

# Needham Research Institute Newsletter

李約瑟研究所通訊



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## New Trustees join the NRI Board



*NRI's new Trustees (from left to right) Lord Broers, Prof. Liu Dun, Prof. Craig Clunas, Sir Christopher Hum and Prof. Martin Jones*

**Professor Lord (Alec) Broers FEng FRS Kt DL** was Master of Churchill College from 1990 until he became Vice-Chancellor of the University of Cambridge in 1996. He was also Head of the Department of Engineering at Cambridge until 1996. He has been a pioneer of nanotechnology, having worked on the application of electrons, X-rays and ultra-violet light to microscopy, and to the fabrication of microelectronic components. In Cambridge, he established a nanofabrication laboratory in which the technology of miniaturisation was extended to the atomic scale. He has been President of the Royal Academy of Engineering, and chairs the House of Lords Committee on Science and Technology.

Previously Director of the Institute for the History of Natural Science within the Chinese Academy of Sciences (1997-2005), **Professor Liu Dun** 刘钝 is one of the leading scholars of the history of science in the People's Republic of China and he plays an active role in international affairs as current President of the International Union of the History and Philosophy of Science/Division of the History of Science and Technology.

**Professor Craig Clunas** studied Chinese at Cambridge and at Beijing Languages Institute before receiving his doctorate in Chinese and Mongolian literature from SOAS. From 1979 he worked for 15 years in the Victoria and Albert Museum as a curator of Chinese art and material culture, subsequently holding chairs of art history at the University of Sussex, SOAS, and now at the University of Oxford. His research has focused on the Ming period, but he has additional interests in twentieth-century China and in the theory and methodology of art history.

**Sir Christopher Hum KCMG** read Modern and Mediaeval Languages at Pembroke College, Cambridge. He then joined the Foreign and Commonwealth Office, where his career was strongly focussed on China. He studied Mandarin at Hong Kong University and subsequently spent eight years on diplomatic postings in Beijing, culminating in four years (2002-2005) as British Ambassador. He was also closely associated with the negotiations in the 1980s and 1990s on the return of Hong Kong. Since 2006 he has been Master of Gonville and Caius College, where Joseph Needham was once Master, but continues to maintain active links with China.

**Martin Jones** has been Professor of Archaeological Science at Cambridge since 1990, where he leads research on the archaeology of food and agriculture through a range of bio-archaeological and genetic methods. His two principal current research interests include the origins of modern food-sharing behaviour, and the spread of agricultural resources in both directions across prehistoric Eurasia. Over the past five years he has worked with colleagues at the Chinese Academy of Social Sciences and Peking University to study the origins and spread of agriculture from North China. Back in the UK, he has also chaired a number of panels involved with the promotion and resourcing of archaeological science for the NERC, AHRC and Wellcome Trust.

### Also in this issue:

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Edited by Susan Bennett

# Radiation sickness and the politics of nuclear energy

By Dr. Aya Homei, GB-Sasakawa Research and Teaching Associate in Japanese Science and Technology at Cambridge University Department of East Asian Studies and the NRI between September 2008 and August 2009



My workshop entitled ‘Radiation sickness and the politics of nuclear energy: cold-war science, technology and medicine in Japan, USA and Britain’ took place at the Institute from 14 – 15 August 2009, and became the last major task completed by me before leaving the Institute on 31 August. The workshop was generously supported by the Wellcome Trust, the Japan Foundation Endowment Committee and the Great Britain Sasakawa Foundation. It was attended by over 20 participants, of which 11 were

speakers from the countries covered in the workshop. From East Asia, Professor Masakatsu Yamazaki at the Tokyo Institute of Technology and Mr. Yukuo Sasamoto of the Citizen Science Initiative Japan travelled from Tokyo to contribute their expertise and take part in the workshop. Participants examined the medical articulation of radiation sickness in the three countries and investigated how research on the medical effects of radiation was tied to cold-war politics and debates over nuclear weapons and the peaceful use of nuclear energy. Participants paid special attention to the position of Japan within the larger context: Japan was unique in that it was the first country that was home to large numbers of those suffering from radiation sickness (*hibakusha*). The country’s unique position turned Japanese sufferers into subjects of study carried out by doctors and scientists from all over the world, but thus far it was not known in detail what was really at stake within Japan. The workshop therefore addressed some of the important historical questions that have arisen from the extant narrative. Participants examined these questions with enthusiasm, and lively discussions unfolded at the workshop. I am planning for selected contributions to be published in a suitable journal.

## Actors and Observers

A workshop, organised with the co-operation of Dr Catherine Jami (CNRS, Paris), took place at the NRI from 4-5 December 2008, on the topic of “Actors’ And Observers’ Categories in East and West: Changing Typologies of Science in Practice and Scholarship”. Invited participants looked comparatively and analytically at the ways in which the study of the natural world has historically been defined and divided up, both by those practising the sciences in East Asia and Europe, and by those who have studied the history of science. The aim was to use standpoints from Asia and Europe on equal terms as a stimulus to comparative reflection. Thirteen papers were presented, covering topics ranging from ‘Concepts of mathematics from ancient Egyptian mathematical papyri’ (Annette Imhausen, University of Mainz) to ‘The Globalisation of Chinese Medicine and its Discontents: The Case of Menopause’ (Volker Scheid, University of Westminster). Funding was provided by the Mellon Foundation.

## Sino-British Science co-operation

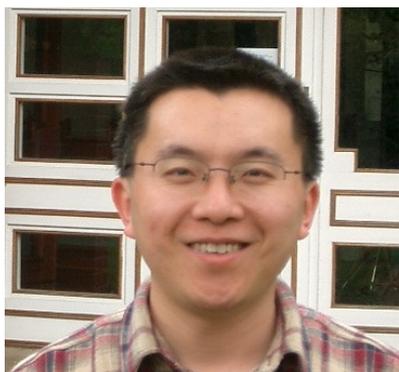
On 22 April 2009, an international seminar entitled “Sino-British science co-operation since Joseph Needham: past, present, and future prospects” was held in the Joseph Needham meeting suite, Research Councils UK office, Beijing. This event was jointly organised by the NRI and the Institute for the History of Natural Sciences, Chinese Academy of Sciences, and included distinguished speakers from backgrounds in history, current scientific

research, and diplomatic and official life. Welcome financial support came from the Sino-British Fellowship Trust. Our Director, Professor Cullen, spoke on “Joseph Needham’s work in wartime China – the Sino-British science cooperation office in Chungking”. One of the most significant contributions, came from Professor Lü Yonglong, (Director, International Co-Operation Bureau, CAS) on “Perspectives in Sino-UK Scientific Cooperation”. This was a valuable and very frank survey of problems as well as positive aspects in the development of scientific co-operation between the PRC and UK in recent years.

## *Needham biography launch in Beijing*

The Chinese translation of the biography of Joseph Needham by Simon Winchester, *The Man Who Loved China*, was launched at an impressive event in Beijing on 21 April 2009, organised for the 48 Group Club by Alistair Michie, an Honorary Associate of the NRI. Apart from the author, speakers included the President of the Chinese Academy of Sciences, Professor Lu Yongxiang, the British Ambassador Sir William Ehrman, as well as the Director of the NRI Professor Christopher Cullen. The guest list included several dozen persons of vice-ministerial rank, and sponsorship was provided by Newlands UK and a number of other business partners. The Chinese translation is an integral rendering of the English original, and has had the benefit of polishing and correction by Professor Liu Dun, who has recently joined our Board of Trustees.

## Prize for Hou Gang 侯钢



We are delighted to be able to report that the 2009 prize awarded at the 23rd International Congress for the History of Science and Technology in Budapest for work by a young scholar in the field of East Asian

Science History went to Hou Gang (Tianjin University), for his thesis on the relations between divination and mathematics in the Song 宋 Dynasty. Major research for this thesis was done during a period of residence at the NRI from April 2003 to April 2004, with the support of a Li Foundation of New York Fellowship. Historians of mathematics have been struck by the fertility and ingenuity of the techniques used by Song mathematicians in various areas. Based on hints in the original texts, scholars have speculated that their methods may have had some connection with the divinatory techniques of the Book of Change (*Yijing* 易經). Joseph Needham himself remarked “a search through the obscure and difficult Chinese mediaeval divination texts, if conducted by a sinologist who was also a good mathematician, would be rewarding”.

But since the two bodies of texts involved – mathematical and divinatory – are both exceedingly complex and difficult to penetrate, nobody until now seems to have had the courage and persistence needed to try to settle the question definitively. Now this prize-winning thesis has opened a new window on the history of mathematics in China, showing among other things that the famous “Chinese remainder theorem” as devised by Qin Jiushao 秦九韶 stemmed from divination techniques associated with the *Yijing*. There is no doubt that we shall learn much more about the ingenuity of Song mathematicians by further explorations of the rich material that Hou Gang has begun to exploit.

## GB-Sasakawa research and teaching associate in Japanese science and technology



My name is Clinton Godart, and from September 2009 to 2011, I will be working as a research and teaching associate in Japanese science and technology at the NRI and the University's Department of East Asian Studies, with generous funding from the Great Britain Sasakawa

Foundation. I came to the history of science in Japan by a roundabout way: I started studying philosophy in Leuven, became interested in East-Asian philosophy, and after a few years changed track to Japanese studies. I did an M.A. in Osaka, where I worked on how Buddhist thinkers in the Meiji period engaged with Western philosophy. This brought me to question the relation between religion and science in Japan in this period. Into my second year in the PhD program in the Department of History at The University of Chicago, I became enthralled by the history of evolutionary theory and decided to write my dissertation on the history of evolutionary theory in Japan, which I finished last summer.

At the NRI, I will be continuing this project and will hopefully turn it into a book manuscript, entitled *Darwin in Japan: Evolutionary Theory and Japan's Modernity*. *Darwin in Japan* is a broad rethinking of the roles which evolutionary theory played in Japan from the late nineteenth century into the postwar era. Partly motivated to go beyond the often repeated but rarely investigated story of the influence of “social Darwinism,” I look not only at biology, but also at how philosophers, Christians, Buddhists, state officials as well as anarchists, conceived and used evolution. This history therefore serves as a platform to think about larger issues such as the relationship between science and religion, and science and the modern state. My focus at the NRI will be on, among others, the controversial biologist Imanishi Kinji 今西錦司, who criticized modern selection theory, and the influence of Soviet biology (Lysenkoism) in postwar era Japan.

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## East Asia in Budapest

The 23rd International Congress of History of Science and Technology was held from 28 July – 2 August 2009, in Budapest, Hungary. We are glad to be able to report that historians concerned with East Asia made a great impact at this gathering, reflecting the increasing importance of our field in world history of science. What is more, there were strong NRI connections with the activities that took place there. Our Director, jointly with our long-term visitor Dr Catherine Jami (CNRS, Paris), organized a well-attended symposium on ‘Communities and Communication in East Asian Sciences’ in which there were contributions by two other NRI researchers,

Dr Aya Homei and Jiří Hudeček. There were several other symposia in which East Asia figured prominently. Professor Liu Dun was elected to the Council of the Division of History of Science and Technology as President, and Dr. Catherine Jami joins him as Treasurer, having previously served as Assessor. Slowly but surely the History of Science landscape is beginning to move away from its traditional Eurocentrism to a more balanced view of world history, and the NRI will continue to make a strong contribution to continuing this movement.

## LIBRARY NEWS

by John Moffett, Librarian

Among the customary wide range of research materials acquired over the last year, one item stands out. The 44 volume set *Zhongguo zaoqi keji qikan huibian* 中国早期科技期刊汇编 (*A Collection of Chinese Early Scientific Journals*) reprints 8 of the most important scientific journals published in China between the 1870s and 1940s. To my knowledge, only one of these journals has been reprinted before, and all are difficult to locate, both in China and in the West. It is, therefore, a very useful addition to our collection, facilitating research into this extraordinary period of cultural interaction.

I have also committed a great deal of time during the year to producing a catalogue of Dr. Needham's collection of photographs from his time as Director of the Sino-British Science Co-operation Office 中英科學合作館 in China



*Joseph Needham, Cao Tianqin 曹天欽, Laurence Picken and Dorothy Needham with their Chinese hosts outside the Low Temperature Carbonisation Plant 低溫碳化廠, Pingyi 平彝, Yunnan province 雲南省, Oct. 1944.*

from 1943-1946. The majority of these 1200 b/w images were taken by Dr. Needham himself, with a few collected by him from other sources. The records are being entered into our existing archive catalogue and will be searchable through the JANUS portal <http://janus.lib.cam.ac.uk/>. Scans have been made of the photographs and a webpage is under construction to display them. Though the conditions under which Dr. Needham travelled took their toll on the quality of some of the rolls of film, they provide an intriguing window into the world he found and explored with such excitement. Our thanks go to the Andrew W. Mellon Foundation for funding this work.

In March I visited the Research Center for Science & Technology History and Development Strategy, Harbin Institute of Technology 哈尔滨工业大学科技史与发展策略研究中心 in China, meeting staff members and students. I then spent a few very valuable days in Beijing buying books for the library, meeting with a wide variety of scholars to find out about their latest projects, and attending the workshop, *Sino-British Science Co-operation since Joseph Needham*, held at the UK Research Councils (RCUK) office in China (see page 2).

### SEMINARS

Our sixteenth year of Friday text-reading seminars produced yet another rich and varied range of topics, from records of an explosion at an arsenal in Beijing in 1626 to a medieval Arabic account of Chinese medicine, Qing illusionistic painting to technological innovation in Japan, and medieval Chinese guides to letter-writing to Chinese astronomy in the Ming and Qing dynasties. We are very grateful to all the speakers and attendees for their part in enriching the academic activities of the Institute. For the current programme of seminars, see: <http://www.nri.org.uk/seminars.html>.

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## NRI monograph wins International Convention Of Asian Scholars prize

As well as the great *Science and Civilisation in China* series, we also publish the Needham Research Institute

Monographs, which aim to disseminate cutting edge research in the fields with which our Institute deals. The success of this series has been considerable — see the list of books brought out so far in the leaflet that accompanies this newsletter. In the last newsletter we were pleased to announce the publication of the book edited by Laurent Pordié



*“Tibetan Medicine in the Contemporary World: Global politics of medical knowledge and practice”*.

Now we are even more pleased to be able to tell readers that this book has been awarded the Colleague's Choice prize of the International Convention Of Asian Scholars. As the prize citation says “This is a major contribution to our understanding of Tibetan medicine as a global phenomenon. Its eleven papers include a wide range of perspectives by anthropologists and practitioners concerning the social, political and identity issues involved in the modern world of Tibetan medicine. Critical yet respectful discussions engage with the practice of Tibetan medicine both in Asia and the West and this well-produced volume is a landmark in the field which will be required reading for students and specialists alike. It is a cohesive collection, and its essays are fresh and original, as well as readable and highly informative. It will be a basic source for many years to come”.