

# NEEDHAM RESEARCH INSTITUTE NEWSLETTER

Newsletter No. 9

EAST ASIAN HISTORY OF SCIENCE TRUST

January 1991



## TRUSTEES

An up-to-date list of members of the three Trusts for the East Asian History of Science, which sponsor the work of the Institute, follows:

**London:** Chairman: Lord Roll of Ipsden. Members: Professor Patrick Bateson; Mr Roland Berger; Mr W. B. Harland; Professor Ho Peng Yoke; Mr John Horwood-Smart; Mr Stephen Keynes; Professor Geoffrey Lloyd; Dr Michael Loewe; Professor Lu Gwei-Djen; Dr Joseph Needham; Professor Sir Brian Pippard. Secretary: Mrs C Kornicki.

**Hong Kong:** Chairman: Dr Philip Mao; Honorary Secretary: Dr Peter Lee; Honorary Treasurer: the Honorable David K. P. Li; Honorary Legal Adviser: Mr G. E. S. Stevenson; Honorary Auditor: the Honorable Peter H. Y. Wong. Members: the Honorable T. K. Ann; Mr P. L. Lam; Mrs Mary Wong Lam; Mr T. Y. Lee; Dr. Ronald D. B. Leung; Professor Arthur K. C. Li; Dr Ma Lin; the Honorable Dr Wang Gungwu; Professor Rosie T. T. Young.

**New York:** Chairman: Mr John Diebold; Secretary: Ms Anne Shillinglaw. Members: Mrs Lillian Berkman; the Reverend James T. Burchaell; Mr Robert M Hirsch; Dr Nathan Pusey; Mr Erwin Salk; Ms Denise Sinclair; Professor Nathan Sivin; Mr Preston Stephens; Mr Phillips Talbot.

## SEMINARS

Courses of reading seminars for students and others were held at the Institute during the summer, and will be followed by a further series in 1991. The texts and subjects chosen for study range from methods of divination, medical science and early Chinese intellectual development.

## THE SOUTH WING

The Vice-Chancellor of the University of Cambridge has kindly consented to open the South Wing on 10 May.



The Chinese ambassador's birthday present of a medal to J. N.

## APPOINTMENTS AND STAFF CHANGES

Dr Huang Hsing-tsung and Dr Michael Loewe have been appointed by the Trustees as Deputy Directors of the Institute. Dr Cullen and Mr K. Robinson have accepted the title of Senior Research Fellow. Dr Gregory Blue left the Institute on 30 August to take up an appointment as Lecturer in Chinese Influences on Europe, at Victoria University, British Columbia. Mrs Liang Lien-chu resigned as librarian with effect from 31 October and will be succeeded by Ms Hilary Chung from 1 April 1991. Mr Colin Ronan retired from his work at the Institute on 1-10-90; he is succeeded by Dr H. T. Huang as Project co-ordinator, and by Mrs C. Kornicki as Secretary to the Trust. Mr Jōchi Shigeru took up his appointment as a Daiwa Fellow, sponsored by the Daiwa Anglo-Japanese Foundation, on 15 January 1991. His research concerns Japanese and Chinese mathematics.

## COLIN RONAN

At the end of 1990 Colin Ronan left the Institute and went to live off the south coast, in Hastings. He has not retired, but decided to devote his time to other interests, including the abridgements of *SCC* which have been delayed by the task of looking after the administration of the Institute. When he was asked by the Trustees to take this on, neither he nor they guessed how many problems, large and small, would arise with the move to the new building, and everyone concerned owes him a debt of gratitude for giving so much attention to them and their material needs.

Colin's move comes in the middle of his term as President of the British Astronomical Association. His distinction as an amateur astronomer and writer on astronomy was recently recognised in an unusual way, by the naming of an Asteroid after him. We hope that his orbit will allow him to be frequently visible from Cambridge.

A.B.P

## GIFTS

The Institute records with deep gratitude a grant made by the

National Institute for Research Advancement (Tokyo) to support work on the social background of science and technology in China; a grant from the Daiwoo Foundation (Seoul) for the purchase of books in Korean; gifts of books from Professor Else Glahn, Professor Ishige Naomichi and Dr Jeremy Watson; and a contribution to the Institute's work from Mr Stephen Feldman (Asian Rare Books).

## JOSEPH NEEDHAM LECTURE

The first Joseph Needham Lecture, which has been founded by the Master and Fellows of Gonville and Caius College, will be given by Dr Christopher Cullen, Senior Research Fellow in the Department of History, School of Oriental and African Studies London, on Thursday 2 May 1991, in the Little Hall, Cambridge.

## LECTURE ON THE I CHING

At the invitation of the Institute, Dr Xu Daoyi of the Institute of Geology, State Seismological Bureau, Peking, delivered a lecture on the subject of 'The *I-ching* and Modern Natural Science', on 7 September 1990. The Institute was glad to welcome the attendance of a large number of colleagues and students from the scientific departments of the University.



Dr Jung Kong Lee 1924-1990

# DR JUNG KONG LEE LATE HONORARY SECRETARY EAST ASIAN HISTORY OF SCIENCE FOUNDATION

Dr Jung Kong Lee was born in Hong Kong in 1924. During the Pacific war, he had joined the Chinese army, being assigned to General Joseph Stilwell as an interpreter for his troops, who were serving in the China-India-Burma theatre. With the termination of hostilities, he proceeded to the United States of America where he graduated from Princeton University and was appointed as a Professor of Chemistry at the University of Kansas at Lawrence, Kansas, until 1980. Being required to return to Hong Kong to help in the management of the family business, he resigned his post at the University of Kansas. He was a scion of the house of Lee Hysan which later became the Lee Hysan Estate and Hysan Development Corporation in Hong Kong.

Dr Lee's family had always taken a keen interest in Joseph Needham's work, and it was through the agency of the East Asian History of Science Foundation, Hong Kong, that he became the first of a number of donors of substantial sums to the building fund of the Needham Research Institute.

"JK" had been on the Board of the Foundation since its beginning in 1981. In 1984, at short notice, he had to take over duties from the Honorary Secretary of the Foundation, who was obliged to return to the United States. He immediately undertook his new responsibilities without reserve or delay, continuing to run the Foundation with enthusiasm and vigour and maintaining close contact with the two sister Trusts in London and New York. He was instrumental in obtaining a number of other donations to the Foundation and in having the annual Foundation Lectures in Hong Kong instituted.

Being a scientist himself, Dr Lee knew how important Joseph Needham's work is in bringing an understanding and appreciation of Chinese contributions to the development of science, technology and civilisation throughout the world. Being forward looking

and bearing in mind the needs of the 21st rather than the 20th century, JK was accustomed to a quick pace of action; and he thought and hoped that the work of both the Foundation and the Institute could be somewhat accelerated.

A man of high intelligence and intellect, with a humane point of view, Dr Lee believed implicitly in the furthering of education in scientific research and development as a means of bringing about greater human understanding and compassion. He was a member of the National Council of the Salk Institute in San Diego; of the Advisory Council of Princeton University; and of the Board of Trustees of the United College of the Chinese University of Hong Kong. That he was also deeply concerned with the future of China, Hong Kong and the rest of the world is clearly shown by his membership of the Basic Law Consultative Committee of Hong Kong. This important body, which has been responsible for drafting the future constitution of Hong Kong after its reversion to China in 1997, required his presence in Peking frequently, and it was on return from one of the meetings held there that he discovered that he had difficulty in swallowing. He died after a short illness on 31 January 1990. His loss is a great blow to all members of the Foundation and to its work.

Dr Lee is survived by his wife, Ingrid, and their son Oliver, who is at present studying at one of the universities in the United States.

Philip Mao

## A NEWLY FOUND SET OF MANUSCRIPTS

The large cache of manuscripts which was discovered at Chang-chia shan, Chiang-ling (Hu-peh Province) in 1984 included 113 wooden strips (27 cm long) which carried a text which was entitled 'Yin shu', and whose contents concerns physical exercises designed to sustain health or to cure illnesses. While the date of the original composition cannot be known for certain, the copy which has been found is in all probability to be dated not later than -186. The following notes are based on a transcription of the text and an introductory survey which appeared in *Wenwu* 1990.10, pp.82f. and 87f. (illustration on Plate 8).

The text includes three parts, of which the first sets out precautions to be taken as a means of maintaining health during the

four seasons of the year; the second records the titles of 35 physical exercises, involving manipulation of the limbs and other parts of the body; and it discusses their application to bodily needs and their use in curing illnesses; the third part concerns the causes and prevention of illness. In all the names and uses of 75 exercises are mentioned. Some of the methods that are described (including breathing exercises and bodily postures or exercises) had been mentioned in earlier documents such as the *Chuang-tzu*; they also featured in subsequent literature such as the *Huai-nan-tzu* and the *Hou Han shu*. The text makes the point that health and long life may be achieved by regulation of the body so as to conform with the changes of the four seasons and with the cycle of Yin and Yang, but it does not mention the Five Phases.

The newly transcribed document calls for comparison with a set of 44 drawings of exercises of this type which were depicted on a silken manuscript from Ma-wang-tui that may be dated shortly before -168 (see *Wenwu* 1975.6, pp.6f.; and *Kaogu* 1975.1, Plate 9.1). There is some measure of identity between the names of the exercises that are given in each of the two documents. Some of the names simply describe the type of bodily movement or exercise; others follow the movements of animals, such as the 'bear's stretch', or of birds, such as the 'duck's bath'. The 41 ailments that are mentioned in the document from Chang-chia shan include some that are due to external difficulty or injury, e.g. to the leg, knees or back; internal matters such as hernia; diseases of the five sensory organs; and urinary disorders. Cures are effected either by use of the exercises without further aid; or with the help of equipment such as a fixed post; or with the help of another person; or in combination with massage.

## THE DIRECTOR'S TOUR IN EAST ASIA: 16 AUGUST TO 26 SEPTEMBER 1990

In the course of little more than one month, Professor Ho Peng Yoke completed a strenuous programme of visits to a number of centres of research and learning in Malaya, Taiwan, Hong Kong,

China, Japan and Singapore. The programme included visits to a number of leading personalities in academic circles with which the Institute is in contact and in grant-giving bodies through whose generosity it has been possible to maintain and expand the Institute's work. Professor Ho was honoured by the conferment of several titles and appointments and he contributed to the work of those centres that he visited by presenting lectures or seminars. The main purpose of the tour was to deepen understanding with colleagues and to present a clear picture of the aims and needs of the Institute; it may be claimed that considerable progress was achieved in these respects.

The institutes which welcomed Professor Ho included the University of Malaya; the National Tsing-hua University, Hsin-chu (Taiwan); the East Asian History of Science Foundation Limited, Hong Kong; the University of Science and Technology, Peking; the Chinese Academy of Science, Peking; Peking Normal University; the Society of the History of Japanese mathematics in Shinjuku (Tokyo); Kansai Science City (Osaka); the National Institute for Research Advancement (Tokyo); and the National University of Singapore.

Parts of Professor Ho's lecture in Peking, on the subject of 'Looking at the history of Chinese science from the viewpoint of a traditional Chinese scholar' appeared on television, as did his speech given on the occasion of a ceremony to launch the first three volumes of the new Chinese translation of *Science and Civilisation in China*. Professor Ho gave seminars at Peking National University and in Shinjuku; and he presented a paper at the International Conference on the History of Science and Technology in Modern China, in Taiwan.

Professor Ho returned to Cambridge as a director of a new 'Centre for Medicine and Culture in China', sponsored by Glaxo Taiwan Limited; as Honorary Professor of the University of Science and Technology, Peking; Honorary Professor of the Chinese Academy of Science; and Honorary member of the Chinese Society for the History of Science. He held valuable and fruitful discussions with the Acting Vice-Chancellor of the University of Malaya; the Vice-Chancellor of the University of Hong Kong; Mr and Mrs P. L. Lam and Mr George Hicks, of the East Asian History of Science Foundation (Hong Kong); the President of the National Institute for Re-

search Advancement; and the Dean and Professor of Chinese at the National University of Singapore. At a meeting which lasted for 35 minutes and which was shown in part on television, Mr Jiang Zemin, Secretary General of the communist party, stressed the need to study the history of science from a general and international point of view rather than from a chauvinistic approach.

## SIXTH ICHSC

The Sixth International Conference on the History of Science in China, which was held in Cambridge from 2 to 7 August 1990, was attended by 159 participants, a high proportion of whom are scholars working at universities and other institutions in the People's Republic of China, the Republic of China, Hong Kong, Japan and Korea. Altogether 108 papers were presented on a variety of subjects, which concerned both early and modern times. The topics of research that were discussed ranged from manuals on dominoes to the laws of nature in East and West; and from science and technology in neolithic China to land surveys in Tokugawa Japan. The three major subjects of astronomy, medical science and nutritional science were discussed at three panels that had been arranged for specialists who have been researching in those fields of study. Other subjects which attracted considerable attention included mathematics, metals and metal workings and clocks and clock-work.

A number of events accompanied the formal proceedings of the conference. On behalf of the Chinese Academy of Science, Professor Lu Jiayi presented and unveiled a decorative stone from the T'ai-hu Lake, Hsü-chou, which now stands proudly erect in the garden of the Institute. Acting again for the Chinese Academy, Professor Lu conferred the title of Professor on Dr Lu Gwei-Djen. Hakim Mohammed Said, President of the Hamdard Foundation, Pakistan, presented a congratulatory volume to Dr Needham. The 'Topping out' ceremony, marking the completion of initial stages in the construction of the South Wing, took place in the presence of a number of participants to the conference, who were welcomed by speeches made by the Chairmen of the three Trusts who support the Institute's work. A display of books included *A selection from the writings of Joseph Needham*, published recently by Professor Man-

sel Davies, and the first three volumes of the new translation into Chinese of *Science and Civilization in China*, now being undertaken by scholars in Shanghai and elsewhere. At an inaugural meeting there was founded the International Society for the History of East Asian Science, Medicine and Technology, whose functions will include sponsorship of later conferences of the type held in Cambridge.

The organisers of the conference are deeply grateful to Jane Rowell Conferences, of Cambridge, for the arduous work of solving the manifold problems that arose and ensuring that the working arrangements, including the preparation and distribution of abstracts of the papers, were satisfactory. It was owing to the excellent organisation of Robinson College, where all the participants were housed and the meetings held, that it was possible for those attending to do so in comfort, with the advantages of spacious accommodation and gardens in which to relax. For financial support, which made it possible to help a number of visitors from overseas and to hold a number of social events, the organisers of the conference express their deepest gratitude to the Lee Foundation, Singapore; the National Institute for Research Advancement, Tokyo; the Royal Society; the Wellcome Foundation; the Universities' China Committee in London; the Cambridge University Press and Gonville and Caius College. Private benefactors who contributed generously to the needs of the conference included Dr Lillian Chin, of London.

## REPORTS ON RESEARCH

Marta Hanson writes:

Marta Hanson spent her first five months at the Needham Research Institute researching into the Chinese medical response to epidemic diseases during the 17th and 18th centuries. She is particularly interested in the medical tradition which was concerned with *wen ping*, or febrile disorders, and which flourished during the Ch'ing dynasty. At a series of seminars on the history of plague which was held at the Wellcome Unit for the History of Medicine in Cambridge, she was able to establish ties with historians dealing with similar issues that arose from the western experience with and response to epidemic diseases. A comparative perspective is central to her research. In November 1990 she gave a talk at

Darwin College, where she addressed questions concerning the means of intergrating such a perspective, using, by way of illustration, the work of Wu Yuh-sing, an important late Ming writer in the febrile disorder tradition.

The Institute's collection of medical books includes reprints of the basic texts in the febrile disorder tradition, as well as extensive sources on the cold-damage disorder tradition from which it came. Marta Hanson also found it convenient to use the Chinese medical collections held in the Wellcome Institute, London, and in the School of Oriental and African Studies. Although the Chinese medical collections in these two institutions are not as well developed as that of the Needham Research Institute, the School of Oriental and African Studies possesses original editions, and the Wellcome Institute possesses facsimiles, of 18th century texts on febrile disorders which complement the sources that are available in Cambridge. These original editions serve to help to construct the bibliographical and publishing context of these texts.

During the Lent Term, Marta Hanson will compare the prescriptions used in the cold-damage tradition up to the Ming period with those contained both in the febrile disorder texts, and the more popular *fang shu* or prescription manuals of the Ch'ing period; her purpose will be to determine whether the medical debates of the early Ch'ing period actually changed therapeutic practice. By tracing changes in prescriptions, she intends to unravel the relationship between medical scholasticism and clinical action.

Over the next few months she will discuss her research at the comparative medicine colloquium sponsored by S.O.A.S.; in a series held at the Wellcome Unit in Cambridge, which concerns work in progress; and on a panel which concerns 'Ch'ing responses to epidemics', at the meeting of the Association of Asian Studies which will be held in New Orleans.

Bridie Andrews writes:

Ms B. J. Andrews has been a regular visitor at the Institute over the past year. Interested in the recent history of traditional Chinese medicine, she first examined and translated a Chinese anatomical treatise of 1830, *I lin kai ts'o* ('Correcting the errors of physicians'), by Wang Ch'ing-jen (1768-1831). The Institute's library holds a photocopy of the first edition of this important

work, as well as a later annotated version, both of which have proved invaluable.

This book, which was republished 40 times between 1830 and 1950, claims that since the anatomical information in early Chinese medical texts is full of self-contradictions, such texts, being based on erroneous assumptions, are wrong from beginning to end. The author then proceeds to describe the internal organs as he saw them. Wang Ch'ing-jen is one of the very few physicians in traditional China to have examined personally the internal structure of the human body, and his findings reflect both his orthodox education in the medical classics and his enquiring mind.

More recently, Ms Andrews has been researching into the ways in which the gradual acceptance of modern ideas of public health, sanitation and the germ theory of disease causation in China influenced the status of traditional medicine at the beginning of this century. Traditional Chinese medicine, as taught today, is a discipline which has had to accept and to some extent incorporate these modern scientific concepts, just as it has also had to come to terms with western anatomy and physiology. The resulting medical system is therefore to some extent a relatively recent construct.

Ms Andrews hopes to elucidate some of the ways in which new ideas or new scientific knowledge may be incorporated in the medical tradition without compromising its existence. She hopes that the recent example of the meeting of modern and traditional medicine in China will help to explain how other confrontations over medical theory have been resolved in China's more distant past.

Through her translation of Wang Ch'ing-jen's book, Ms Andrews has developed an interest in the history of Chinese anatomy. She is currently using the holdings of the Institute to prepare a researched article on the subject, to be published later in the year.

## NSF FELLOWSHIP

The National Science Foundation is supporting a research fellowship for US citizens which will be tenable at the Institute from 1 October 1991 to 30 September 1992. Enquiries should be made to the Director, and applications should reach him by 1 March 1991.

# THE CAMBRIDGE HISTORY OF CHINA

General Editors:

JOHN K. FAIRBANK

*Francis Lee Higginson Professor of History, Emeritus, Harvard University*

DENIS TWITCHETT

*Gordon Wu Professor of Chinese Studies, Princeton University*

Planned in 16 volumes, *The Cambridge History of China* aims to provide a substantial account of the history of China as a benchmark for an international readership. The out-pouring of current research, the application of new

methods and the extension of scholarship into new fields, have all stimulated Chinese historical studies and are reflected in the formulation and editing of the *History*.

'With this series, Cambridge University Press embarks upon a great service to general education and humane letters.'

*The Observer*

'...should prove to be a valuable aid to the scholar and a unique introduction for general readers.'

*Asian Affairs*

## Already published

Volume 1:	The Ch'in and Han Empires 221 BC - AD 220 Edited by DENIS TWITCHETT and MICHAEL LOEWE 1987 0 521 24327 0	£80.00 net
Volume 3:	Sui and T'ang China, 589-906, Part I Edited by DENIS TWITCHETT 1979 0 521 21446 7	£80.00 net
Volume 7:	The Ming Dynasty 1368-1644, Part I Edited by FREDERICK W. MOTE and DENIS TWITCHETT 1988 0 521 24332 7	£70.00 net
Volume 10:	Late Ch'ing 1800-1911, Part I Edited by JOHN K. FAIRBANK 1978 0 521 21447 5	£75.00 net
Volume 11:	Late Ch'ing 1800-1911, Part II Edited by JOHN K. FAIRBANK and KWANG-CHING LIU 1980 0 521 22029 7	£75.00 net
Volume 12:	Republican China 1912-1949, Part I Edited by JOHN K. FAIRBANK 1983 0 521 23541 3	£85.00 net
Volume 13:	Republican China 1912-1949, Part II Edited by JOHN K. FAIRBANK and ALBERT FEUERWERKER 1976 0 521 24338 6	£85.00 net
Volume 14:	The People's Republic, Part I Edited by RODERICK MacFARQUHAR and JOHN K. FAIRBANK 1987 0 521 24336 X	£65.00 net

## To be published in 1991

Volume 15:	The People's Republic, Part II Edited by RODERICK MacFARQUHAR and JOHN K. FAIRBANK 0 521 24337 8	£75.00 net
------------	--	------------

## Volumes in preparation

Volume 6:	Alien Regimes and Border States Edited by DENIS TWITCHETT and HERBERT FRANKE	
Volume 8:	The Ming Dynasty, Part II Edited by FREDERICK W. MOTE and DENIS TWITCHETT	
Volume 2:	The Period of Disunion Edited by DENIS TWITCHETT	
Volume 4:	Sui and T'ang China, Part II Edited by DENIS TWITCHETT	
Volume 5:	Five Dynasties and Sung Edited by DENIS TWITCHETT	

## Further planned volumes

Volume 9a:	The Ch'ing Empire Editor to be appointed
Volume 9b:	Ch'ing Economy, Society and Civilisation Editor to be appointed

# SCIENCE AND CIVILISATION IN CHINA

Titles published to date (1954-1989):

Volume I:	INTRODUCTORY ORIENTATIONS	£50.00 net
Volume II:	HISTORY OF SCIENTIFIC THOUGHT	£85.00 net
Volume III:	MATHEMATICS AND THE SCIENCES OF THE HEAVENS AND THE EARTH	£110.00 net
Volume IV:	PHYSICS AND PHYSICAL TECHNOLOGY	
Part 1:	Physics	£65.00 net
Part 2:	Mechanical Engineering	£100.00 net
Part 3:	Civil Engineering and Nautics	£110.00 net
Volume V:	CHEMISTRY AND CHEMICAL TECHNOLOGY	
Part 1:	Paper and Printing	£70.00 net
Part 2:	Spagyric Discovery and Intervention: Magisteries of Gold and Immortality	£70.00 net
Part 3:	Spagyric Discovery and Invention: Historical survey from Cinnabar Elixirs to Synthetic Insulin	£65.00 net
Part 4:	Spagyric Discovery and Invention: Apparatus, Theories and Gifts	£100.00 net
Part 5:	Spagyric Discovery and Invention: Physiological Alchemy	£85.00 net
Part 7:	Military Technology: The Gunpowder Epic	£70.00 net
Part 9:	Textile Technology: Spinning and Reeling	£70.00 net
Volume VI:	BIOLOGY AND BIOLOGICAL TECHNOLOGY	
Part 1:	Botany	£75.00 net
Part 2:	Agriculture	£80.00 net

For further details of these please write to Humanities Publicity, Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 2RU.

The following titles will be published over the next ten years:

Volume V:	CHEMISTRY AND CHEMICAL TECHNOLOGY
Part 6:	<i>Missiles and Sieges</i>
Part 8:	<i>Military Technology: Shock Weapons and Cavalry</i>
Part 10:	<i>Textile Technology: Weaving and Looms</i>
Part 11:	<i>Non-ferrous metallurgy</i>
Part 12:	<i>Ferrous metallurgy and mining</i>
Part 13:	<i>Ceramic Technology</i>
Part 14:	<i>The Salt Industry, Ink, Lacquer Pigments, Dyes and Adhesives</i>
Volume VI:	BIOLOGY AND BIOLOGICAL TECHNOLOGY
Part 3:	<i>Agro-Industries: Animal Husbandry, Fisheries, Agricultural Industries and Forestry</i>
Part 4:	<i>Horticulture and Botanical Technology</i> (A continuation of the volume on botany already published.)
Part 5:	<i>Zoology</i>
Part 6:	<i>Nutritional Science and Fermentation Technology</i>
Parts	
7 to 10:	<i>Institutes of Medicine (Anatomy and Physiology), Medicine, Pharmaceutics</i>
Volume VII:	THE SOCIAL BACKGROUND
Part 1:	<i>The Nature of Chinese Society in Comparative Perspective</i>
Part 2:	<i>Language and Logic in Traditional China.</i>
Part 3:	<i>Science and Language in Traditional China.</i>
Part 4:	<i>The World View of the Literati. General Conclusions.</i>

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*.

Edited by Michael Loewe and printed by University Printing Service of Cambridge University Press; please address all enquiries to the Editor c/o Needham Research Institute, 8 Sylvester Road, Cambridge CB3 9AF.