nz

8 February 2023

Dear Prime Minister Hipkins,

We, the undersigned, draw your attention to two major problems in the Ministry of Education's Curriculum Refresh policy and in the associated NCEA qualification reforms. These problems were created during your tenure as Minister of Education and can only be solved by calling an immediate halt to the radical initiatives causing the problems. Because the matter is of such urgency, this letter is an open one and will be made public.

The first problem is the fundamental change to the purpose of New Zealand education contained in the Curriculum Refresh document, [Te Mātaiaho: The Refreshed New Zealand Curriculum: Draft for Testing, September 2022](#).

The second problem is an effect of the first. It is the insertion into the curriculum of traditional knowledge, or [mātauranga Māori](#), as equivalent to science.

Problem 1: Changing the purpose of New Zealand education

Since the 1877 Education Act, the purpose of education has been to build our nation upon the accumulated knowledge of humanity. The intended benefits of this universal education system are numerous. Six generations of New Zealanders are educated; a robust economy is developed; stable democracy is secured through secular institutions – all enabling the social cohesion of a multi-ethnic population with different backgrounds but united in its commitment to our nation.

The Curriculum Refresh has abandoned this goal of unity. Instead, the democratic idea of the universal human being upon which the education system was founded is replaced with a localised system that classifies children into racialised groups with, as the Curriculum Refresh states, ‘diverse ways of **being**, understanding, knowing, and doing’. (Our emphasis).

The ‘[Kaupapa Statement](#)’ that guided the Curriculum Refresh development makes this revolutionary new purpose perfectly clear:

We are refreshing the New Zealand Curriculum (the NZC) to better reflect the aspirations and expectations of all New Zealanders. The refresh will adorn our ākonga with a 3-strand whenu (cord). This korowai will be layered with huruhuru (feathers) representing who they are, who they can be, their whakapapa, and their connection to our whenua (lands). The whenu tying it together is made up of whānau (family), ākonga, and kaiako (teachers) working as partners to use and localise the NZC.

The refresh will ensure that the NZC reflects **diverse ways of being, understanding, knowing, and doing**. It helps us inclusively respond to the needs of individual ākonga, who are at the centre of all we do. Ākonga will be able to see their languages, cultures, identities, and strengths in what they learn at school. This will empower ākonga to go boldly into an ever-changing future and contribute to local, national, and global communities.

This vision will primarily be realised by kaiako and school leaders, in partnership with iwi and their school communities. However, it will be important for all New Zealanders to be part of this journey

and help create multiple pathways towards equity and success for all ākonga. (Our emphasis.)

A racialised curriculum

After classifying children racially, the Curriculum Refresh embeds this identity categorisation. We are to be recognised in the education system as either Māori or not. Yet the reality is that modern individuals choose which identity matters to them, a choice informed by personalities, capacities, interests, goals, family, communities and heritages, and likely to change during the lifespan as circumstances change. At school we share the identity of pupil and student.

In contrast, the culturalist ideology now informing education policy places our identity as an ethnic one, a view that risks perpetuating fixed racial stereotypes. More seriously, it links culture to race, a link justified by the belief that how individuals think, behave, and relate to others is pre-determined by their genetic ancestry.

This race-culture link is seen in the Kaupapa Statement that ‘*Ākonga will be able to see their languages, cultures, identities, and strengths in what they learn at school*’. It is a pre-modern race ideology that will destroy our modern future-oriented education system and should be seen for the revolution it is.

Problem 2: The effects of radical change

The second problem to which we draw your urgent attention is the effects of this radical transformation of New Zealand education. They include ‘culturally responsive pedagogies’ – the idea that diverse way of ‘being, knowing, understanding and doing’ require different learning approaches.

An example of this is the misguided belief that Māori- and Pacific-heritage children learn better in groups. Literacy too is under attack by those seeking to ‘decolonise’ reading and writing – see a contribution to the New Zealand Association for Research in Education [HERE](#)

The knowledge equivalence error

We draw your attention specifically to the effect on the curriculum caused by the false claim that traditional knowledge and modern science are

equivalent (mana orite). This is damaging, not only to science education within New Zealand but to our nation's international reputation.

The damage occurs in two ways. First, the interweaving of mātauranga Māori across the science curriculum forces a comparison between the two knowledge systems in ways that do justice to neither. Traditional knowledge has its own value and purpose and belongs in curriculum subjects such as social studies, geography, and literature. But it is not science and does not belong in the science curriculum.

Second, the NCEA Reform and Curriculum Refresh bring pseudoscientific ideas into science due to the poor transposition of some concepts from mātauranga Māori. For example, the [NCEA Chemistry & Biology Glossary](#) introduces the idea of *mauri* as a relevant concept in biology and chemistry. It defines *mauri* as:

The vital essence, life force of everything: be it a physical object, living thing or ecosystem. In Chemistry and Biology, *mauri* refers to the health and life-sustaining capacity of the *taiao*, on biological, physical, and chemical levels.

[Vitalism](#), the idea of an innate 'life force' present in all things, has surfaced in many cultural knowledge systems, including European, but has been soundly refuted and is not part of modern science. Inserting mātauranga Māori into the science curriculum will, not only lead to confusion in our schools and for our students, but will destroy our nation's reputation for quality science.

A scholarly account of the difference between mātauranga Māori and modern science which compares the properties of each knowledge type, their differences, their relationship, methods and procedures for their development, and policy implications is available on pages 13-21 of the November 2019 [HPS&ST Newsletter](#).

Halt the Curriculum Refresh

Asserting that the [Treaty of Waitangi](#) is 'a fundamental component of our constitution', Te Mātaiaho: the Curriculum Refresh's radical goal is to 'foster the next generation of Te Tiriti partners by moving beyond the rhetorical notion of "honouring" Te Tiriti to giving effect to it' (p.5).

But the status of the Treaty is subject to unresolved political contest. It is undemocratic to engineer a revolutionary constitutional change through the educational curriculum.

We ask for the restoration of an academic curriculum and qualification system based on the democratic principles of universalism and secularism; a system that enabled generations of New Zealanders to acquire the universal knowledge of humanity.

Such curriculum was the reason for the nation's successful education system that has lasted nearly one hundred and fifty years. The transformative Curriculum Refresh will undo the principles and practices that made such success possible with dire consequences for New Zealand's future.

Prime Minister Hipkins, the Curriculum Refresh and the NCEA Reforms were developed on your watch as Minister of Education. It is, therefore, incumbent on you to repeal them before irrevocable damage is done to our country. As Prime Minister, you are certainly in a position to do so.

Professor Elizabeth Rata, University of Auckland.
(corresponding author e.rata@auckland.ac.nz)
Professor Peter Schwerdtfeger, Massey University.

Dr Raymond Richards, University of Waikato.

Dr David Lillis, retired senior academic manager.

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

- Lecture, *Pendulum Swings: Models and Metaphors*, Arthur Eisenkraft [HERE](#)
- History of Science Society (USA) Newsletter, available [HERE](#)

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

Recent HPS&ST Research Articles

Centaurus (Volume 64, Issue 3, 2022)

Special Issue: Science at the Zoo: Producing Knowledge about Exotic Animals

Editors: Miquel Carandel and Oliver Hochadel

Bethhäuser, B.A., Bach-Mortensen, A.M. & Engzell, P. (2023). A systematic review and meta-analysis of the evidence on learning during the COVID-19 pandemic. *Nat Hum Behav*, 1-14. <https://doi.org/10.1038/s41562-022-01506-4>

Capecchi, D. (2023). The Principle of Inertia in the History of Classical Mechanics. *Found Sci*, 1-42. <https://doi.org/10.1007/s10699-023-09902-3>

Costello, R.A., Beatty, A.E., Dunk, R.D.P. et al. (2023). Re-envisioning Biology Curricula to Include Ideological Awareness. *Res Sci Educ*, 1-14. <https://doi.org/10.1007/s11165-023-10101-0>.

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Recent HPS&ST Related Books

Botteri, G., & Casazza, R. (2023). *The Astronomical System of Aristotle*. Leiden, The Netherlands: Brill. ISBN: 978-90-04-52552-8

“Many have heard of Aristotle's First Unmoved Mover, the one that moves all things without being moved. Very few, however, have managed to capture the ultimate meaning of that entity. Explaining why it is necessary the existence of such a First Unmoved Mover is one of the goals of this book, but, even more, its journey allows us to understand why Aristotle maintained that there are a total of 55 Unmoved Movers, not just one. The key is Aristotelian astronomy, little studied so far in comparison with other aspects of his thought.

In this solid piece of research and free philosophical speculation that Botteri & Casazza offer us, the authors' gaze raised to the sky—by means of the naked-eye analysis of celestial movements—leads to the reconstruction of Aristotle's astronomical system, key to understanding his cosmology, his physics, and even his metaphysics. A friendly book, in which the reader celebrates page after page the magnificent explanatory graphics. A book matured, coherent, creative,

and intense, which should not be missing in any philosophical library.

“This book is a revised English translation from the original Spanish publication *El sistema astronómico de Aristoteles: Una interpretación*, published by Ediciones Biblioteca Nacional, Buenos Aires, 2015.”
(From the Publishers)

More information [HERE](#)

Costa, J. T. (2023). *Radical by Nature: The Revolutionary Life of Alfred Russel Wallace*. Princeton, NJ: Princeton University Press. ISBN: 9780691233796

“Alfred Russel Wallace (1823–1913) was perhaps the most famed naturalist of the Victorian age. His expeditions to remote Amazonia and southeast Asia were the stuff of legend. A collector of thousands of species new to science, he shared in the discovery of natural selection and founded the discipline of evolutionary biogeography.

“*Radical by Nature* tells the story of Wallace's epic life and achievements, from his stellar rise from humble origins to his complicated friendship with Charles Darwin and other leading scientific lights of Britain to his devotion to social causes and movements that threatened to alienate him from scientific society.

“James Costa draws on letters, notebooks, and journals to provide a multifaceted account of a revolutionary life in science as well as Wallace's family life. He shows how the self-taught Wallace doggedly pursued bold, even radical ideas that caused a seismic shift in the natural sciences, and how he also courted controversy with nonscientific pursuits such as spiritualism and socialism. Costa describes Wallace's courageous social advocacy of women's rights, labor reform, and other important issues. He also sheds light on Wallace's complex relationship with Darwin, describing how Wallace graciously applauded his friend and rival, becoming one of his most ardent defenders.

“Weaving a revelatory narrative with the latest scholarship, *Radical by Nature* paints a mesmerizing portrait of a multifaceted thinker driven by a singular passion for science, a commitment to social justice, and a lifelong sense of wonder.” (From the Publishers)

More information [HERE](#)

DeWitt, A., & Sheppard, K. (Eds.) (2023). *The Correspondence of John Tyndall* (Volume 12): *The Correspondence, March 1871-May 1872*. Pittsburg, PA: University of Pittsburgh Press. ISBN: 9780822946892

“The twelfth volume of *The Correspondence* of John Tyndall contains 326 letters and covers the fifteen months of Tyndall’s life from March 1871 through May 1872, a time when he was a central figure in the field and had a substantial reputation in both the UK and the United States. It begins just before the publication of *Fragments of Science* in April and *Hours of Exercise* in May. It includes a number of small but public disputes about science, most notably the start of a controversy about Kew Gardens involving botanist Joseph Hooker. Tyndall was visited by friends and dignitaries; he traveled to Switzerland, Ireland, and the countryside for scrambles; and he began planning a trip to the United States. He dealt with issues concerning his family in Ireland, which were troublesome for him. He was busy administering the Royal Institution and the Royal Society; he was also working as the scientific consultant to Trinity House, which was involved in overseeing lighthouses in the United Kingdom, of which Ireland was a part at this time.

Unlike other volumes, this one is not defined as much by one or two major endeavors or events for Tyndall, but instead includes a number of smaller projects as well as personal and professional issues.” (From the Publishers)

More information [HERE](#)

Devitt, M. (2023). *Biological Essentialism*. Oxford, UK: OUP. ISBN: 9780198840282

“*Biological Essentialism* addresses three main issues. The first concerns the essences (natures, identities) of biological taxa, particularly

species. Kripke and other metaphysicians hold that these essences are (at least partly) intrinsic, underlying, probably largely genetic properties. This view, based largely on intuitions, is dismissed by the consensus in the philosophy of biology as being incompatible with Darwinism and reflecting ignorance of biology. *Biological Essentialism* argues that the demands of biological explanation show that the metaphysicians are right. The positive view of the consensus is that the essences are wholly relational: taxa must have certain histories.

Biological Essentialism argues that there is indeed an historical component to the essence, but this component presupposes an intrinsic component. Its second issue concerns the essences of biological individuals. Metaphysicians have had much to say about this, again on the basis of intuitions. Many hold that an individual is essentially a member of its species. This has recently been unequivocally rejected by philosophers of biology. *Biological Essentialism* appeals to biological explanation again to argue for essential membership; furthermore, to argue for the Kripkean view that an organism’s essence is partly intrinsic and partly relational (a matter of origin).

Finally, the book addresses the lively contemporary issue of whether race is biologically “real”. From the perspective developed earlier, the book argues that there are indeed racial kinds, in some sense, that are “in the realm of the biological”. These kinds also have partly historical and partly intrinsic underlying essences.” (From the Publishers)

More information [HERE](#)

Dicks, H. (2023). *The Biomimicry Revolution: Learning from Nature How to Inhabit the Earth*. New York, NY: Columbia University Press. ISBN: 9780231208819

“Modernity is founded on the belief that the world we build is a human invention, not a part of nature. The ecological consequences of this idea have been catastrophic. We have laid waste to natural ecosystems, replacing them with fundamentally unsustainable human designs. With time running out to address the

environmental crises we have caused, our best path forward is to turn to nature for guidance.

“In this book, Henry Dicks explores the philosophical significance of a revolutionary approach to sustainable innovation: biomimicry. The term describes the application and adaptation of strategies found in nature to the development of artificial products and systems, such as passive cooling techniques modeled on termite mounds or solar cells modeled on leaves. Dicks argues that biomimicry, typically seen as just a design strategy, can also serve as the basis for a new environmental philosophy that radically alters how we understand and relate to the natural world. By showing how we can imitate, emulate, and learn from nature, biomimicry points us toward a genuinely sustainable way of inhabiting the earth.

“Rooted in philosophy, *The Biomimicry Revolution* has profound implications spanning the natural sciences, design, architecture, sustainability studies, science and technology studies, and the environmental humanities. It presents a sweeping reconception of what philosophy can be and offers a powerful new vision of terrestrial existence.” (From the Publishers)

More information [HERE](#)

Dika, T. R. (2023). *Descartes's Method: The Formation of the Subject of Science*. Oxford, UK: OUP. ISBN: 9780192869869

“*Descartes's Method* develops an ontological interpretation of Descartes's method as a dynamic and, within limits, differentiable problem-solving cognitive disposition or habitus, which can be actualized or applied to different problems in various ways, depending on the nature of the problem. Parts I-II develop the foundations of an habitual interpretation of Descartes's method, while Parts III-V demonstrate the fruits of such an interpretation in metaphysics, natural philosophy, and mathematics. The first book to draw on the recently discovered Cambridge manuscript of Descartes's *Rules for the Direction of the Mind*, *Descartes's Method* concretely demonstrates the efficacy of Descartes's method in the

sciences and the underlying unity of Descartes's method from *Rules for the Direction of the Mind* to *Principles of Philosophy* (1644). (From the Publishers)

More information [HERE](#)

Eddy, M.D. (2023). *Media and the Mind: Art, Science, and Notebooks as Paper Machines, 1700-1830*. Chicago, IL: The University of Chicago Press. ISBN: 9780226828350

“Information is often characterized as facts that float effortlessly across time and space. But before the nineteenth century, information was seen as a process that included a set of skills enacted through media on a daily basis. How, why, and where were these mediated facts and skills learned? Concentrating on manuscripts created by students in Scotland between 1700 and 1830, Matthew Daniel Eddy argues that notebooks functioned as workshops where notekeepers learned to judge the accuracy, utility, and morality of the data they encountered. He shows that, in an age preoccupied with “enlightened” values, the skills and materials required to make and use notebooks were not simply aids to reason - they were part of reason itself.

“Covering a rich selection of material and visual media ranging from hand-stitched bindings to watercolor paintings, the book problematizes John Locke’s comparison of the mind to a blank piece of paper, the tabula rasa. Although one of the most recognizable metaphors of the British Enlightenment, scholars seldom consider why it was so successful for those who used it. Eddy makes a case for using the material culture of early modern manuscripts to expand the meaning of the metaphor in a way that offers a clearer understanding of the direct relationship that existed between thinking and notekeeping. Starting in the home, moving to schools, and then ending with universities, the book explores this argument by reconstructing the relationship between media and the mind from the bottom up.” (From the Publishers)

More information [HERE](#)

Graves Jr., J. L., & Goodman, A. H. (2023). *Racism, Not Race: Answers to Frequently Asked Questions*. New York: NY: Columbia University Press. ISBN: 9780231200677. [Paperback]

“The science on race is clear. Common categories like “Black,” “white,” and “Asian” do not represent genetic differences among groups. But if race is a pernicious fiction according to natural science, it is all too significant in the day-to-day lives of racialized people across the globe. Inequities in health, wealth, and an array of other life outcomes cannot be explained without referring to “race”—but their true source is racism. What do we need to know about the pseudoscience of race in order to fight racism and fulfill human potential?”

“In this book, two distinguished scientists tackle common misconceptions about race, human biology, and racism. Using an accessible question-and-answer format, Joseph L. Graves Jr. and Alan H. Goodman explain the differences between social and biological notions of race. Although there are many meaningful human genetic variations, they do not map onto socially constructed racial categories. Drawing on evidence from both natural and social science, Graves and Goodman dismantle the malignant myth of gene-based racial difference. They demonstrate that the ideology of racism created races and show why the inequalities ascribed to race are in fact caused by racism.

“Graves and Goodman provide persuasive and timely answers to key questions about race and racism for a moment when people of all backgrounds are striving for social justice. *Racism, Not Race* shows readers why antiracist principles are both just and backed by sound science.” (From the Publishers)

More information [HERE](#)

Harmon, J. E., & Gross, A. G. (2023). *The Many Voices of Modern Physics: Written Communication Practices of Key Discoveries*. Pittsburg, PA: University of Pittsburg Press. ISBN: 9780822947585

“*The Many Voices of Modern Physics* follows a revolution that began in 1905 when Albert Einstein published papers on special relativity and quantum theory. Unlike Newtonian physics, this new physics often departs wildly from common sense, a radical divorce that presents a unique communicative challenge to physicists when writing for other physicists or for the general public, and to journalists and popular science writers as well.

In their two long careers, Joseph Harmon and the late Alan Gross have explored how scientists communicate with each other and with the general public. Here, they focus not on the history of modern physics but on its communication. In their survey of physics communications and related persuasive practices, they move from peak to peak of scientific achievement, recalling how physicists use the communicative tools available—in particular, thought experiments, analogies, visuals, and equations—to convince others that what they say is not only true but significant, that it must be incorporated into the body of scientific and general knowledge.

Each chapter includes a chorus of voices, from the many celebrated physicists who devoted considerable time and ingenuity to communicating their discoveries, to the science journalists who made those discoveries accessible to the public, and even to philosophers, sociologists, historians, an opera composer, and a patent lawyer. With their final collaboration, Harmon and Gross offer a tribute to the communicative practices of the physicists who convinced their peers and the general public that the universe is a far more bizarre and interesting place than their nineteenth-century predecessors imagined.” (From the Publisher)

More information [HERE](#)

Jaeger, L. (2023). *Women of Genius in Science: Whose Frequently Overlooked Contributions Changed the World*. New York, NY: Springer. ISBN: 978-3-031-23926-7

“Although women participated in shaping scientific thinking from the outset, they very rarely became visible. This imbalance

continues today, although there are currently more female scientists than ever before. Lars Jaeger spans an arc from antiquity to the present day and portrays the lives and work of the most important female scientists and mathematicians in essay-like introductions. From Hypatia of Alexandria to Emmy Noether and Lisa Randall, they have all achieved great things, decisively advanced science and yet often could not step out of the shadow of their male colleagues.

“In addition to the exciting portraits of the individual women scientists, the book also sheds light on gender relations in science and their agonisingly slow evolution in favour of women.” (From the Publishers)

More information [HERE](#)

Littleton, F.K., Bewley, S., & Drife, J. (2023). *Presenting the First Test-Tube Baby: The Edwards and Steptoe Lecture of 1979*. Cambridge: Cambridge University Press. ISBN: 9781009210997

“In January 1979, Robert Edwards and Patrick Steptoe delivered a lecture detailing the ten-year clinical and scientific research programme that led to the birth of Louise Brown, the first baby born utilising IVF. This thoroughly-researched book provides both a full annotated transcript of the lecture as well as recorded reminiscences from those who attended, detailing the contemporary understandings of the event. An essay on the lecture's historical context adds fresh insight into the biographies of Edwards and Steptoe and highlights sources from print and broadcast media that have received scant attention in earlier publications.

Current and future implications of the advances in IVF since the first procedure are also explored, examining future medical and scientific possibilities as well as ethical issues that may arise. A foreword by Louise Brown herself places this remarkable leap of science in a personal context, one that so many families have since experienced themselves.” (From the Publishers)

More information [HERE](#)

Nesvold, E. (2023). *Off-Earth: Ethical Questions and Quandaries for Living in Outer Space*. Cambridge, MA: The MIT Press. ISBN: 9780262047548

“We've pinpointed the destination, refined the technology, designed the habitat, outfitted our space residents. Are we forgetting something? A timely reminder that it's not just rocket science, this thought-provoking book explores the all-too-human issues raised by the prospect of settling in outer space. It's worth remembering, Erika Nesvold suggests, that in making new worlds, we don't necessarily leave our earthly problems behind. Accordingly, her work highlights the complex ethical challenges that accompany any other-worldly venture—questions about the environment, labor rights, and medical ethics, among others.

“Any such venture, Nesvold contends, must be made on behalf of all humanity, with global input and collaboration. *Off-Earth* thus includes historical and contemporary examples from outside the dominant Western/US, abled, and privileged narrative of the space industry. Nesvold calls on experts in ethics, sociology, history, social justice, and law to launch a hopeful conversation about the potential ethical pitfalls of becoming a multi-planet species—and, ideally, to shed light on similar problems we presently face here on Earth.

“Space settlement is rapidly becoming ever more likely. Will it look like the utopian vision of Star Trek? Or the dark future of Star Wars? Nesvold challenges us to decide.”

More information [HERE](#)

Ramsey, G., & De Block, A. (Eds.) (2022). *The Dynamics of Science: Computational Frontiers in History and Philosophy of Science*. Pittsburg, PA: University of Pittsburg Press. ISBN: 9780822947370

“Millions of scientific articles are published each year, making it difficult to stay abreast of advances within even the smallest subdisciplines. Traditional approaches to the study of science, such as the history and philosophy of science, involve closely reading a relatively small set of journal articles. And

yet many questions benefit from casting a wider net: Is most scientific change gradual or revolutionary? What are the key sources of scientific novelty? Over the past several decades, a massive effort to digitize the academic literature and equip computers with algorithms that can distantly read and analyze a digital database has taken us one step closer to answering these questions.

The Dynamics of Science brings together a diverse array of contributors to examine the largely unexplored computational frontiers of history and philosophy of science. Together, they reveal how tools and data from automated textual analysis, or machine “reading,” combined with methods and models from game theory and cultural evolutionary theory, can begin to answer fundamental questions about the nature and history of science.” (From the Publisher)

More information [HERE](#)

Smith, G. (2023). *Distrust: Big Data, Data-Torturing, and the Assault on Science*. Oxford, UK: OUP. ISBN: 9780192868459

“This thought-provoking book argues that, ironically, science's credibility is being undermined by tools created by scientists themselves. Scientific disinformation and damaging conspiracy theories are rife because of the internet that science created, the scientific demand for empirical evidence and statistical significance leads to data torturing and confirmation bias, and data mining is fuelled by the technological advances in Big Data and the development of ever-increasingly powerful computers.

“Using a wide range of entertaining examples, this fascinating book examines the impacts of society's growing distrust of science, and ultimately provides constructive suggestions for restoring the credibility of the scientific community.” (From the Publisher)

More information [HERE](#)

Sciortino, L. (2023). *History of Rationalities: Ways of Thinking from Vico to Hacking and Beyond*. New York, NY: Springer.

“Over time, philosophers and historians of science have introduced different notions of 'ways of thinking'. This book presents, compares, and contrasts these different notions. It focuses primarily on Ian Hacking's idea of 'style of reasoning' in order to assess and develop it into a more systematic theory of scientific thought, arguing that Hacking's theory implies epistemic relativism. Luca Sciortino also discusses the implications of Hacking's ideas for the study of the problem of contingency and inevitability in the development of scientific knowledge” (From the Publishers)

More information [HERE](#)

Sugimoto, C. R., & Larivière, V. (2023). *Equity for Women in Science: Dismantling Systemic Barriers to Advancement*. Cambridge, MA: Harvard University Press. ISBN: 9780674919297

“If current trends continue, women and men will be equally represented in the field of biology in 2069. In physics, math, and engineering, women should not expect to reach parity for more than a century. The gender gap in science and technology is narrowing, but at a decidedly unimpressive pace. And even if parity is achievable, what about equity?

“*Equity for Women in Science*, the first large-scale empirical analysis of the global gender gap in science, provides strong evidence that the structures of scientific production and reward impede women's career advancement. To make their case, Cassidy R. Sugimoto and Vincent Larivière have conducted scientometric analyses using millions of published papers across disciplines. The data show that women are systematically denied the chief currencies of scientific credit: publications and citations.

The rising tide of collaboration only exacerbates disparities, with women unlikely to land coveted leadership positions or gain access to global networks. The findings are unequivocal: when published, men are positioned as key contributors and women are relegated to low-visibility technical roles. The

intersecting disparities in labor, reward, and resources contribute to cumulative disadvantages for the advancement of women in science.

“Alongside their eye-opening analyses, Sugimoto and Larivière offer solutions. The data themselves point the way, showing where existing institutions fall short. A fair and equitable research ecosystem is possible, but the scientific community must first disrupt its own pervasive patterns of gatekeeping.” (From the Publishers)

More information [HERE](#)

Summers, W. C. (2023.) *The American Phage Group: Founders of Molecular Biology*. New Haven, CT: Yale University Press.

“This book is the first critical and analytical study of the American Phage Group—a small group of scientists who gathered around Max Delbrück, Salvador Luria, and Alfred Hershey between 1940 and 1960—and how this novel research program became the foundation of the field of molecular biology. These three young, charismatic, and iconoclastic scientists were convinced of the importance of bacterial viruses (bacteriophages) to the study of the gene and of heredity in general.

Based on substantial archival research, numerous participant interviews collected over the past thirty years, and an intimate knowledge of the relevant scientific literature in the field, William C. Summers has written a fascinating new history of the American Phage Group. Rather than a linear narrative of progress by past heroes, this book emphasizes the diversity and historical contingencies in the group’s development.” (From the Publishers)

More information [HERE](#)

Tomlinson, G. (2023). *The Machines of Evolution and the Scope of Meaning*. Princeton, NJ: Princeton University Press. ISBN: 9781942130796

“What is meaning? How does it arise? Where is it found in the world? In recent years, philosophers and scientists have answered

these questions in different ways. Some see meaning as a uniquely human achievement, others extend it to trees, microbes, and even to the bonding of DNA and RNA molecules. In this groundbreaking book, Gary Tomlinson defines a middle path. Combining emergent thinking about evolution, new research on animal behaviors, and theories of information and signs, he tracks meaning far out into the animal world. At the same time he discerns limits to its scope and identifies innumerable life forms, including many animals and all other organisms, that make no meanings at all.

“Tomlinson’s map of meaning starts from signs, the fundamental units of reference or aboutness. Where signs are at work they shape meaning-laden lifeways, offering possibilities for distinctive organism/niche interactions and sometimes leading to technology and culture. The emergence of meaning does not, however, monopolize complexity in the living world. Countless organisms generate awe-inspiring behavioral intricacies without meaning. *The Machines of Evolution and the Scope of Meaning* offers a reevaluation of both meaning and meaninglessness, uncovering a foundational difference in animal solutions to the hard problem of life.” (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.asterix@gmail.com) for inclusion in these sections.

Third International Congress on the History of Science in Education, 4-6 September 2023

We are pleased to invite you to save the date for the 3rd International Congress on the History of Science in Education (3CIHCE), taking place at the University of Algarve (UAlg) in Faro, between the **4th and 6th of September 2023**. The Congress is organised by the UAlg in collaboration with the University of Trás-os-Montes and Alto Douro

(UTAD), the University of Coimbra (UC) and Higher Education Institutions from Brazil and Spain.



Maintaining the objectives of previous editions, the 3CIHCE aims to bring together researchers, professors and students interested in the history and teaching of Biology, Geology, Chemistry, Physics and Mathematics, as well as Educational Sciences, Engineering, Agricultural Sciences, Pharmacy/Pharmaceutical Sciences, Medicine, Dental Medicine, Veterinary Medicine, Nursing, Biochemistry, Nutrition and Food Sciences, Anthropology, Astronomy, Psychology, Economics, Sociology, Ecology, Cellular and Molecular Biology and Nanosciences, among others, in an enriching and multidisciplinary debate.

The conference is intended for undergraduate, master, and doctoral students, professors of the 1st, 2nd and 3rd cycles of basic education and secondary education, university professors, researchers, and the public, and will be carried out in a hybrid format (face-to-face and videoconference).



We cordially invite you to submit your abstract until **May 31, 2023**, and registration for the congress can be performed until July 31, 2023.

The submitted works will be evaluated by the Scientific Committee led by Professor Isilda Rodrigues from UTAD.

Please note that abstracts must contain the title, names of authors and their affiliations, a maximum of 250 words, up to 5 keywords, be written in English and Portuguese, in Arial font, size 11 and with 1.5 line spacing. The website, program and other relevant information will be available soon.

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Ninth Norwegian Conference on History of Science, 29 November – 2 December 2023, Trondheim, Norway

The conference is being held at the Norwegian University of Science and Technology. The organizers invite papers on any aspect of the history of science, technology or medicine and particularly welcome papers engaging with the issue of anniversaries, broadly defined.



Historians can be ambivalent about anniversaries. On the one hand, they offer an opportunity to reassess and mobilize interest in topics that otherwise would not receive widespread attention. Anniversaries are an occasion to reflect on the enduring importance of history to the contemporary world and are frequently used to argue for funding specific projects. On the other hand, not all topics of historical interest have anniversaries; anniversaries may isolate topics

from their historical context or facilitate an arbitrary juxtaposition of past and present; and they may foster expectations that the past must be celebrated rather than critically analyzed.

Such topics are fundamental to historical inquiry, prompting reflection on the relationships between scholars and audiences, between research and social context – including teaching – and between events of the past and the imperatives of the present.

Deadline for submissions June 1.

For more information, see [conference webpage](#)

Contact person: Annette Lykknes

(annette.lykknes@ntnu.no)

Coming HPS&ST Related Conferences

March 16-18, 2023, 9th Integrated History and Philosophy of Science Conference, University of South Carolina, Columbia SC.

Details [HERE](#)

April 18-21, 2023, NARST Annual Conference, Chicago

Details [HERE](#)

April 20-21, 2023, History of Science, Technology and Medicine (HSTM) Network Ireland Annual Meeting, Dublin City University.

Details: [HERE](#)

April 20-21, Conference *Gravitational Constant: From Local to Universal*, St Andrews, Scotland

Details [HERE](#)

May 5-7, 2023, 'Science, Values and Society', Postgraduate Philosophy Student Conference, Alberta, Canada

Details: [HERE](#)

June 8-9, 2023, 10th International Philosophy of Medicine Roundtable, Bologna, Italy

Details [HERE](#)

June 9-11, 2023, Eighth Annual Conference on the History of Recent Social Science, Uppsala, Sweden

Details [HERE](#)

June 27-30, 2023, ASERA Annual Conference, Cairns, Australia

Details [HERE](#)

July 4-7, 2023, European Society for the History of the Human Sciences, Rome conference

Details [HERE](#)

July 9-15, 2023, ISHPSSB biennial conference, Toronto, Canada.

Details [HERE](#)

July 24-29, 2023, 17th DLMPST Congress, University of Buenos Aires

Information: Pablo Lorenzano, [HERE](#)

August 9-11, 2023, IHPST-LA regional conference, Porto Alegre, Brazil

Details [HERE](#)

August 14-18, 2023, International Committee for History of Technology, 50th Conference, Tallinn, Estonia

Details [HERE](#)

August 29-Sept.3, 2023, ESERA biennial conference, Cappadocia, Turkey

Details [HERE](#)

September 4-6, 2023, 3rd International Conference on History of Science and Education, Algrave, Portugal.

Details [Isilda Teixeira Rodrigues](#)

September 18-22, 2023, 42nd Scientific Instrument Symposium, Palermo, Italy

Details [HERE](#)

September 20-23, 2023, European Philosophy of Science Association (EPSA23), Belgrade, Serbia

Details [HERE](#)

November 29-December 2, 2023, 9th Norwegian Conference on the History of Science, Trondheim, Norway.

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
[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)

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