INTERNATIONAL UNION OF THE HISTORY AND PHILOSOPHY OF SCIENCE/
DIVISION OF HISTORY OF SCIENCE AND TECHNOLOGY (IUHPS/DHST)

2013 DHST PRIZE FOR YOUNG SCHOLARS

Awarded in the 24th International Congress of History of Science, Technology, and Medicine

Division of History of Science and Technology

International Union of History of History and Philosophy of Science

İSAR 1990 İSTANBUL

İSAR FOUNDATION
(Foundation for Research on Islamic History, Art and Culture)

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THE · BRITISH SOCIETY · FOR THE · HISTORY OF · SCIENCE

HST
Institute for History of Natural Science, Chinese Academy of Sciences

Manchester, 28th July 2013

INTERNATIONAL UNION OF THE HISTORY AND PHILOSOPHY OF SCIENCE/ DIVISION OF HISTORY OF SCIENCE AND TECHNOLOGY (IUHPS/DHST)

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Initiated at the 22nd International Congress of History of Science in 2005 held in Beijing, the Prize is awarded by the International Union of History and Philosophy of Science/Division of History of Science and Technology every four years to up to five young historians of science and technology for outstanding doctoral dissertations, completed within the last four years. The applicants for the 2013 Prize must have had their doctoral degrees in the history of science or technology awarded no earlier than July 2008, while the deadline for submitting appropriate materials was exactly one year before the quadrennial Congress.

Unlike the previous two awards, the 2013 DHST Prize does not specify distinct categories. Entries can be on the history of science, technology or medicine in any part of the world. Any dissertation in a language other than English must be accompanied by a detailed summary in English of no more than 20 pages. By the deadline of 31 August 2012, fifty-five applications for the 2013 YSP were received. Of these, thirty-four of the applicants wrote their dissertations in English; detailed English abstracts have been provided by those who wrote in other languages, which included Portuguese, Spanish, Russian, Italian, French, German, Japanese, Arabic and Chinese.

Chaired by the current DHST President, the Award Committee endeavors to maintain the broadest coverage of subjects, geographical areas and chronology. It consists of thirteen historians of science, technology and medicine, whose specialties cover a broad spectrum of research fields and various languages.

The four phases (qualification examination, preliminary selection by online discussion, final selection by vote, re-examination) of the selection process lasted five months. Finally, five Winners and another five young colleagues given Honorable Mentions were selected.

Each Prize consists of a certificate and assistance with travel expenditures to the IUHPS/DHST Congress in Manchester. In accordance with the DHST Council's decision, a gold medal named after Professor Ekmeleddin Ihsanoglu given by the ISAR Foundation is awarded to one of the winners whose thesis concerns Islamic civilization. The British Society for the History of Science also provides generous support for the Winners and Honorable Mentions with a waiver of registration and accommodation fees for the Congress.

The Award ceremony will be held on the morning of Sunday 28 July, 2013. Four winners, who are attending the Manchester Congress, are invited to give presentations in this plenary session, which is just before the Closing ceremony of the Congress.

WINNERS OF 2013 DHST PRIZE FOR YOUNG SCHOLARS

Michitake Aso, Assistant Professor
University of Albany, State University of New York, Social Science 145, 1400 Washington Ave, Albany, NY 12222, USA
Email: maso@albany.edu
Dissertation: "Forests without Birds: Science, Environment, and Health in French Colonial Vietnam," in English, University of Wisconsin-Madison, 2011

Eugénie Briot, Assistant Professor
Université Paris-Est, Marne-la-Vallée, 8 bis rue Campagne Première, 75014 Paris, France
Email: eugenie.briot@gmail.com
Dissertation: "The chemistry of elegances: The parisian perfumery in the XIXth century, birth of a luxury industry (1830-1914)," in French, Conservatoire National des Arts et Métiers, Paris, 2008

Fabian Krämer, Akademischer Rat a.Z
Ludwig-Maximilians Universität München, Historisches Seminar der Ludwig-Maximilians Universität, Wissenschaftsgeschichte, Geschwister-Scholl-Platz 1, 80539 München, Germany
Email: kraemer@mpiwg-berlin.mpg.de
Dissertation: "How Did a Centaur Get to Early Modern London? Observation and Reading in the European Study of Nature, ca. 1550-1650," in German, Ludwig-Maximilians Universität München, 2012

Don Leggett, Research Associate
School of History, University of Kent, Canterbury, CT2 7NX, UK
Email: D.W.Leggett@kent.ac.uk
Dissertation: "Shaping the Victorian Navy: experiment, experience and the culture of expertise in naval architecture," in English, University of Kent, 2010

Marc Oliveras, Professor
University of Barcelona, Carrer Sant Ramon, 30, 4-4, Sant Cugat del Vallès, 08172 – Barcelona, Spain
Email: aedicofidia@yahoo.es
Dissertation: "Ibn Qunfudh al-Qusantînî´s Commentary of the Urjûza on Astrology of ´Alî b. Abî al-Rijâl," in Spanish, University of Barcelona, 2010

HONORABLE MENTIONS OF 2013 DHST PRIZE FOR YOUNG SCHOLARS

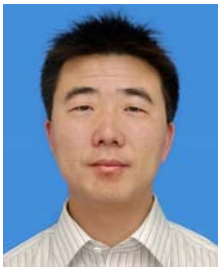
Hesham Alahmad, Pharmacist, Lecturer

Institute for the History of Arabic Science, University of Aleppo, Faisal St., mafraq althakana, alkao Building, 8\5, Aleppo, Syria
Email: ha44ha@gmail.com
Dissertation: "Editing and Study: Taqwīm al-adwiyah al-mufrada Manuscript (Table of Simple Drugs), Written by Ibrāhīm b. Abī Sa`īd b. Ibrāhīm al-Maġribī al-`Alā'ī (Lived in 547H/1152M)" in Arabic, University of Aleppo, 2010

Hao Chen, Lecturer
Department of History, Renmin University of China, 59 Zhongguanchun Street, Beijing 100872, China
Email: peterrc@163.com
Dissertation: "Negotiating Cultural Identities between Textual Medicine and Bodily Experiences: A Problem-Oriented Narrative History of Chinese Medical Culture in the 6th -11th centuries CE," in Chinese, Peking University, 2011

Helen Curry, Lecturer
Department of History and Philosophy of Science, University of Cambridge
Free School Lane, Cambridge CB2 3EH, UK
Email: hcurry@gmail.com
Dissertation: "Accelerating Evolution, Engineering Life: American Agriculture and Technologies of Genetic Modification, 1925-1960," in English, Yale University, 2012

Yulia Frumer, Assistant Professor
Johns Hopkins University, History of Science and Technology, Krieger School of Arts and Sciences, Gilman Hall, Room 301E, 3400 N. Charles Street, Baltimore, Maryland 21218, USA
Email: yfrumer@mpiwg-berlin.mpg.de
Dissertation: "Clocks and Time in Edo Japan," in English, Princeton University, 2012



Hui Li, Assistant Professor
Shanghai Institute for Science of Sciences, Rm.1002, No.1525 West Zhongshan Road, Shanghai 200235, China
Email: sclh22@gmail.com
Dissertation: "A Study on Astral Divination of Lunar Mansions and Planets in Chinese Buddhist Scriptures," in Chinese, Shanghai Jiao Tong University, 2011

2013 AWARD COMMITTEE

Ana BARAHONA*
Department of Evolutionary Biology, School of Sciences, National University of Mexico
Mexico City, Mexico

Pascal CROZET
SPHERE (Science, Philosophie, Histoire), CNRS - Université Paris-Diderot
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Beirut, Lebanon

Roderick W. HOME
School of Historical and Philosophical Studies, University of Melbourne
Melbourne, Australia

LIU Dun (Chair)*
Institute for History of Natural Science, Chinese Academy of Sciences
Beijing, China

Pablo LORENZANO*
National University of Quilmes & National Scientific and Technical Research Council
Buenos Aires, Argentina

Efthymios NICOLAIDIS*
National Hellenic Research Foundation
Athens, Greece

Ronald L. NUMBERS*
Medical History & Bioethics Department, University of Wisconsin-Madison
Madison, WI, USA

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Corvallis, OR, USA

Alexey POSTNIKOV*
Russian Academy of Sciences S.I.Vavilov Institute of the History of Science and Technology
Moscow, Russia

Annette B. VOGT*
Max Planck Institute for the History of Science
Berlin, Germany

James WILLIAMS
Department of History, Stetson University
DeLand, FL, USA

Michio YANO*, Japan
Kyoto Sangyo University
Kyoto, Japan

* 2009-2013 DHST Council member

SUN Chengsheng (Secretary)
Institute for History of Natural Science, Chinese Academy of Sciences, Beijing, China

The First Award (July 2005, Beijing)

Western civilization

Winner
Jimena Canales: "Sensational Differences: Individuality in Observation, Experimentation and Representation (France 1853-1895)".

Honorable Mention:
Maria Rentetzi: "Gender, Politics and Radioactivity Research in Vienna, 1910-1938".
Karin Nickelsen: "Botanical Illustrations of 18th- Century Production, Content, Function".

Islamic civilization

Winner
François Charette: "Mathematical Instrumentation in 14th-Century Egypt and Syria: The Illustrated Treatise of Najm al-Din al-Misri".

Honorable Mention
Marwa Elshakry: "Darwin's Legacy in the Arab East: Science, Religon and Politics, 1870-1914".
Mahmoud Masri: "Manuscript on Masalih Al Abdan wa El Enfus li Ebi Zeyid Al-Balakhi: editing and study".

East Asian civilization

Winner
Kenji Ito: "Making sense of Ryoshiron (Quantum Theory): The Introduction of Quantum Mechanics into Japan, 1920-1940".

Honorable Mention
Zhang Li: "The Institutionalization of Polymer Science in China, 1949-1965".

South Asian civilization and Ancient civilizations

No award given.

The Second Award (July 2009, Budapest)

Western civilization

Winner
Paul Erickson: "The Politics of Game Theory: Mathematics and Cold War Culture".

Honorable Mention
Daniela Bleichmar: "Visual culture in eighteenth-century natural history: Botanical illustrations and expeditions in the Spanish Atlantic".
Sadiah Qureshi: "Livings Curiosities: Human Ethnological Exhibitions in London, 1900-1855".

Islamic civilization

Winner
José Bellver: "On Jābir b. Afah's Criticisms of Ptolemy's *Almagest*".

Honorable Mention
Josep Casulleras: "The Treatise on the Projection of Rays by Ibn Mu'adh al-Jayyani (d. 1093)".
Nahyan A.G. Fancy: "Pulmonary Transit and Bodily Resurrection: The Interaction of Medicine, Philosophy and Religion in the Works of Ibn al-Nafis (d.1288)".

East Asian civilization

Winner
Hou Gang: "The *Yishu* and Its Connection with the Mathematics in the Northern and Southern Song Dynasties".

Honorable Mention
Carla Suzan Nappi: "The Monkey of the Inkpot: Natural History and its Transformations in Early Modern China".

South Asian civilization and Ancient civilizations

No award given.

ABSTRACTS OF PRESENTATIONS

(The winners attend Manchester congress, alphabetic order)

Michitake Aso: Forests without Birds: Science, Environment, and Health in French Colonial Vietnam

Rubber production in the territory that is now Vietnam started in the late nineteenth century with exploration for latex-secreting plants. By the end of the 1930s, rubber exports totaled more than 60,000 tons. Most of this production took place on vast plantations of *hevea brasiliensis*, a species of latex-producing tree originally found in the Amazonian forest. These plantations required a docile workforce, a need that planters met by importing Vietnamese peasants from the north and center of French Indochina. These laborers, or "coolies," played a vital role in the anti-colonial movement as they struggled for better working conditions and higher wages.

The turbulent years on the Indochinese peninsula lasting from 1940 to 1954 posed a serious threat to plantations. After a steep decline at the end of World War II, the rubber industry revived and by the time the Viet Minh defeated the French at Dien Bien Phu, rubber exports exceeded previous levels. Between 1955 and 1965, producers benefited from the relatively peaceful conditions and Vietnamese began to play a more significant role in the industry. The arrival of the US military marked a shift to a more violent period that entailed a rapid decline in output. Despite the use of plantations as battlefields, rubber remained a key for nation-building projects and South Vietnamese and American planners spent considerable time considering this plant's economic potential.

While rubber exports from Indonesia and Malaysia have historically dwarfed those from Vietnam, the rubber industry has had a profound and lasting impact on the landscapes and society of Vietnam. My dissertation, "Forests without Birds," uses the rubber industry as a lens to study changes in environment, health, and science and explores the role of place in shaping knowledge production and politics in southern Indochina. It argues that public and private agricultural experimental stations and medical institutes carried out research on plant acclimatization and malaria prevention that encouraged plantation, rather than smallholder, growth. This decision had consequences as the abusive practices common on plantations led to well-publicized incidents of racial violence during the colonial period. The needs of the plantations, in turn, invigorated colonial institutions. In other words, these enclaves served as foci for agronomists and medical researchers, colonial officials, private enterprises, and social activists, generating practices and discourses that anticipated and helped bring about post-colonial development projects.

Fabian Krämer: How Did a Centaur Get to Early Modern London? Observation and Reading in the European Study of Nature, ca. 1550-1650

Building on Gianna Pomata's and Nancy G. Siraisi's notion of "learned empiricism", my dissertation aims at overcoming the dichotomy between early modern erudition and enlightened

empiricism, which is present not only in the writings of eighteenth-century intellectuals but also in a considerable portion of the secondary literature. In order to do so it concentrates on the early modern naturalist discourse on monsters and tackles the following questions: Whence did European naturalists in the seventeenth century get their knowledge on this subject matter? Which knowledge sources did they privilege and consider especially authoritative – book learning or empirical observation, if indeed they were opposed?

I argue that there were distinctly early modern types of empiricism that had strong learned components. These learned components lie at the heart of my explanation of the presence of reports and visualizations of phenomena in the works of early modern European authors that appear unbelievable to the modern reader. For many Renaissance naturalists accounts that they culled from the works of both contemporary and ancient learned and less learned authors could well go together with minute observations of medical or natural historical phenomena conducted by the respective author.

I go on to argue that we should take the rhetoric of empiricism of the eighteenth-century intellectuals who came to criticize these predecessors for their alleged credulity vis-à-vis the many 'fabulous' monsters in their works *cum grano salis*. The rhetoric of these eighteenth-century authors may give the impression that they had given up reading altogether in favour of direct observation. In fact they may not have read less than their Renaissance predecessors. Yet both their reading and observational practices differed in significant ways from those in use in the sixteenth and early seventeenth centuries.

Don Leggett: Shaping the Victorian Navy: experiment, experience and the culture of expertise in naval architecture

On the surface, the Victorian Royal Navy was transformed from a fleet of sailing wooden walls into a complex machine: a system of mechanical technologies controlling propulsion, navigation and firepower. This transformation, however, went far beyond material aspects, taking place within the simultaneous reordering of institutions of knowledge and skill and the politics of refining cultures of expertise. As such the ship becomes a lens to examine issues regarding 'expertise', 'mechanics', 'power' and 'science' in Victorian Britain. My PhD thesis employed a co-production framework to examine the decline of wooden sail ships and the rise of iron steam ships; the weakened authority of professional sailors and the strengthened authority of engineers; and the fall of aristocratic control and the ascendency of scientific expertise in the British navy.

This talk presents the main themes and conclusions of my thesis. Part I of the thesis placed naval architecture and the issue of expertise in a series of political, institutional and social contexts surrounding the administration of the navy, the profession of naval architects and education in naval architecture. Part II focused on the cultures of experiment and science in Victorian naval architecture, largely revolving around the working contexts of the mathematician William Froude who employed model experiments to forge an engineering science of naval architecture. Part III returned to the broader perspectives discussed in Part I to explore how the skills possessed by naval architects were understood and promoted in the Victorian naval community and governmental machinery. Using a series of controversies the thesis located the authority and

identity of the engineering ‘expert’ within the British techno-military state.

Marc Oliveras: Ibn Qunfudh al-Qusantînî´s Commentary of the Urjûza on Astrology of ´Alî b. Abî al-Rijâl (Urjûza fî ahkâm al-nujûm Ibn Qunfudh al-Qusantînî)

´Alî b. Abî l-Rijâl (Tunis, c. V/XI) became famous for his Kitâb al-bâri´ fî ahkâm al-nujûm, a wide-ranging compendium of the major themes in judiciary astrology: elections, interrogations, and the revolutions of the world-year. Although few works by Ibn Abî l-Rijâl have come down to us, we have the complete astrological poem al-Urjûza fî ahkâm al-nujûm. Another Maghribî astrologer, Ibn Qunfudh al-Qusantînî (740/1339-810/1407), wrote a commentary (sharh) on this urjûza but, although the commentary deals with the same topics as the Bâri´, the two works do not always present them in the same way.

Along with the defense of astrology from the religious point of view, we also find traces of a curious relation between astrology and sufism. There are clear parallels between the careers of Ibn Qunfudh, Ibn ´Azzûz al-Qusantînî (d. 755/1354) and Ibn al-Bannâ´ al-Marrâkushî (d. 721/1321). Ibn al-Bannâ´s reputation as a sûfî has been noted; his teachers Abû ´Abd Allâh (d. 678/1279) and Abû Zayd al-Hazmîrî (d. 706/1306) both practiced sufism as well as astronomy and astrology. In many cases the interest in astrology and sufism had in common a certain need for hermetic secrecy. The reasons may have been religious if the astrologer was facing charges of heresy (kufr or zandaqa), but it may also have been political, as in the case of Ibn Qunfudh’s sharh, at least in part.

A horoscope is a kind of image of the sky at a specific time, and its elements (planets, nodes, stars and lots) will only meet again in the same position several centuries later. It is a very useful tool for historians who wish to calculate the exact date of an event. Enigmatically, Ibn Qunfudh’s does not mention the name of the people to whom the horoscopes refer; in my opinion, he knows that somebody contemporary to him will be able to identify them, because he has both the historical perspective and sufficient astrological knowledge to establish the approximate latitude and the planetary longitudes for which the horoscopes had been cast.