

NEEDHAM RESEARCH INSTITUTE NEWSLETTER

Newsletter No. 13

EAST ASIAN HISTORY OF SCIENCE TRUST

January 1993



THE NEWSLETTER

We welcome friends and colleagues to the thirteenth issue of the Newsletter, in the hope that the fateful significance attached to that number in Western *shu shu* will not be realised. As ever, its contents are a varied mixture of current events, plans for the future and reflections on the past. For the past we have Professor Lisowski's account of the formation of the East Asian History of Science Foundation, Hong Kong, one of the essential underpinnings of the Institute's financial viability; for the future we have Professor Ho's sketch of our developing international relations; for news of the present we go to Buckingham Palace for the investiture of the Director Emeritus as Companion of Honour, and return to the Institute for the arrival of our new librarian.

We would like to take this opportunity to ask for our readers' help in two ways. We hope that you find the Newsletter interesting, and we greatly value this opportunity to keep in touch with our friends round the world. But we feel that from time to time it is wise for us to update our mailing list. Could you therefore help us by filling in and returning the enclosed form to ensure that you continue to receive future issues? This will be of the greatest help to us. Secondly, I would be grateful if readers could find the time to let us have their comments on the style and content of the Newsletter. Does it tell you what you want to know about the NRI? If not, please give us your suggestions. We look forward to hearing from you.

NEW LIBRARIAN

We are pleased to be able to report that Mr. John P. C. Moffett, successor to Dr. Hilary Chung, has been in post since October 1992. John Moffett stu-

died Chinese at Edinburgh University. He then spent four years in Beijing, first studying at Beijing University, then working for the Foreign Language Press, which gave him an opportunity to pursue interests in traditional Chinese medicine and *Chhi kung*. On returning to Britain, he worked on a doctoral dissertation, still to be finalised, on Prediction in Early Chinese Culture. As well as a wide knowledge of and enthusiasm for both ancient and modern Chinese culture, he brings to his tasks here a unique energy which is exemplified by his practice of urging fellow-members of the Institute to join him for *thai chi* exercise in the garden at 11 a.m. every day.

JOSEPH NEEDHAM AT BUCKINGHAM PALACE

On the 22nd October, Joseph Needham attended an Investiture at Buckingham Palace during which he was admitted as a Member of the Order of the Companions of Honour. Those of us who had the honour of accompanying him witnessed a most impressive occasion.

We arrived at the Palace about 10 a.m. and were allowed in by the policemen on the main gates on production of our special passes. Dr. Needham's car drove straight through into the central quadrangle of the Palace. For his special convenience, we were admitted through a private doorway so that we could use a lift, rather than walking up the stairs from the usual grand entrance. This gave us a very interesting opportunity to see some corridors of the Palace not usually open to the public. When we met up again with the main throng, Dr. Needham was taken off for a special briefing for the recipients of honours, while those of us who were mere spectators were ushered to our seats in the Palace



Her Majesty The Queen in conversation with Dr Needham. Reproduced by kind permission of Buckingham Palace and Bonham-Carter Associates.

Ballroom. Here we were entertained by the playing of the orchestra of the Irish Guards who were in the gallery above us. A little before 11 a.m. an impressive tramping of feet announced the arrival of the Queen's personal bodyguard, the Yeomen of the Guard, clad in full Tudor rig and shouldering their gleaming partisans, which bore a remarkable resemblance to the ancient Chinese dagger-axe or *ko*. Shortly after these impressive figures had taken their stand on the dais, Her Majesty entered and the Investiture commenced. The high precedence given to Companions of Honour meant that Dr Needham was one of the very first to be presented to Her Majesty the Queen, when he had the pleasure of a short conversation in which she wished him well in his continuing work. A long succession of lower ranking investitures followed, until Her Majesty left at the conclusion of the ceremony, followed by her Tudor bodyguard.

Founded in 1917 by George V, the Order was originally restricted to fifty members. In 1943 the membership was enlarged to sixty-five. Its members take precedence above Knights and Dames Commander of various Orders of Chivalry, but below

Knights and Dames Grand Cross. Previous recipients have included such distinguished names as Sir John Gielgud, Graham Greene, Sir Peter Medawar, Henry Moore, Sir Karl Popper, Mr. Lee Kuan Yew and Tunku Abdul Rahman. The manuscript grant of the dignity of a member of the Order of the Companions of Honour to Joseph Needham Esquire, F.R.S. now hangs in an honoured place in the tea-room of the Needham Research Institute. Following the precedent of many Chinese historians, we transcribe here this important primary source for the history of the history of Chinese Science.

ELIZABETH the Second by the Grace of God of the United Kingdom of Great Britain and Northern Ireland and of Her other Realms and Territories Queen, Head of the Commonwealth, Defender of the Faith and Sovereign of the Order of the Companions of Honour to Our trusty and well beloved Joseph Needham Esquire

GREETING

WHEREAS We have thought fit to nominate and appoint you to be a Member of Our Order of the Companions of Honour We do by these Presents grant unto you the Dignity of Membership of Our said Order and We do hereby authorise you to have hold and enjoy the said Dignity.

Given at Our Court at Saint James's under Our Sign Manual and the Seal of Our Said Order this Thirteenth day of June 1992 in the Forty-first year of Our Reign.

THE IMPACT OF SCIENCE AND CIVILISATION IN CHINA

It is common nowadays for the significance of a piece of published scientific research to be

rated by the number of citations it attracts in the journal literature. Through the kindness of Dr. Maurice Goldsmith and Eugene Garfield, President of the Institute for Scientific Information, Philadelphia, U.S.A., we are able to give striking statistical proof of the impact of the work of Joseph Needham and his collaborators on the world of science and scholarship. The *Sci-Search* database for scientific periodicals from 1974 to 1992 gives 812 cited references. *Social Sci-Search* 1972-1992 gives 734 cited references, and *Arts and Humanities Search* 1980-1992 gives 584 cited references. We hope that supporters of the Institute's work will be encouraged by this evidence that the research we do here commands attention.

THE EAST ASIAN HISTORY OF SCIENCE FOUNDATION, HONG KONG

The Foundation had its beginning on one of those sultry July days at a hotel in Hong Kong in 1978 over a convivial luncheon hosted by the late Mr Peter Burbidge at which Dr Peter L Lee, Mr Lee Tsung-Ying and Professor F P Lisowski (the "Three Li's") took part. On the occasion Mr Burbidge initiated the idea of forming the Hong Kong Branch of the East Asian History of Science Trust (Cambridge) which was to support the efforts of the Cambridge Trust in helping Dr Joseph Needham to set up a permanent library and institute in Cambridge for the study of the history of science, technology and medicine of East Asia, and of China in particular. The four of us were to be the Trustees, and at the same time the "Three Li's" in Hong Kong were empowered to invite like-minded friends and colleagues to join the Trust. Mr Burbidge then provided Mr George E S Stevenson, a prominent Hong Kong lawyer, with the necessary information and instructions for the preparation of the Trust documents.

During the remainder of 1978 several of us and George Stevenson were engaged in travel and in any case the preparation of the Trust papers and their negotiations with the relevant government departments occupied a considerable time. Thus apart from odd meetings nothing further could be undertaken.

In 1979 we invited Dr Philip W

C Mao, a well-known surgeon in Hong Kong, to become a Trustee. Philip Mao had always been interested in the work of Joseph Needham and was himself a connoisseur of Chinese cultural artefacts. At our first meeting we unanimously elected Philip Mao as our Chairman ("Chairman Mao" as Professor Shigeru Nakayama called him). Peter Lee was appointed as Secretary with Miss Annie Kwan as his Minute Secretary. Subsequently Mr David K P Li became the Treasurer.

It was from this decisive moment under the energetic leadership of Philip Mao that the Trust really took off and moved forward. He immediately invited additional members to become Trustees who were prominent in business, the professions and academia in Hong Kong. All were interested in the work of Joseph Needham and in particular in furthering the knowledge of the history of Chinese science and technology in its widest sense. On the advice of George Stevenson, and so as to comply with the laws of Hong Kong, the Trust was transformed into a Foundation and the Trustees became Directors of the Board of Management of the Foundation. During this period the decision was made to go public and launch an appeal for donations. For this purpose Lee Tsung-Ying translated the "Library Appeal" and the "State of the Project" brochures from English into Chinese for distribution.

On October 14, 1981 the East Asian History of Science Foundation and the Appeal were launched in the City Hall in Hong Kong. The opening address was given by Joseph Needham who was accompanied by the late Dr Lu Gwei-Djen. Both had specially come over for the occasion from Cambridge. The Foundation and the Appeal were well received and had a good media coverage. In a matter of a decade the Foundation proved to be the major contributor both directly and indirectly to the building of the Needham Research Institute. Today its main endeavours are directed towards the endowment of the Institute as well as sponsorship of scholars and workers who want to do research at the Institute.

In early 1984 Professor Ho Peng Yoke joined the Board which he later left to become Director of the Needham Research Institute. Peter Lee continued as Secretary until late in 1984 when he had to return to America. On his departure the late Dr J K Lee took over until his untimely illness forced him to relinquish the

post in 1989. During his time he initiated the annual Foundation Lectures in Hong Kong. "JK", as he was known among friends, unfortunately passed away on January 31, 1990. His passing was a great loss to the Foundation since his help and advice had been invaluable. In the meantime Peter Lee had returned to Hong Kong and the Board in 1985 and in 1989 he resumed the secretaryship of the Foundation.

The Foundation has maintained a close contact with the two sister Trusts in Cambridge and New York. And there have been various visits to the Needham Research Institute by representatives of the Foundation, such as the laying of the foundation stone, the official opening of the Institute and at other times. The Foundation has also hosted visits by members of the two sister Trusts. Since the death of Dr J K Lee and the confusion consequent to the incidents of June the 4th 1989 in Beijing, the question of appointing yearly lectureships of the Foundation in Hong Kong has been in abeyance. This will be revived again in the not too distant future. However, it is the wish of the Foundation that it will not be on Chinese contributions only, but also to work done by other countries in East Asia.

The Foundation has been instrumental for finding financial support for a few scholars from China to work in Cambridge at the Needham Research Institute in recent years and also contributing to part of the costs of the Institute in Cambridge. One of the aims of the Foundation is to have post-graduate scholars also from the three universities in Hong Kong to be able to help in the work at the Institute in Cambridge.

Ever since its inception the Foundation has displayed a unity of purpose and within its organisation a most harmonious relationship. This is due in a large measure to the able leadership of Philip Mao and the single-mindedness of the Board of Directors in its endeavours to support the Needham Research Institute and in bringing about the recognition and appreciation of the Chinese contribution to the development of science, technology and medicine throughout the world, and thereby furthering education as a means of contributing to greater human understanding.

The present members of the Board of the Foundation are as follows:

Dr Philip Wen-Chee Mao
(Chairman)
Dr Peter L Lee (Hon Secretary)

Mr David K P Li
(Hon Treasurer)
Mr David Fok
(Hon Legal Advisor)
Mr Peter H Y Wong
Mr T Y Lee
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Prof Wong Gungwu
Ambassador Burton Levin
Mr Joseph E Hotung

F P Lisowski

THE NEEDHAM RESEARCH INSTITUTE AND CHINESE SCIENCE

(Professor Ho Peng-Yoke, Director of the Needham Research Institute, delivered the following lecture at the Korean History of Science Society, Seoul - 2nd July 1992)

The topic of the lecture, assigned to me by Professor Kim Yung-Sik is "The Needham Research Institute and Chinese Science." I shall, of course, follow his instructions, but to follow the recent developments in Cambridge, I ask your indulgence to permit me, as my talk progresses, to change the topic gradually into "The Needham Research Institute and East Asian Science."

It is an undisputed fact that the Needham Research Institute owes its existence to Joseph Needham's monumental work *Science and Civilisation in China*. The first volume saw the light of day in 1954. Until now 15 physical volumes have been published, 2 volumes are with the press and 3 or 4 more are at their final stage ready to be sent to the press. There will be about 30 physical volumes when the whole project is completed. Joseph Needham is now trying to complete Volume VI pt. 7 on Chinese medicine and the chapter of Volume VII embodying his general conclusions. Just before I left Cambridge last month, Dr. Needham was awarded the Order of Companion of Honour by the Queen of England in recognition of his scholarship and contribution to mankind.

Joseph Needham has been helped by a group of collaborators. Since the last decade he has

entrusted most of the other volumes of the series to his collaborators, realising that age was catching up with him. He is now in his 92nd year and we shall consider it fortunate if he is able to complete the two parts of his series that I have just mentioned. In fact, he has told me on several occasions that he never expected, himself, to live to the age of over 90. When I suggested that it was due to his genes he denied it saying that this could not be true because his mother died in her 70's and his father in his 60's. He attributes his longevity to ginseng. He started taking one pill a day in the 1960's, but in recent years he cut it down to one pill a week on the advice of his late wife, Lu Gwei-Djen. He asked me to consult Professor Leong Way, an eminent professor of pharmacology in the United States, to find out whether he knows what the active principles are in ginseng that have such a beneficial effect. In fact I am looking forward to seeing Professor Leong Way early next week in Taipei at the Academia Sinica to ask him if he knows the answer. In any case I hope that ginseng will help Joseph Needham to accomplish the task that I have just mentioned.

Now let me come back to the Needham Research Institute. During his work on *Science and Civilisation in China*, Joseph Needham has, since half-a-century ago, built up a unique collection of materials on the history of science in China. Scholars from all over the world have visited Cambridge, not only to collaborate with him on the *Science and Civilisation in China* project, but also for their own researches. For example, one of the earliest visitors was Professor Nakayama Shigeru, who went to Cambridge in 1957 to use these materials while he was writing his doctoral thesis. In 1968 while Joseph Needham was the Master of Gonville and Caius College, he donated his books to a Trust and laid the foundation for a library which later became the East Asian History of Science Library. At first this library was housed in temporary premises. In 1983 the Trustees formed the Needham Research Institute which was to include within it the East Asian History of Science Library, and began to raise funds to erect a new building within the premises of Robinson College. The great majority of the funds came from East Asia, mainly from Hong Kong and Singapore, and also generous donations from both Beijing and Taipei, while the remainder came from the United States of America. The

Main Building and the North Wing of the building were completed in 1986 and the South Wing in 1991.

While the primary objective of the Needham Research Institute lies in the completion of *Science and Civilisation in China*, it is taking on new academic activities. As a matter of fact, I myself as Director of the Institute, do not involve myself directly with the great Project, which is in the hands of the two Deputy Directors, Dr. Huang Hsing-Tsung and Dr. Christopher Cullen. The latter is also the Chairman of the Publications Board, which attends to *Science and Civilisation in China* and all other publications including monographs published in the Institute.

My own effort is directed to making the Institute a centre of international scholarship, developing closer links not only between Asia and the West, but also between Asian countries themselves, fostering innovative research, and providing fundamental contributions not only to the history of science in East Asia but to our general understanding of science and its role in society. The civilisations of mankind, so largely independent and isolated in the past, are now coming together into a single global unity. It is urgent, therefore, that they should know more of each other's past, and so understand one another better. Only in ways like this can permanent and universal peace, and international understanding, be brought about. I look upon the Needham Research Institute as an outpost of East Asia cultures in the Western world devoted to the study of what those cultures have contributed to world science and world civilisation.

The Needham Research Institute has therefore taken on new academic activities such as:

- 1) helping in the training of young historians of East Asian science by assisting them to secure financial grants and offering them facilities in the Institute;
- 2) providing working facilities for scholars of East Asian science;
- 3) creating links with institutions in East Asia in the promotion of the history of East Asian science.

The first item includes two young Japanese scholars completing their doctoral theses at the Institute and supported by grants from the Anglo-Daiwa Foundation. The National Science Foundation has so far supported two American scholars to work on their Ph.D. theses at the Institute. As for the second item, the number of scholars who have uti-

lised the facilities of the Institute is too large for me to mention. But I cannot omit the name of Dr. Jeon Sangwoon, who spent many months at the Institute in 1991 and also the beginning of this year. The most recent visitors are Professor Chen Meidong, Director of the Institute of the History of Natural Science, Beijing, Professor Liu Dun of the same Institute and Mr. Liu Jiemin of the Beijing Normal University. The visits of the first two gentlemen are sponsored by the East Asia History of Science Foundation, Hong Kong, while Mr. Liu Jiemin received a generous grant from the Li Foundation of New York.

It is the third item, however, which I would like to deal with at some length. We have cultivated an excellent relationship with both the Institute of the History of Natural Science in Beijing, and Academia Sinica, and the National Tsinghua University in Taiwan. The recent visits of Professor Chen Meidong and Professor Liu Dun form part of our plan to develop a closer link with Beijing. Scholars from Academia Sinica have been invited by Joseph Needham to write some sections of the remaining volumes of *Science and Civilisation in China*. The Institute joins the National Tsinghua University in publishing a *Newsletter for the History of East Asian Science* and I am involved myself in a research project at Tsinghua on the *shushu* pseudo-science as well as conducting classes for post-graduate students in that university. Here I find my dual capacity as member of Academia Sinica and Honorary Professor of the Chinese Academy of Science extremely helpful. It is my duty to take care of the interests of all the parties I represent, namely Cambridge, Beijing and Taiwan. Fortunately since history of science is a binding force and my work is made so much easier and enjoyable.

As I said earlier, the interest of the Needham Research Institute has extended beyond China. In the belief that, after having developed into one of the world's leading economic powers, Japan should make a greater contribution to world peace and prosperity in the 21st-century by extending and developing the present knowledge of the fundamental sciences and by promoting creative academic research, the people of the three cities of Kyoto, Osaka and Nara are building a new city which will have access to traditional culture as well as modern science and research facilities. This is the so-called Kansai Science City, located in the Kei-

Han-Na hills, between the three cities mentioned. Among the many projects in this new city is the International Institute of Advanced Studies. Construction of the building began last year and is expected to be completed by the end of this year. The Director of the Institute is Dr. Michio Ika-moto, formerly President of Kyoto University.

It is proposed that there will be a 'Center for the History of East Asian Science' within the International Institute of Advanced Studies. The two persons charged with the responsibility of planning this unit are Professor Kunio Goto of St. Andrew University outside Kyoto and Professor Shigeru Nakayama of Kanagawa University. Discussions between the three of us have been taking place since 1990, to explore areas of mutual co-operation. The first meeting took place in Osaka in September 1990 when it was proposed to hold a workshop which duly took place in Kyoto on the 19th and 20th January 1991. The workshop, attended by 29 persons including Dr. Jeon Sangwoon, was held at the Kyodai Kaiken, near Kyoto University.

The following points directly relating to The Needham Research Institute were discussed:-

- a) the possibility of the Needham Research Institute helping with the production of English translations of Japanese texts on the history of science, particularly those pertaining to East Asia and perhaps also with their publication, with remunerations for translators and the cost of publication to be borne by Kansai;
- b) the Japanese are very grateful that the Needham Research Institute is looking after scholars from Japan under the Anglo-Daiwa Foundation scheme, and feel that Japan should take the responsibility for seeking funds to look after Japanese scholars working in the Institute;
- c) the hope that mutual help will continue between Japanese libraries, The Needham Research Institute collections, including means of enriching the Japanese holdings of the Institute;
- d) the feasibility of using The Needham Research Institute as an outpost or agency for the Kansai International Institute for Advanced Studies, the parent body of the proposed Center.

Co-operation between the proposed Center and the Institute of the History of Natural Sciences in Beijing was also discussed.

I have spoken elsewhere in Japan saying that Chinese historians of science were unable to make Chinese science known to

the world because their works were written in the Chinese language. They had to wait for Joseph Needham to make Chinese science known. In the case of Japan, there are very few people in the outside world who know about, for instance, the contributions to mathematics by Seki Takakazu and although Professor Yabuuchi Kiyoshi is indeed an eminent scholar in Japan, his

work is known to very few outside the country. I have suggested that the service of The Needham Research Institute may be utilised for the translation and publication of some important Japanese works to make them known to the world.

Let me now come to Korean science. I wonder how many people in the West know about the great 15th-century astronomer

and calendar expert Yi Sun-ji in the reign of King Sejong, or about the *Sirhak* scholar Hong Tae-yong of the 18th-century? Perhaps Korean scholars would like to do something about it. In this connection I should mention and acknowledge with thanks the generous gift of books on the history of Korean science from the Daewoo Foundation. I hope that this is the first step towards a link

between The Needham Research Institute and some similar centre of Korean science. I am sure that the Institute for the History of Natural Science in Beijing, the Academia Sinica in Taipei and the National Tsinghua University in Hsinchu will be just as happy as we are in Cambridge to promote links between all our Institutions for the study of East Asian science.

SCIENCE AND CIVILISATION IN CHINA

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It must be emphasised that the subject-matter of some of the parts given above is subject to alteration as research proceeds. Further information about these titles will be included in future editions of the Needham Research Institute Newsletter.

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