

## BOOK REVIEW

Renfrew, Colin, *Archaeology and Language : The Puzzle of Indo-European Origins*, Jonathan Cape, London, 1987, p. 346.

Historians of science such as Seidenberg (*Archive for History of Exact Sciences*, vol. 18, 1978) and van der Waerden (*Geometry and Algebra in Ancient Civilizations*, Berlin 1983) have presented powerful arguments for a ritual origin of geometry and mathematics amongst the Indo-European people in the third millennium B.C. or earlier. Theories on the spread of the Indo-Europeans are thus of great interest to the readers of this *Journal*. Colin Renfrew, who is a professor of archaeology at Cambridge University, proposes in his book that an eastern region of Anatolia (what is now Turkey) was a "a part, although not necessarily all, of the early 'homeland' of people speaking a very early form of Indo-European, around 7000 B.C."

Renfrew bases his proposal on linguistic and archaeological evidence. A new approach in historical linguistics called glottochronology has shown that languages change more slowly than had been assumed earlier. Current glottochronology models suggest that the differentiation in the Indo-European language family would have occurred in the epoch for dispersal suggested by Renfrew. The most influential interpretation of the archaeological evidence during the 1970's has been that of Marija Gimbutas who identifies the dispersal with the Kurgan culture and dates its beginning to the 5th millennium B.C. Renfrew marshals many arguments against a notion of migrations related directly to the spread of an archaeological complex and he shows why epochs earlier than that of Gimbutas need to be considered. The archaeological evidence for India is best summarized by Shaffer in a well-known essay in the book *The People of South Asia* Edited by Lukacs, 1984) :

Current archaeological data do not support the existence of an Indo-Aryan or European invasion into South Asia at any time in the pre- or protohistoric periods. Instead, it is possible to document archaeologically a series of cultural changes reflecting indigenous cultural development from prehistoric to historic periods. The early Vedic literature describes not a human invasion into the area, but a fundamental restructuring of indigenous society that saw the rise of hereditary social elites... The Indo-Aryan invasion(s) as an academic concept in 18th- and 19th-century Europe reflected the cultural milieu of that period. Linguistic data were used to validate the concept that in turn was used to interpret archaeological and anthropological data.

The results of the Mehrgarh excavations of the 1970's and analysis of the Amri, Kot Diji and other archaeological complexes have shown that the Harappan tradition can be viewed as a process that goes back to pre 6000 B.C. and evolves through various stages to the mature and late Harappan phases. The urbanization of the Ganga Valley that is usually dated to 700 B.C. can be viewed as a part of the same tradition. All this and literary evidence, as reported in the pages of this *Journal* in a separate article by this reviewer, imply that the question of the chronological evidence in the Vedic literature that had been studied earlier by Tilak, Jacobi, Sengupta and others needs to be reopened. Allusions to the epoch of 4000 B.C. in the Vedic literature as seen by Sengupta and a similar remembrance of the period 6000-4000 B.C. as argued by Tilak in *The Orion* are not inconsistent with the proposed chronology of Shaffer, Renfrew and others.

Renfrew makes the important point that the new, longer chronology de-emphasizes the significance of the shared Indo-European heritage. Local conditions must be sought to explain the development of sophisticated social organizations in Asia and Europe. That this development occurred in different ways in the various Indo-European peoples is thus not surprising.

The longer chronology has important implications for the Seidenberg-van der Waerden view of the rise of early science. Since one cannot now talk of the spread of this science by the dispersal of the people, one must look at processes of diffusion as well as attested contacts between the Aryans, the Hittites, and the Babylonians in the 2nd millennium B.C. and those between the Indians, the Persians, and the Greeks in the following millennium. Doubtless there was cultural interaction amongst the Eurasian peoples in the earlier millennia also.

In conclusion, we appear to be in the midst of a paradigmatic change in our understanding of ancient Indian and Indo-European chronology, history, and science. While one may not agree with several details of the reconstructions proposed by Renfrew, this book opens up several questions for debate that are crucial to our understanding of early science.

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Joachim Becker, *Medizingeschichte in Indien* : D.V. Subba Reddy und das Institut für Geschichte der Medizin in Hyderabad, Köln, 1985

The book is a review of the History of Medicine in India by Joachim Becker, (*Medizingeschichte in Indien*), dealing with D.V. Subba Reddy and the Institute of History of Medicine in Hyderabad, published in 1985. It appears as the 36th volume of the works of the Research Institute of the History of Medicine of the University of Cologne (in short, *Kölner medizinhistorische Beiträge*).

The information was collected in the course of the author's studies at the Medicine Historical Institute of Hyderabad and the Institute of Medicine and Medical Research in Delhi-Tughlakabad. He held numerous conversations with Prof. Subba Reddy and his colleagues for a long time in Hyderabad. From several interviews he collected a picture of Prof. Subba Reddy's personality. He gathered his writings, most of which were available in the central library of medical science in Köln, but some had to be gathered from Subba Reddy's personal collections available at the Indian Institute of History of Medicine. Furthermore, he had many opportunities to discuss with the succeeding director of the Institute, Dr. B. Rama Rao, and his colleagues. His visits to the Wellcome Institute for the History of Medicine (London), a few places of study in Madras and Visakhapatnam and further visits to Pondichery, Madras and Calcutta helped him to check the biography of Subba Reddy and other details of the Institute.

A brief summary of chronological details will be of interest in this connection.

Born at Nellore on 6.4.1899 ; 1916-1917 : Studied at the Missionary College at Trichinopoly ; 1918-1920 : Studied at Pachayappa College in Madras ; 1920-1925 : Studied Medicine at Madras Medical College ; 1928-1929 : Further studies in Dermato-Venereology in London and Edinburgh ; 1932 : First contribution on Medical-historical subject on "Evolution of Physiology" ; 1936 : Beginning of correspondence with H.E. Siegerist. Subba Reddy received an award for his contribution on Antiquity of Syphilis in India for the "Charaka-Memorial Prize" ; Since 1962 Corresponding Member of the American Association of the History of Medicine ; 1943 : Publication on *Phiraṅgī Roga in the 16th and 17th centuries* ; 1944 : Meeting with H.E. Siegerist ; 1947 : Obtained Ph.D. in Physiology on the work "Studies in the Physiology in Vitamin K ; 1947 : Founder Fellow and Secretary of the Indian Association for the Study of Medical History (since

1952 Indian Association of the History of Medicine) ; 1947 : Publication of *History of Native Medicine* and the *The Beginning of Modern Medicine in Madras* ; 1948 : Worked for 6 months as Special Officer for Reorganisation of Medical Libraries ; Occasionally the Head of the Central Institute of Physiology at the Madras Medical College, publication of *Development of Knowledge of Health and Medicine* ; 1948-49 : Advisor of the Scientific sub-committee of the Chopra Committee for Medical Education and Care in India ; 1955-56 : Teacher in the History of Medicine in the University of Madras ; 1956 : Nomination as the first Indian Chair for History of Medicine ; 1956 : Founding of and publication of the *Indian Journal of the History of Medicine* ; 1956-1958 : Director of the first Indian Department of History of Medicine ; 1957-1958 : Additional Principal at the Gandhi Medical College in Hyderabad, Lectures at the Osmania Medical College at Hyderabad on History of Medicine ; 1958-1966 : Director of the upgraded Department of History of Medicine in Hyderabad, Lecture on the History of Medicine at the Osmania Medical College and occasionally at the Gandhi Medical College, Medical Colleges at Warangal, Visakhapatam, Tirupati, Cornum, Bangalore and private medical colleges in Andhra Pradesh as well as at the Andhra University in Waltair and in All India Institute of Medical Sciences in New Delhi ; Secretary of the Telugu Bhasha Samiti (Publication of Telugu Encyclopaedia) ; Vice-President of the Hyderabad Arts Association, Chairman of the Books Committee at the Osmania Medical College, joining the International Society for the History of Medicine (year not known) ; Fellow of the National Institute of Sciences (year unknown) ; 1959-1966 : Vice President of the Academy of Medical Sciences in Andhra Pradesh in Hyderabad ; 1961 : Member of the Advisory Committee for Planning of the Institute of History of Medicine and Medical Research, Delhi-Tughlakabad (foundation stone in 1962) ; 1961 : Fellow of the Indian Academy of Medical Sciences ; 1963 : Foundation of and Publication of *Bulletin of the Department of History of Medicine* (till 1966) ; 1965-1969 : Member of the National Commission for Compilation of History of Sciences ; 1969-1974 : Honorary Director of the Institute for History of Medicine in Hyderabad ; Advisor for the Lakshmi pathi Museum of History of Medicine in Madras (inauguration in 1973) ; 1971 : Foundation and Publication of the *Bulletin of the Institute of History of Medicine* in Hyderabad ; 1979 : Chairman of the National Seminar on History of Medicine in Medieval India in New Delhi.

D.V. Subba Reddy has been a very active fighter for the cause of the history of medicine and his endeavour has been unflinching. Even the outlines of his life are clear enough about his multifarious activities including his researches. It is amazing that in spite of a very busy life, he found time to write as many as 413 papers and 21 books and monographs. One of the important events in his life was

the foundation of the first Indian Department of History of Medicine dating back to 1945. It is equipped with a library, and a photo and microfilms units. His efforts have succeeded in making up a collection of a museum as well. His efforts to spread his message in several international congresses in connection with the cultivation of the History of Medicine have been partly rewarded with success.

A special mention may be made of the meeting Subba Reddy had with H.E. Siegarist, who was a German Scholar with his interest in Sanskrit but later migrated to U.S.A. It was he who had first made a strong recommendation for the founding of such an institute in view of the usefulness of the course.

Subba Reddy excelled as a teacher, an organiser, a researcher, as an indefatigable fighter in the cause of the History of Medicine. As ill luck would have it, the emphasis on the History of Medicine was revised somewhat, in spite of his pioneering work, the emphasis fell on the historical research in Āyurvedic medicine since 1978.

Joachim Becker has contributed a devoted study to the life and achievements of D.V. Subba Reddy.

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