



International History, Philosophy and Science Teaching Group

NEWSLETTER

September 2006

www.ihpst.org

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1. *Science & Education* vol.15 nos. 7-8

A thematic double issue of *Science & Education* will shortly be published and mailed to subscribers. As explained in item #2 below, the individual papers are available at the Springer web site for individuals whose institutions subscribe to the electronic version of the journal.

TEXTBOOKS IN THE SCIENTIFIC PERIPHERY

Editors: Antonio Garcia-Belmar, José Ramón Bertomeu-Sánchez, Manolis Patiniotis
& Anders Lundgren

ANTONIO GARCIA-BELMAR, JOSÉ RAMÓN BERTOMEU-SÁNCHEZ, MANOLIS PATINIOTIS & ANDERS LUNDGREN / Introduction: Scientific and Technological Textbooks in the European Periphery

BERNADETTE BENSUADE VINCENT / Textbooks on the Map of Science Studies

ANA CARNEIRO, MARIA PAULA DIOGO, & ANA SIMÕES / Communicating the New Chemistry in 18th Century Portugal: Seabra's *Elementos de Chimica*

JOSÉ RAMÓN BERTOMEU-SANCHEZ & ANTONIO GARCÍA-BELMAR / Pedro Gutiérrez Bueno's Textbooks: Audiences, Teaching Practices and the Chemical Revolution

RAFFAELLA SELIGARDI / Views of Chemistry and Chemical Theories: A Comparison of Two University Textbooks in Early 19th Century Bologna

ANJA SKAAR JACOBSEN / Propagating Dynamical Science in the Periphery of German Naturphilosophie: H. C. Ørsted's Romantic Research School

ANDERS LUNDGREN / The Transfer of Chemical Knowledge: The Case of Chemical Technology and its Textbooks
GÁBOR PALLÓ / The Encyclopaedia as Textbook: The First Hungarian Textbook
MANOLIS PATINIOTIS / Textbooks at the Crossroads: Scientific and Philosophical Textbooks in 18th Century Greek Education
GEORGIA PETROU / Translation Studies and the History of Science: The Greek Textbooks of the 18th Century
IRINA GOUZEVITCH / The Editorial Policy as a Mirror of Petrine Reforms : Textbooks for Engineers and Their Translators in Early 18th Century Russia
KATHRYN M. OLESKO / Science Pedagogy as a Category of Historical Analysis: Past, Present, and Future

Subscription renewals and new subscriptions (USD85 pa, with discount for students, retired faculty and scholars from depressed economies), can be effected at the IHPST web site: www.ihpst.org

2. *Science & Education Journal on the Web*

The journal *Science & Education* is now available on the web at: <http://www.springerlink.com/> (then PUBLICATIONS, then S, then ‘Science & Education’)

Approximately 3,000 institutions around the world have subscribed to the on-line version of the journal, while many institutions have subscriptions to both print and on-line versions.

The on-line version is heavily used. In 2005 there were 22,262 article-downloads, in 2004 there were 21,373 article-downloads. These figures make ‘*Science & Education*’ the most downloaded of all Springer science education journals.

The web site provides many services to researchers:

1. The ‘On Line First’ section allows access to all accepted, forthcoming articles in the journal. As soon as an article is accepted for publication, a typeset pdf version of it is posted on the web and can be accessed by individual journal subscribers or by individuals whose institutions subscribe to a Springer package that includes ‘*Science & Education*’.
2. The Contents of each issue of the journal, back to Volume 1 Number 1 in 1992, are available. These can be downloaded by subscribers and individuals whose institutions subscribe to the journal. They are also available, at a cost, to non-subscribers.
3. Full details of the Editorial Board and Submission process are posted.

3. *Science & Education Increased Numbers for 2007*

Science & Education commenced publication in 1992 with four numbers (100pp) per volume. In 1997 this was increased to six numbers per volume, and in 2003 to eight numbers. Because of the quantity and quality of manuscripts continuing to be submitted to the journal, the numbers per volume will increase to ten, effective 2007 (volume 16). This will decrease the currently long ‘time-to-publication’ of accepted manuscripts. It will also allow the journal to continue promoting special thematic issues without unduly impinging on time to publication for routine issues. But, as noted above, ‘time-to-publication’ is not so critical now that accepted articles are available for perusal and citation on-line prior to hardcopy publication.

There will be a slight increase in subscription cost, currently USD85, for personal subscribers, but this will not be much. The likely figure is USD95, but that is to be confirmed. Current

subscriptions for 2007 and beyond will not be affected; nor will renewals that are made up to the time that the new rate is determined.

4. Free History of Science Books from Dibner Library

The Burndy library of history of science and technology is being moved from MIT to the Huntington Library in California. They have many copies of illustrated, general reader level, books on history of science written by Bern Dibner, and they are willing to mail these anywhere in the world (generously, they pay the postage).

If IHPST colleagues are interested in acquiring the books for themselves or for their institutions, they should request copies (or sets) of books within the next week or so. Do feel free to order in bulk, one schoolteacher recently took 20 boxes of the books.

Below is a message from the Dibner coordinator below, with list of books available.

From Dibner Institute:

We have free Burndy Library publications available until September 29. I will be more than happy to give you as many copies as you want to take.

After September 29, the remaining books will have to be destroyed, so don't delay. Please feel free to forward this notice and my contact info to anyone on or off-campus who might be interested in these books.

Dawn Davis Loring
Dibner Institute
Workshop & Conference Coordinator
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USA
617-253-8721
Email: dloring@mit.edu

- * Bern Dibner. *Moving the Obelisks*. Norwalk, CT, 1991.
- * Galvani, Luigi. *Commentary on the Effects of Electricity on Muscular Motion*. Norwalk, CT, 1953.
- * Bern Dibner. *Ten Founding Fathers of Science*. Norwalk, CT, 1954. 48 pp., illus.
- * Bern Dibner. *Heralds of Science*. Norwalk, CT, 1955.
- * Bern Dibner. *Heralds of Science*. Cambridge, MA: M.I.T. Press, 1969. Reprint of 1955 edition.
- * Bern Dibner. *Heralds of Science*. Revised 25th Anniversary edition. 1980.
- * Bern Dibner. *Early Electrical Machines*. Norwalk, CT, 1957.
- * Bern Dibner. *Agricola on Metals*. Norwalk, CT, 1958.
- * Bern Dibner. *The Atlantic Cable*. Norwalk, CT, 1959.
- * Bern Dibner. *Oersted and the Discovery of Electromagnetism*. Norwalk, CT, 1961.
- * Bern Dibner. *The Victoria and the Triton*. Norwalk, CT, 1962.
- * Bern Dibner. *The New Rays of Professor Röntgen*. Norwalk, CT, 1963.
- * Bern Dibner. *Alessandro Volta and the Electric Battery*. NY: Franklin Watts, 1964.
- * Stillman Drake & Bern Dibner. *A Letter from Galileo*. Norwalk, CT, 1967.
- * Ladislao Reti & Bern Dibner. *Leonardo da Vinci Technologist*. Norwalk, CT, 1969.

- * Bern Dibner. *Luigi Galvani*. Norwalk, CT, 1971.
- * Herbert W. Meyer. *A History of Electricity and Magnetism*. Norwalk, CT, 1972.
- * Stillman Drake. *Copernicus - Philosophy and Science*. Norwalk, CT, 1973.
- * Bern Dibner. *Leonardo Da Vinci, Machines and Weaponry*. Norwalk, CT, 1974.
- * Bern Dibner. *Benjamin Franklin Electrician*. Norwalk, CT, 1976.
- * Galilei, Galileo. *Operations of the Geometric and Military Compass*. 1978.
- * Masuda Tsuna. *Kodo Zuroku Illustrated Book on the Smelting of Copper*. Norwalk, CT, 1983.
- * Igor Kipnis & Bern Dibner. *Mozart and the Royal Society*. Norwalk, CT, 1985.
- * I. Bernard Cohen. *The Newtonian Revolution*. Norwalk, CT, 1987.
- * J. W. Krutch. *The Colloid and the Crystal*. Norwalk, CT, 1988.

5. 2007 IHPST Conference, Calgary

The International History, Philosophy and Science Teaching Group will hold its *Ninth* Conference, at the University of Calgary, June 24 (evening) – 28 (noon), 2007

Conference Chair: Professor Ian Winchester
 Conference Secretary: Linda Lentz
 Programme Chair: HsingChi Wang (ihpst07@ucalgary.ca)

The Conference Theme is: *Contextual Approaches to Science and Mathematics Teaching*

It is expected that about 200-250 educators, historians, philosophers, teachers, scientists and cognitive scientists from about 30 countries will engage with theoretical, curricular and pedagogical issues in contemporary science education. Prospective participants are encouraged to contact colleagues and put together panels or symposia on these issues.

Proposals (max.1,000 words) and Abstract (max. 150 words) need to be submitted as attachments to programme chair by **15th April 2007**. The files should be named: SURNAME_proposal.doc and SURNAME_abstract.doc.

More details, including registration, travel and accommodation, will be available at the conference web site: www.ucalgary.ca/ihpst07

6. Spanish Anthology on History, Philosophy and Science Teaching

The following 19 chapter, 480 page anthology on 'HPS and Science Teaching' has been published by the Universidad Nacional Autónoma de México. It might be usefully used in teacher education programmes. It is available for USD22.50 from the web address given below.

S. F. Martinez and G. Guillaumin (ed.) (2005). Historia, filosofía y enseñanza de las ciencias. Mexico: Instituto de Investigaciones Filosóficas / UNAM.

Introducción general

1. HISTORIOGRAFÍA DE LA CIENCIA

Edna Suárez: La historiografía de la ciencia

John R. R. Christie: El desarrollo de la historiografía de la ciencia.

Steven Shapin: Disciplina y delimitación: la historia y la sociología de la ciencia a la luz del debate externismo-internismo.

Rachel Laudan: La "nueva" historia de la ciencia: implicaciones para la filosofía de la ciencia.

Larry Laudan: La historia de la ciencia y la filosofía de la ciencia.

María Jesús Santesmases: Conceptos, instrumentos, contextos: historiografía de la biología molecular.

II. LA RELACIÓN ENTRE HISTORIA DE LA CIENCIA Y FILOSOFÍA DE LA CIENCIA

Godfrey Guillaumin: Historia de la ciencia y filosofía de la ciencia: relaciones inestables e historicidad en la ciencia.

Thomas Nickles: ¿Cuál es la relación entre la filosofía de la ciencia y la historia de la ciencia?

Marga Vicedo: ¿Es pertinente la historia de la ciencia en la filosofía de la ciencia?

Godfrey Guillaumin: De las teorías a las prácticas científicas: algunos problemas epistemológicos de la "nueva" historiografía de la ciencia.

Sergio F. Martínez: La geografía de la razón científica: dependencia epistémica y estructura social de la cognición.

Anna Estany: El papel de la historia de la ciencia en los estudios interdisciplinarios de la ciencia.

III. ALGUNOS ESTUDIOS DE CASO

Carlos López Beltrán: Por una nueva historiografía de los conceptos científicos. El caso de la herencia biológica.

Javier Echeverría: Función heurística de la filosofía para la historia de las matemáticas. Los Elementos de Euclides y las tablas de logaritmos de Neper.

Ambrosio Velasco Gómez: Historicidad y racionalidad de las tradiciones científicas.

IV. EDUCACIÓN, HISTORIA Y FILOSOFÍA DE LA CIENCIA

Sergio F. Martínez: Constructivismo y filosofía de la educación.

Michael R. Matthews: El constructivismo y la enseñanza de las ciencias.

Christopher Winch: El aprendizaje como invención. Educación y constructivismo.

The anthology can be obtained by going to web site:

<http://www.etienda.unam.mx/indexTienda.html?ntienda=libreriafilosoficas/>

This accesses the virtual store of "Instituto de Investigaciones Filosóficas". Then go to the end where it says "Índice de todos los productos" and select there "Historia, filosofía y enseñanza de la ciencia" then appears the anthology with a price of USD 22.50, edited by Sergio F. Martínez and Godfrey Guillaumin.

7. Fourth Hellenic Conference on History, Philosophy and Science Teaching

The 4th Hellenic HPS&ST conference will be 14-16 September 2007, in Patras, Greece.

The Conference Chair is:

Dr Dimitris Koliopoulos
University of Patras
Department of Early Childhood Education
Rion 26500 Patras
Greece
e-mail dkoliop@upatras.gr

8. Philosophy of Education Society of Australasia Conference

35th Annual Conference, University of Sydney, New South Wales

23 November - 26 November 2006

Theme: Politics, Business and Education: The Aims of Education in the Twenty-First Century

Members of PESA and other persons interested in presenting a philosophically competent paper on the theme or other topic of philosophical and/or educational interest are invited to forward a copy of the paper to the Conference Convenor:

Dr. Jim MacKenzie at j.mackenzie@edfac.usyd.edu.au

Papers should be 5000 - 6000 words, submitted by email in the style of the Society's journal, *Educational Philosophy and Theory*. Submit in Word format for text only papers. For papers containing diagrams, text boxes etc., please submit in PDF format with diagrams embedded. Working papers should be sent to the Convenor by 30 September for inclusion in the program.

A philosophy of education workshop for graduate students is proposed prior to the opening of the conference on the evening of 23 November.

A grant of AUD\$400 is available for 'graduate student' presenters and for retired full members of PESA who have a refereed paper approved for presentation. Successful recipients will be notified before the conference.

Those wishing to combine conferences may wish to go on to Adelaide for the Australian Association for Research in Education conference 27 – 30 November and to Rotorua for NZARE on 5 - 8 December.

For further information contact the Conference Convenor or the PESA website at:

www.pesa.org.au

9. Current Research

Apart from contributions to *Science & Education* the following are some papers published in recent years that bear upon the research concerns of the IHPST Group. Suggestions for up-dating this list should be sent to the Editor at m.matthews@unsw.edu.au

Mamlok-Naaman, R., Ben-Zvi, R. & Hofstein, A., Menis, J., & Erduran, S.: 2005, 'Influencing Students' Attitudes towards Science by exposing them to a Historical Approach', *International Journal of Science and Mathematics Education* **3**(3)

Niaz, M.: 2005, 'The Quantitative Imperative vs the Imperative of Presuppositions', *Theory & Psychology* **15** (2), 247-256.

Niaz, M.: 2005, 'Do General Chemistry Textbooks Facilitate Conceptual Understanding?', *Química Nova* **28**(2), 335-336.

Niaz, M.: 2005, 'An appraisal of the controversial nature of the oil drop experiment: Is closure possible?', *British Journal for the Philosophy of Science*, **56**(4), 681-702.

Brito, A., Rodríguez, M.A. & Niaz, M.: 2005, 'A Reconstruction of Development of the Periodic Table Based on History and Philosophy of Science and its Implications for General Chemistry Textbooks', *Journal of Research in Science Teaching* **42**(1), 84-111.

Abd-El-Khalick, F. 2005, 'Developing Deeper Understanding of Nature of Science: The Impact of a Philosophy of Science Course on Preservice Science Teachers' Views and Instructional Planning', *International Journal of Science Education* **27**(1), 15-42.

- Lawson, A.E.: 2005, 'William Harvey, Predicting Capillaries, and the Nature of Science: One More Time', *The American Biology Teacher* **67**(4), 202-203.
- Lawson, A.E.: 2005, 'Conducting High Quality Research', *International Journal of Science and Mathematics Education*, **3**(1), 1-5.
- Lawson, A.E.: 2005, 'What is the Role of Induction and Deduction in Reasoning and Scientific Inquiry?' *Journal of Research in Science Teaching* **42**(6), 716-740.
- Dagher, Z., & BouJaoude, S.: 2005, 'Students' Perceptions of the Nature of Evolutionary Theory', *Science Education* **89**(3), 378-391.
- Nola, R. & Irzik, G.: 2005, *Philosophy, Science, Education and Culture*, Springer, Dordrecht.
- Ben-Ari, M.: 2006, 'Whose Final Hour? The Problem of Naive Egocentric Catastrophism in Doomsayers and Catastrophists', *Skeptic* **12**(3), 2006, 40-49.

10. Publications for Sale

The following publications can be ordered from the IHPST Group at www.ihpst.org :

- #1 *CD Proceedings of the 6th IHPST Conference, Denver, 2001*, 100+ papers, W. McComas (ed.), USD10.
- #2 *CD Proceedings of the 7th IHPST Conference, Winnipeg, 2003*, 100+ papers, D. Metz (ed.), USD10.
- #3 *Time for Science Education*, M.R. Matthews, Kluwer, 2000, 440pp, USD20.
- #4 *Science Education and Culture*, F. Bevilacqua, E. Giannetto & M.R. Matthews (eds.), Kluwer, 2001, 362pp, USD20.
- #5 *Science & Education* journal Volume 2, 1993, 382pp, USD10.
- #6 *Science & Education* journal Volume 12, 2003, 808 pps, USD20.
- #7 *Science & Education* journal Volume 13, 2004, 820 pps, USD20.
- #8 *The Pendulum: Scientific, Historical, Philosophical & Educational Perspectives* (Michael R. Matthews, Colin Gauld & Arthur Stinner (eds.), Springer, 2005, USD20

All above prices include postage.

11. Coming Conferences

November 2-5, 2006. Philosophy of Science Association (PSA) Conference, Vancouver. Details at: <http://philsci.org/>

November 23-26, 2006. Philosophy of Education Society of Australasia (PESA) Conference. Details at: www.pesa.org.au, and from Dr Jim Mackenzie, j.mackenzie@edfac.usyd.edu.au

February 12-17, 2007. EPISTEME-2, Second International Conference to Review Research in Science, Mathematics and Technology Education, Homi Bhabha Centre, Mumbai. Details at: <http://www.hbcse.tifr.res.in/episteme/>

March 15-19, 2007. Philosophy of Education Society (PES) Conference, Atlanta. Details at: <http://philosophyofeducation.org/>

April 9-13, 2007. American Educational Research Association (AERA) Conference, Chicago. Details at: <http://www.aera.net/>

April 14-17, 2007. National Association for Research in Science Teaching (NARST) Conference, New Orleans. Details at: <http://www.narst.org/>

June 24-28, 2007. 9th IHPST Conference, Calgary. Details at: www.ucalgary.ca/ihpst07

September 14-16 2007. 4th Hellenic HPS&ST conference, Patras. Details from: Dr Dimitris Koliopoulos, dkoliop@upatras.gr

12. Future Newsletter Items

This IHPST Electronic *Newsletter* goes to 1,120 email addresses on the IHPST list, and it is also posted to various science education, philosophy of education and HPS lists. Items for inclusion in the *Newsletter* are appreciated. These can be items for the 'Recent Research', 'Recent Books', 'Books' or 'Conferences' sections.

Brief Book Notes are especially welcomed.

Please email newsletter material (or journal subscriptions or publication orders) to:

A/Professor M.R. Matthews, School of Education, UNSW, Sydney 2052, Australia
Email: m.matthews@unsw.edu.au

14. IHPST Email List

The email list is used sparingly, perhaps once a month, to send group information such as contained in this Newsletter. It is a closed list, not an open discussion list.

If you receive this email message and wish to remove yourself from the IHPST list, send a message to: majordomo@explode.unsw.edu.au . In the body of the message, not the subject line, simply write: 'unsubscribe ihpst-group'.

Alternatively, if you have friends or colleagues who would like to subscribe to the list, tell them to send a message to: majordomo@explode.unsw.edu.au . In the body of the message, not the subject line, simply write: 'subscribe ihpst-group'.