# NEEDHAM RESEARCH INSTITUTE NEWSLETTER

Newsletter No. 6 EAST ASIAN HISTORY OF SCIENCE TRUST June 1989

## VISITORS

The Institute has been glad to welcome a number of visitors during the last few months, including Dr Sarah Allan (School of Oriental and African Studies); Professor Sir Harold Bailey (Ancient India and Iran Trust); Professor E. Bulag (Normal University, Inner Mongolia); Miss Anna Butler (Ancient India and Iran Trust); Mr and Mrs Chhin Hsiao-I (National Palace Museum, Taipei); Mr Chhiu Po-Shun (Edinburgh); Sir Clifford Darby (Emeritus Professor of Geography, Cambridge); Mr Gao Ming (Beijing University); Mr Michael Grosvenor-Myer (Christ's College, Cambridge); Mr Ho Yung-Chhien (Government of Hong Kong); Ms Hu Jian (Huazhong Normal University); Professor Huang Hsing-Tsung (National Science Foundation, Washington); Mr Huang Yüan-Chhuan (Central Library, Taipei); Mr Philip Hughes; Professor Ke Jun (University of Science and Technology, Beijing); Dr Ursula King (University of Leeds); Dr Lee Hung-Tak (Inchon Memorial Fellow, Darwin College, Cambridge); Dr David McMullen (Faculty of Oriental Studies, Cambridge); Professor Mo Meiqi (Medical Science Library, University of Shanghai); Mrs Sara Naqui (BBC); Mr Davidson Nicol (Sierra Leone); Mr Ning Ke (Beijing Normal University); Mr V. Radhakrishnan (Bangalore); Mr Michael Ryder (Southampton); Mr Y. K. So (Government of Hong Kong); Mr Jan van Lohuizen (Ancient India and Iran Trust); Ms Wang Yarong (Chinese Academy of Social Sciences); Mr Wang Xu (Chinese Academy of Social Sciences); Mr Wen Lu (Ch'eng-tu); Mr Yan Kangnian (Chinese Academy of Sciences); Mr and Mrs Zhang Yijun (Chinese Embassy, London); and Ms Zheng Xumi (Chinese Institute of Contemporary International Relations, Beijing).

## BENEFACTION

The Institute records its deep thanks to the K. P. Tin Foundation Limited (Hong Kong) whose magnificent gift matches that of the Kresge Foundation and will thus allow work to start forthwith on construction of the south wing of the building.

Mr K. P. Tin.

## GIFTS TO THE LIBRARY

The Institute is glad to thank the following authors, editors and publishers for copies of the works that they have produced; Chha Yu-Liang; Chhen Hsin-Hsiung; Chhen Kuang-I; Adlard Coles Limited; Jean Gimpel; Sumet Jumsai; Li Ti; Lin Yüan-Hsiung; Nguyen Hoai-Nhan; and Laurence Picken. The following have been kind enough to send gifts of other books to the library: Martin Bernal, Chang Yüan-Lung; Sir Clifford Darby; Else Glahn; Sir Eric Hotung; Huang Hsing-Tsung; Huan Hsüan-Min; Lienli Jackson; Ma Boying; Antony Reynolds; Wang Ling; John Winter and David Wright.

## VISIT TO EAST ASIA

Since his visit to the Institute in December 1988, Dr Ho Peng-Yoke (Director-designate) has been travelling extensively in East Asia. He has been calling at a number of centres of learning, and making contact with friends of the Institute and especially with colleagues working in Hong Kong and Taiwan.

## THE K. P. TIN FOUNDATION LIMITED

During the last ten years Mr Ka Ping Tin (also known as Mr Ka Piang Thian) has established no less than three charitable foundations, based in Hong Kong, Taiwan and the People's Republic of China. They are dedicated to the promotion of the general welfare of mankind and to the relief of suffering, and the particular objectives of their work are clearly set out in a number of documents. By way of general welfare, the foundations establish orphanages, maternity homes and hostels; they grant funds for relief at times of flood or other natural disasters, and they are ready to provide expenses for burial for those families that are in need. Medical services include grants for hospitals, clinics, free consultations for patients, and convalescence. To support education, the foundations maintain non-profit-making schools and other institutions for training.

Born in south China (Kuang-tung province) in 1919, Mr Tin had the misfortune to lose his father at an early age, with the result that his education was interrupted and he was obliged to set to work to provide for his family's upkeep. While hardly 20 years old, he moved to Indonesia to found two factories, which were the first to produce synthetic leather there. In 1958 he moved to Hong Kong where he now lives. He is the founder and chairman of a number of companies, including Thians' Plastic Industrial Company Limited, Tins' Chemical Industrial Company Limited and Tins' Enterprises Company Limited. So far from being confined to the manufacture of synthetic leather, these companies engage in many types of diversified business, including real estate investment and development.

Mr Tin's pronounced interest in education and scholarship stems partly from his own personal experience and his regret that he had no opportunity to complete his own studies in his youth. He is interested in providing for these needs on a wide basis and in planning for them over a long term. He is keenly aware of the need to provide for education at all levels, and his benefactions have ranged from the earliest stages to colleges that concentrate on technical education and to universities.

As a mark of his philanthropic achievements and on the advice of the Governor of Hong Kong, in 1982 Mr Tin received the award of a badge of Honour from Her Majesty the Queen.

## 6th ICHSC

The Needham Research Institute is pleased to announce that the 6th International Conference on the History of Science in China will take place in Cambridge from August 2nd to August 9th 1990. The conference will be based in the excellent purpose-built facilities of Robinson College, which is just next to the Institute itself.

Previous conferences in this series have been held at Leuven, Hong Kong, Beijing, Sydney and most recently at San Diego (see report in Newletter no. 5). All were valuable occasions for scholarly interchange, and we hope that the 6th ICHSC will enjoy a like success in intellectual terms. In addition, we feel that there is a special significance in the conference being held in the academic environment in which the *Science and Civilisation in China* project was conceived and continues to flourish.

If you would like to be placed on the mailing list for circulars giving full details of the conference, methods of registration etc., please send a note of your name and address to:

The Conference Organiser,
6th ICHSC,
43 Norwich Street,
Cambridge CB2 1ND

Please do not write direct to the Needham Research Institute. First mailings will be sent out during the summer of 1989.

# A. C. MOULE AND MARCO POLO

In 1808 the Royal Society of Sciences of Göttingen announced that it would award a prize for a critical work of scholarship that would evaluate what Marco Polo and other mediaeval travellers had said about Asia, in the light of recent geographical knowledge. This was significant on two counts. It indicated, first, the persistence of interest in Marco Polo's book in an era of transformed 'world-views'. Between the Renaissance and Enlightenment, the diffusion of his *Description of the World* in numerous printed editions had been both a cause and an effect of the wonder and fascination that Europeans felt towards China. However, by 1800 the sinophile rationalism of 17th and 18th century Jesuits and *philosophes* was pretty well discredited, for a variety of reasons. In its place was a sinophobia championed provocatively by the Romantics, and destined before long to become cultural orthodoxy in the West. Yet the disaffection with things Chinese, while throwing a different light on Marco Polo's reputation, did little to dim its lustre, which shone through the 19th century and beyond. The image of a lively, ingenious merchant-adventurer visiting exotic places, preparing the way for the era of European 'discoveries' and expansion, clearly had its attractions, and was much in evidence.

Secondly, the 1808 announcement can be viewed as marking the beginning of the 19th and 20th century tradition of treating the *Description* according to the disciplined source-critical approach that had been pioneered somewhat earlier at Göttingen and then disseminated from there. One might note that the Polian corpus can be considered a highly appropriate candidate for source-critical work, since the original and the first copy are lost, and in their place we have a multiplicity of extant variant manuscripts – 143, I believe it is, most of which fall into a few clearly identifiable genealogies. Giovanni-Battista Ramusio, the 16th-century Italian publisher well known for his series of accounts of voyages, might even be said to have prepared the first critical edition, for he drew on several manuscript versions, thereby preserving them.

The earliest of the 19th century attempts at reproducing the authentic text were: the first full English rendering of Ramusio's version, translated and annotated by William Marsden, who had been urged to this project by G. E. Lessing; and the 1827 Italian version of G.-B. Baldelli Boni. The second half of the century saw the work raised to a higher level by the French sinologist Gustave Pauthier with the publication in 1865 of his prestigious and scholarly two-volume edition, equipped with a substantial introduction and copious notes drawn from Arabic, Persian, Chinese, Mongol, as well as European sources. This was followed by the highly valuable two-volume English edition, also heavily annotated but with a different emphasis, by Sir Henry Yule, one-time member of the Royal Engineers in Bengal, who, though no sinologist, was a world authority on Asian historical geography and natural history. Yule's translation appeared first in 1871, and a revised edition came out in 1875. A third, further expanded, edition was published in 1903, having been undertaken at the request of his family by the eminent French sinologist Henri Cordier. Being Pauthier's successor at the Ecole des Langues Orientales Vivantes, Cordier saw himself as bearing the mantle of the two major preceding editors.

The work to re-establish Marco Polo's original text reached a culmination in the period between the two World Wars. In 1928 Luigi Foscolo Benedetto, of the School of Classics in Rome, published a monumental volume that incorporated the major variants and provided a solid reconstruction of the Franco–Italian original, which he introduced with a valuable account of the history of research on the text. Part of the originality of Benedetto's reconstruction lay in the fact that he had found and used an important, previously unconsidered manuscript of the *Description* in the Biblioteca Ambrosiana in Milan. This manuscript lent credibility to the Ramusian text, but also raised a new problem, since it was a copy made only in 1795. Benedetto identified it on textual grounds as representing a variant that pre-dated the oldest surviving Franco–Italian version, but it was clear that, if extant, the manuscript from which the Ambrosiana text had been copied would be of considerable scholarly interest and would strengthen the credibility of Benedetto's reconstruction.

The original of the 18th-century copy in Milan was eventually located in 1932 at the Toledo Cathedral library by the scholar and collector Sir Percival David, a Governor of the London School of Oriental & African Studies, and later, in 1935–36, the Director of the International Exhibition of Chinese Art, an event that aroused widespread British interest in China at the time. The new manuscript confirmed the general fidelity of the Milan copy, and David planned to publish a major project around it. To this end, he enlisted the help of a former student of Cordier, the distinguished French sinologist Paul Pelliot, of the Ecole Française d'Extrême Orient. Pelliot (1875–1945) had been doing research on Marco Polo for decades, and he in turn enlisted the aid of the Reverend A. C. Moule (1873–1957), Professor of Chinese in Cambridge, whose father, incidentally, had been bishop of Hang-chou (the Southern Sung capital known to Marco Polo and his readers as Quinsai) and had given help to Yule in the preparation of his edition. Like Benedetto, Moule had been working in the 1920s to re-establish the Franco–Italian text. He now turned his hand to constructing a definitive reconstruction of the text and putting it into English, with indications of the manuscript sources of each textual variation. This he completed during the time that he held his chair (1933–1938).

The full publication, sponsored financially by Percival David and jointly authored by Moule & Pelliot, was to appear in four volumes. The first would include Moule's critical translation, together with numerous auxiliary materials regarding Marco Polo and his family, as well as a list of extant manuscripts. The second would be a transcription of the manuscript discovered in Toledo. The third was to consist of Pelliot's detailed 'notes' – many might better be called essays – on key names in the text, together with similar notes by Moule; and the fourth was to be made up of some 80 plates. The second volume was published by Routledge & Kegan Paul in 1938, and was followed in the same year by the first, a monument to Anglo-French cooperation as well as an invaluable scholarly tool.

Volumes 3 and 4 of the project ran into problems, however. David commissioned the Cambridge University Press to start printing the volume of notes, and 378 pages of galley-proofs were ready when the war broke out in Europe and interrupted work. The type was melted down during the hostilities, and Pelliot died unexpectedly in 1945. After the war, though the galleys survived, the project as originally conceived was for financial reasons no longer feasible. Nevertheless, though the volume of plates was dropped, the notes were eventually published as distinct publications separately under the name of each author. Pelliot's three volumes of *Notes on Marco Polo* were published posthumously in Paris by the Imprimerie Nationale, under the editorship of the Mongolist Louis Hambris (who also published a French translation of Moule & Pelliot's first volume in 1955); Moule's notes were published in 1957 by Cambridge University Press, in a slim volume entitled *Quinsai and other notes on Marco Polo*.

At the beginning of his *Marco Polo's Asia*, Leonardo Olschki observed rightly that: 'Although the philological and exegetical problems presented by the various versions of the text are still far from being wholly or definitely resolved, these two editions – the Benedetto and the Moule–Pelliot – nevertheless give us a sure footing for our exploration of its secrets and commentary upon its contents...'.

It may interest readers of this *Newsletter* to know that there are in Cambridge two sets of archival materials derived from the Moule & Pelliot project.

The first is relevant to the history of that project, and is probably of antiquarian and personal interest only. It comprises four box-files of Moule's papers and correspondence, which may be counted among the less expected holdings of the East Asian History of Science Library. The story of how they were acquired is somewhat curious, and is perhaps not out of place here. In 1957, the year Moule died, he had in press both *Quinsai* and his dynastic chronology, *Rulers of China*, a project originally suggested by Pelliot. It was, I suppose, because he was not well and had had problems with his eyes that he deposited with the Press documents relevant to *Quinsai* and the Marco Polo project generally. Years later, a general housecleaning of the Press cellar was undertaken, and these materials of Moule's were on the verge of being discarded. At that time Joseph Needham's friend Peter Burbidge – later the first Chairman of the East Asian History of Science Trust – was the Production Manager at the CUP, and he noticed them among the things waiting to be thrown away. No doubt well aware of the squirrellish dimension to Needham's character, he offered them to him, and Joseph accepted, so the story goes, 'with aclarity'. The materials include a considerable amount of correspondence, inclu-

ding letters by Pelliot, Percival David, Paul Demiéville, Hambis and Moule himself. There are 90-odd pages of corrected galley-proofs, dating from 1938, of the third volume of *Marco Polo* which was never published. These galleys seem on inspection to be replicated, except in minute details, by the volumes eventually published by Hambis and Moule respectively. From the planned volume three there is also a considerable amount of draft material, typed and in long-hand, by Pelliot and by Moule, but I would be surprised if any of this were not taken into account in the later publications. Many of Moule's working notes are here too, as are copies of articles relevant to his research. I might mention that, included with these papers, but with no evident relation to them, is a unique typescript, apparently revised for publication, of the critical, annotated translation of the *Chung-yung*, prepared by Gustav Haloun, Moule's successor to the chair of Chinese.

A second set of materials derived from Moule & Pelliot's project is located in the University Library in Cambridge. In collating his critical edition, Moule worked from a collection of photograph-copies of Marco Polo manuscripts that represent the major variants of the text. These he acquired in the 1920s and 1930s, and in August 1940 he deposited them in the University Library. They are now among the uncatalogued materials in the Manuscripts Room, where they are located in four large box-files that he somewhat mysteriously labelled 'Yule Rotographs'. I am grateful to Jayne Ringrose of the Manuscripts Department for having brought them to my attention. A finding-list was provided several years ago by Consuelo Dutschke. If one follows the designations found in Moule & Pelliot's first volume, the manuscripts available in copies here are: nos. 1 & 2 in the Franco–Italian version; nos. 3 & 10 in the Court French version; nos. 19, 21 & 30 in the Tuscan version; nos. 33 & 55 in the Venetian version; nos. 78, 85 and 108 (part only) in the Pipino version; the unclassified manuscript fragment no. 143; and nos. 123, 124, 127, 129, 130, 133, 135, 136, 137, and 138 in manuscripts deemed by Benedetto and Moule to be based on a text dating from earlier in the 14th century than no. 1. These copies, together with the three Cambridge renditions of Pipino's text (nos. 64, 65 and 66), represent the main manuscript sources Moule used in devising his critical edition. Also available to him in the Library, of course, were the Ramusio text and other printed editions.

Most of Moule's photograph-copies are on heavy card; they are legible, though obviously not so clear as the originals. As the manuscripts from which the photographs were made are now in libraries across Europe and the United States, a collection of copies in one place may perhaps be of some practical value for scholars working on textual problems in Marco Polo's book.

G. Blue

# SOME EARLY CHINESE MAPS

Chinese geography and cartography is treated in *SCC* volume 3, pp. 497f. and 534f. At the time when that volume was published, the earliest available examples of Chinese maps were the two that were engraved on stone in 1136–37, on the basis of work that had been completed perhaps a century before then. Recent excavations have subsequently brought to light material evidence of a much earlier period, that is of the highest importance.

Of over 100 graves found at Fang-ma-t'an, T'ien-shui (Kansu province), 13 have been dated in Ch'in and 1 in Western Han. Of two documents, amounting to 460 strips, that were found in tomb no. 1 (Ch'in period), one was an almanac, similar to those almanacs found at Shui-hu-ti; the other was a record of the deceased person who was buried in the tomb. He was a military man named Tan, who had seen active service and had then been brought up for punishment on a charge of murder. Entries in the second document make it possible to date the tomb at 239–38 B.C.

Of special interest is a set of 7 maps found in the tomb, written in black ink on four wooden boards. These measured 26 cm in length, and 15 to 18 cm in width; three carried maps on both sides; one of the maps was never completed. The remaining six displayed, with some overlap, the principal features of Kuei prefecture, an administrative unit that had been established in 688 B.C., and was later incorporated in Lung-hsi commandery. Details marked on these maps include the names of 28 settlements, mountains, mountain passes, rivers, water-ways and roads. Places named include both the prefectural capital itself and its subordinate districts (*hsiang*); the distances between various points that are given (in *li*) have been shown to very reasonably accurate. Triangular, circular, crescent-shaped or other symbols indicate features such as mountain peaks, valleys, defiles or buildings; sometimes a note is appended of the types of tree growing in a particular region.

The total area that is covered by this map (M1:9) extends to approximately 270 kilometres east to west by 176 kilometres north to south; the scale has been estimated at 1:300,000. Users of the map are instructed how to set it so as to face the four points of the compass. As distinct from other Chinese maps, north is shown at the head, and south at the foot. This series of seven maps thus includes details of natural topography, administrative organs and economic features, and they are thought to have been drawn for military purposes.

In addition, tomb no. 5 of this group, which is dated in early Han between 180 and 150 B.C., included one fragment of a map which had been drawn on a paper-like substance that now measures 5.6 by 2.6 cm. Fine lines delineate mountains, rivers and roads. Other early fragments of this type of substance were used for purposes of wrapping; this is the earliest piece known to have been used for writing.

For a report on the tombs of Fang-ma-T'an, see *Wên-wu* 1989.2.1–11 and 31; for the Ch'in maps see pp. 12–22 and Plates III, IV. A colour plate reproduces one of the Ch'in maps and the fragment of paper.

Tomb no. 3 Ma-wang-tui (near Ch'ang-sha) was excavated in 1973, and considerable attention has been paid to the collection of texts that was found there. There were in addition three maps, of which one has been described as topographical and administrative, and one as military; the third is said to have shown prefectures and some towns.

The maps from Ma-wang-tui were on lengths of silk, which had been folded several times before enclosure in a box. As a result archaeologists were faced with the delicate task of reconstructing the original forms from the surviving square or rectangular fragments.

The topographical map had consisted of 32 pieces, in various states of preservation, which when assembled together measure 96 by 96 cm. With a scale that has been estimated at 1:180,000, or 1 inch (Han) to the *li*, the map covers some eight prefectures in the southern part of the kingdom of Ch'ang-sha, which was an integral unit of the Han empire (i.e., parts of the modern provinces of Hu-nan, Kuang-hsi and Kuang-tung). The area treated lies between 111 and 112 degrees east, and 23 and 26 degrees north; the map shows the principal rivers, mountains and roads, and over 80 human settlements; different symbols are used to indicate prefectures (*hsien*), districts (*hsiang*) and hamlets (*li*).

The military map from Ma-wang-tui had also been folded, and now consists of 28 fragments, with markings in black and red. As reconstructed, the map now measures 98 by 78 cm., covering a portion of the area treated in the topographical map, with somewhat greater detail for its northern than for its southern part. The scale is in general between 1:80,000 and 1:100,000, and altogether 99 names or symbols identify important features. These include 20 rivers and waterways, of which 14 are named, at least 9 named mountain peaks, and a number of roads. But the main purpose of this map stands revealed in its attention to military matters, such as indications of the disposition, defence lines and command posts of 9 units, and perhaps of posts used for observation and signalling. Human settlements are marked, together with a note of the numbers of their inhabitants, which range from 12 to 108 households; some settlements are shown are being uninhabited.

For a brief account of these maps, see *K'ao-ku* 1975.1,53; for the topographical map, see *Wên-wu* 1975.2,35f. (which includes a reconstruction) and *Wên-wu* 1975.2,43f.; for the military map, see *Wên-wu* 1976.1,18f. (with a reconstruction). Other points of interest are discussed in *Wên-wu* 1975.6,20f. and 1976.1,24f. and 28f.

Writing in the third century, P'ei Hsiu complained that the earliest maps which were available to him, and which dated from Eastern Han (A.D. 25–220), included insufficient information and lacked accuracy and reliability. The recent finds suggest that the examples which were at his disposal were by no means the best maps drawn by Chinese cartographers who lived before his time.

M.L.

# THE CAMBRIDGE HISTORY OF 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*.

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