

BOOK REVIEW

David Pingree, **Catalogue of Jyotiṣa Manuscripts in the Wellcome Library – *Sanskrit Astral and Mathematical Literature***, pp xix + 472, Brill Leiden. Boston, 2004.

The Wellcome Sanskrit Collection is known after the name of a businessman philanthropist, Sir Henry Wellcome (1835-1936), who made systematic collection of manuscripts and books out of his own resources for his South Asian Museum and Library. The collection is very rich in manuscripts of Ayurveda and other branches. This also contains about 1000 manuscripts of *jyotiḥśāstra* (astronomy, mathematics, divination and astrology), representing more than 500 separate texts by about 250 authors. The collections were done through Wellcome's agents Dr. Paira Mall (picked up for his background, interest, proficiency in Indian Languages and for his association as a Royal Physician to the house of Kapurthala, 1911-1913, based also in Amritsar from 1911 to 1921), dealer Bhajan Lal (located at Amritsar and Bharatpur between 1928-1935) and Banarsi Dass and others. Out of the manuscripts collected for this Library, some are copies of manuscripts available from private collection and carried out with the help of agents and dealers. All these manuscripts were piled up in bundles and kept in boxes.

Professor V. Raghavan, well-known Professor of the Madras University, while making his survey of Sanskrit manuscripts outside India made an opportunity to scrutinize some of the collections of the Wellcome Institute and listed about 3000 titles/authors from the collection. He has published his search of the manuscripts in Europe under the title, *Manuscripts, Catalogues, Editions* (Madras, 1964), which contains a list of 4959 manuscripts in London alone.

Dominik Wujastyk, another very good scholar of Sanskrit manuscripts associated with the library and later incharge of the manuscript collection, put a lot of labour in organising the manuscripts by assigning call numbers alongwith Greek letter α , β , γ for paper manuscripts of increasing size, δ for oversize manuscripts and ϵ for palm leaf manuscripts. Two volumes of his *A Handlist of Sanskrit and Prakrit Manuscripts* Vol. 1 (1985) containing a list of 1003 entries and volume II (1998) containing entry numbers from 1004 to 2004, are published from the Wellcome Institute (*Abbre: Handlist*).

Professor David Pingree, a very renowned scholar of the *jyotiṣa* manuscripts and who is equally well known for his *Census of the Exact Sciences in Sanskrit Manuscripts* (*Abbre: Cess*), made a number of visits to this Library and procured photocopies of salient pages of manuscripts from this Institute from 1961 onwards in order to make a descriptive catalogue of *Jyotiṣa* and allied manuscripts. The catalogue is arranged as per his original scheme adopted for his other catalogues. It has three major divisions – *jyotiṣa* and *gaṇita* (astronomy and mathematics), *saṃhita* (divination) and *horā* (astrology). The astronomy again is subdivided into seven types of texts, divination into nine varieties of methods, genethliology into two types – *jātaka* (Greek inspired) *tājika* (Persian inspired), and *muhūrta* into four purposes. There were also a few manuscripts on *praśna*, encyclopaedies, *kośa*, magic, composite manuscripts, *sūcīpatras*. It also contains 13 indexes and an addendum. The manuscript have been arranged serially under these headings, and a concordance list at the end has also been provided for identifying the manuscripts, with the Handlist and the shelf location.

The collection has also identified a few rare manuscripts and are enlisted as follows:

Siddhāntas

Sūryasiddhāntaṭīkā of Bhūdhara
Sarvasiddhāntarāja of Nityānanda

Karāṇas

Grahaṇādhikāra
Brahmatulyaṭippaṇa of Jayavanta

	<i>Siddhāntarahasyodāhṛti</i> of Nārāyaṇa
	<i>Khecarāgamai</i> of Viṣṇu
	<i>Satkarāṇa</i> of Candrāyaṇa
Koṣṭhakas	<i>Tithikalpalatā</i>
	<i>Anantasudhārasasāraṇi</i> of Ananta
	<i>Gaṇitamakaranda</i> of Rāmadāsa Dave
	<i>Devivilāsasārīṇi</i>
Yantra	<i>Yantrarāja</i> of Śrīnātha
Miscellaneous	<i>Bhāgavatajyotiḥśāstrayor</i>
	<i>Bhūgolakhagolavirodhaparihāra</i> of Nandarāma
	Mīra
Mathematics	<i>Ganitapañcaviṃśī</i> of Śrīdhara
	<i>Trisatikā</i> of Śrīdhara
	<i>Amṛtatarāṅgiṇī</i> of Rāmeśvara
	<i>Lilāvativilāsa</i> of Devisahāya
	<i>Bījabhāṣya</i> of Sūrya
Divination	<i>Kāśyapasamhitā</i>
	<i>Śaunakasamhitā</i>
Jātaka	<i>Laghujātakadīpikā</i> of Isvara
	<i>Subodhikā</i> of Sumatiharṣa Gaṇi
	<i>Jātakapaddhatyudāharāṇa</i> of Lakṣmaṇa
	Illustrated <i>Lagnacandrikā</i> of Kāśinātha
	<i>Dāsacintāmaṇi</i> of Rājarsi
	<i>Jātakapaddhati</i> of Dharmēśvara
	<i>Jātakakallola</i> of Raghunātha
Tājika	<i>Varṣaphala</i> of Maṇittha
	<i>Tājikasabdaugha</i> of Giridhara
Iatromathematics	<i>Vṛddhasūryaruṇasamvāda</i>
Prasna	<i>Mahāgamaprasnāsāstra</i> of Kāśīśvara
	<i>Praśnacandēśvara</i> of Sārada
	<i>Praśnasindhu</i> of Vāsavānanda

The manuscripts with same titles in the form of copies/commentaries by authors/commentators have been grouped under the original work. It would have been easier to handle if the names of manuscripts were put after each serial number followed by details of accession number with proper identification of features of each manuscript whether it is a copy or a separate text etc. Of course, each entry of the catalogue contains details of the number of folios with size, complete or incomplete revealing the status of the manuscript, lines in a folia, beginning verse or colophone along with other relevant details. The indexes at the end help at identification to a great extent. This shows to what extent Professor Pingree is meticulous and thorough which has made the work a unique source book for reconstruction of history of astronomy in India. The scholar of *jyotiṣa* and mathematics are indeed grateful to Professor Pingree for bringing out such an important source book useful for preparation of editions and further researches. The catalogue is excellent by any standard, neat in presentation, typography, binding, use of diacritical marks and various other facets, and is a good guide book for concerned scholars. The national and international libraries/centers dealing with the subject will love to have a copy.

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Nandalal Maity, *Acharya Prafulla Chandrer Jibanveda* (in Bengali), Jnan Bichitra Prakashani, 10 Jagannathbari Road, Agartala 799001, Tripura, Price Rs. 175.00

The present volume on P. C. Ray (in Bengali) is a little bit serious in approach among the publications describing the life and works of the great savant since his demise in 1944. P. C. Ray himself made the task easier as he produced his autobiography, *Life and Experiences of a Bengali Chemist* (and also its Bengali version *Ātmacarita*), during 'thirties in which he narrated each and every aspect of his life. Moreover, P. C. Ray was a prolific writer, wrote many subjects, be it on science, society, history, politics, even Shakespeare. These volumes were not reprinted for many years and the scholars find it difficult

to examine his writings from the dust covered corners of library. No one even tried to edit a "Complete Works of P. C. Ray". The available literatures on P. C. Ray are not comparable with those on illuminated scientists of Europe and United States, as different schools of history of science make regular attempts for preparations of biographies by finding new information from primary sources. In India we have good biographical works on S. Ramanujan, S. Chandrasekhar by R. Kanigel and K. C. Wali respectively and are waiting for many others whose birth centenaries are observed within last one decade. We need hard working researchers to unleash many obscure primary documents kept in university records, government-owned papers, families.

P. C. Ray's long life of 83 years was very much chequered with so many happenings that still more informations can be brought out from obscurity. His correspondence with European scientists and Indian leaders of public life, his love and struggle type of interactions with the colonial establishment and above all, his experience with the chemical industries are not duly dealt by any investigator. We believe that overseas science archives, the records of Calcutta University, Government archives and the papers kept in Bengal Chemical and Pharmaceutical Works (BCPW) may help in this regard. BCPW which has just celebrated its hundred years of existence and once the publisher of P. C. Ray's *History of Hindu Chemistry* may come forward with funding responsibility for writing a complete biography of its founder.

It appears that the author of this particular book has faithfully followed P. C. Ray's *Ātmacarita* which was recently reprinted by a Calcutta-based publisher. The author has dealt the subject in fourteen chapters, not exactly chronologically except the early part, but his discussion on P. C. Ray as chemist, entrepreneur, science organizer, educationist and social activist needs further elaboration and in-depth analysis. Even at the very beginning of P. C. Ray's career at Edinburgh University, his involvement in writing two books *India before and after the Mutiny* (1885) and *Essay on India* (1886) requires introspective analysis as he linked himself knowingly or unknowingly with the

mainstream national movement that emerged at Bombay by the way of formation of Indian National Congress (INC) in the same year. P. C. Ray being inspired by his teacher Surendranath Banerjea and also being a son of a zaminder had the mind set-up of taking the colonial rule as an opportunity of furthering the social and economic interest of middle class. His perpetual association with Indian entrepreneurs, with Mahatma Gandhi and Indian science proves the nationalistic aspirations of educated Indians of that time. P. C. Ray was an out and out nationalist by his words and deeds and he maintained his ideology throughout the life. It is interesting to see how P. C. Ray reacted with the extremist faction of Indian National Congress, the *swadesī* movement and the National Education Movement – all came out together in the first decade of twentieth century. It may be recalled that P. C. Ray was not a foundation member of National Council of Education (1906). Though authored a book of Hindu revival (chemical) and also became president of National Council of Education many years later (1924- 1944), P. C. Ray was not in the line of above issues, as to him these were more emotional and will help little in the country's emancipation. It may be argued that his link with Surendranath Banerjea may be a reason for taking stand not with the extremist faction of INC but as he was educated in West and as he was eager to develop Indian chemistry and Indian industry. He remained with the public education system of the colonial government and supported Asutosh Mookerjee's struggle against the government's attempt to subjugate the university. However, P. C. Ray had blessings on Indian Association for the Advancement of Scientific Association as this body sent many students abroad for training in technologies related to industries. He knew that mere ideology will not help the *swadesī* industries. P. C. Ray was not Hindu revivalist in true sense as he was critical to the caste system and also to *māyābādi darśana*. To P. C. Ray, the cause of decline of ancient Indian science lies with the religious and social system, though his analysis was not liked by many, even some of his students. In respect of education, P. C. Ray did not support the boycott call of English education system, the English goods as well; to him, the strategy was to use public education in favour of consolidation and

furtherance of nationalist movement. He was against that education which aims at to produce just a technician without basic science. He was vehemently against *mistrification* of science education as propounded by a section of nationalists of his time. In this connection we may recall how P. C. Ray fought against attempted bureaucratization of chemical services by the way of formation of an All Indian Chemical Service. His note of dissent and counter suggestion of developing chemistry in universities reminds us his “struggle and unity” strategy in the field of science and education. For this he had to pay so dearly. He was never promoted to Indian Education Service. Sometimes he was deliberately excluded in important meetings of chemists organized by the government as we find in the case of a conference for consideration of the organization of chemical researches in India held at Lahore in 1918. Though industrialist and supporter of big industries and science, P. C. Ray was an ardent follower of Mahatma Gandhi except on one or two occasion(s). He was against the Khilafat movement and also against the boycott call. Again, his passion with *carkhā*, austerity reminds us of his closeness with Gandhiji. To him, *carkhā* was a symbol of nationalism, self-reliance, a tool for livelihood of the poors, especially of poor women. His experience with industries set up by him, as well as by his students, made him to understand the political hindrances against the growth of Indian industries. Some of his students, like R. L. Datta who obtained several patents, could not do much in the application in industries. When the noncooperation movement gained momentum under the guidance of Gandhiji, P. C. Ray inclined more and more to political and social activities. Side by side, P. C. Ray was interested in *khādī*. His research with the indigenous herbal colour reminds us of his love and affection to Indian technology and culture.

Though *Acharya Prafulla Chandrer Jibanveda* dealt almost every aspect of P. C. Ray’s life, it could not explore new informations. Let the scholars come forward for examining all important primary sources and prepare a book of complete biography.

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