

**HISTORY OF MEDICINE IN SOUTH ASIA
SOME CONCERNS, SOME QUESTIONS**

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Medical history, without any doubt, is first of all history, a historical discipline like the history of philosophy, the history of art, or the history of music. It therefore has the general methods of historical research in common with other historical disciplines. But it is a special history and therefore different from all others, with problems and methods of its own . . .

Medical history, therefore, will study health and disease through the ages, the conditions for health and disease, and the history of all human activities that tended to promote health, to prevent illness, and to restore the sick, no matter who the acting individuals were.¹

H.E. Singerist

The doyen of medical history thus explained the significance and scope of the discipline he so passionately promoted. Earlier the approach to the past was basically medical. He was one of the early few to visualise history of medicine as ‘a critical historical discipline in which historians, philologists, philosophers and physicians collaborated’. He asked new questions: What health conditions were in a given society at a given time? Was there much illness or little? What diseases prevailed? How people lived, the rich and the poor, the master and the slave; under what conditions they produced food and commodities, what their housing was, their nutrition, their recreations? What was done to promote health and to prevent illness? What were the tools – religion, education or both? To these he added the history of hygiene and public health.² He constructed a social

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¹ H.E. Singerist, *A History of Medicine*, Vol. I, OUP, New York, 1977, 6-7.

² H.E. Singerist, ‘The Philosophy of Hygiene,’ *Bulletin of the Institute of History of Medicine*, I, 1933, 323-31

history of medicine not only from the point of view of physicians but that of the patient. How did the patients view the ailment and the cure? How were they treated? At what cost? Singerist presented medical history not only as the concern of history but as ‘the compass that guides us into the future’, or rather as ‘medicine’ *per se*. His was a vision of medicine, not just what medicine has been, but what it is and should be.³ In an age when science and art of medicine has become very complex with specialities and supra-specialities, history of medicine provides a vantage point from which medicine can be seen as a whole.⁴

Singerist was a pioneer but not alone. He represented an era of great technological changes which had brought the world closer. Fielding Garrison, for example, showed concern for ‘the medicine and sanitation of the whole world’.⁵ The colonized world also received attention, thanks to its unique tropical environment and problems. In this genre come Harold Scott’s *History of Tropical Medicine* and Charles Wilson’s *Ambassadors in White*.⁶ These were supplemented by a number of medical memoirs and travelogues which brought hitherto less known areas and its diseases into focus.⁷

The Indian Weltanschauung

How does the above outline fit into the Indian landscape? How did the Indians create, promote and view their medical thought and practices? From time immemorial, the Indian medical men, inspite of their scripture-orientation, have insisted on the supreme importance of direct observation of natural phenomena and on the technique of a rational processing of empirical data. The *Carak Samhita*, an ancient medical text, says: ‘To one

³ Owesei Temkin, ‘Henry E. Singerist and Aspects of Medical Historiography’, *Bulletin of the History of Medicine*, XXXII, 6, 1958, 487-495.

⁴ D.V. Subba Reddy, ‘Evolution of the Study and Writing of History of Medicine’, *Indian Journal of History of Medicine*, VI, 1961, 21-39.

⁵ Fielding H. Garrison, ‘Geomedicine: A Science in Gestation’, *Bulletin of the Institute of History of Medicine*, I, 1933, 2-9, Idem, *An Introduction to the History of Medicine*, Saunders, Philadelphia, 1929.

⁶ H.H. Scott, *A History of Tropical medicine*, 2 Vols., Williams & Wilkins, Baltimore, 1939-42; C.M. Wilson, *Ambassadors in White: The Story of American Tropical Medicine*, Henry Holt & Co., New York, 1942.

⁷ The examples can be seen in Ronald Ross, *Memoirs*, Murray, London, 1923; P. Manson-Bahr and A. Alcock, *The Life and Works of Sir Patrick Manson*, Cassel, London, 1927; Victor Heiser, *An American Doctor’s Odyssey*, Norton & Co., New York, 1936; G.S. Seagrave, *Burma Surgeon*, Norton & Co., New York, 1943, etc.

who understand, knowledge of nature and love of humanity are not two things but one'.⁸
What can illustrate better the links between science and society?

It is generally agreed that the Indian universe has been complex, pluralistic and hierarchical. Unlike the Cartesian world-view, here nature and culture, subject and object were never seen in an adversarial mould.⁹ Pluralism was reorganised but at the core there remained a quest for synthesis and a holistic understanding. This trend is manifest especially in the Indian medical thought and system. Again it is this trend which takes even yukti-vyaposraya bhesaja (rational medicine) to the mirth and mire of metaphysics.¹⁰ How does it take place? From magico-religious beginnings to rationalistic therapeutics and then back to decadence, it must be a fascinating journey. Or is it possible to think of another trajectory? If not, what were the factors responsible for the ups and downs? Was it because of the priestly class and the varnasrama hierarchy? The priests would naturally be interested in supernaturalism and mystification of nature. Why did the medical men bow to them?¹¹ Were there other options? Linear, hagiographical accounts or even philosophical explanations do not suffice. We need critical sociological enquiries.

Similar exercise we require for medieval times. Be it Ayurveda i.e. the knowledge of science (veda) for longevity (ayus) or the Yunani (Graeco-Arab) system, socio-historical explanations would probably be more rewarding and relevant than the metaphysical ones. For example, how the Mutzilites (who based their arguments on reason but without contradicting the Quranic observations) were gradually replaced by the fatalistic Asharites who repudiated rational thought? Al-Hytham's ideas and experiments in optics later degenerated into metaphysical debates. Why could the experimental rigour of a Susruta or Al-Hytham not be institutionalised? As a perceptive scholar explains.

⁸ Debiprasad Chattopadhyay, *Science and Society in Ancient India*, Research India, Calcutta, 1977, 7.

⁹ Ole Brunn and Arnae Kalland (eds.), *Asian Perceptions of Nature*, Curzon Press, London, 1995.

¹⁰ R.C. Majumdar's enthusiastic account of Ayurveda is an example. See D.M. Bose, et. al. (eds.), *A Concise History of Science in India*, INSA Pub., New Delhi, 1971, 213-262.

¹¹ This question is relevant for our own time as well. If a particular political dispensation imposes astro-medicine, should our medical institutions accept it?

A society oriented towards fatalism, or one in which an interventionist deity forms part of the matrix of causal connections, is bound to produce fewer individuals inclined to probe the unknown with the tools of science.¹²

To this was added a highly divisive caste-system very peculiar to the South Asian society. Caste led to the ruinous separation of theory from practice, of mental work from manual work.¹³ Faith and caste were to prove a fatal combination. In late medieval times, this was compounded by an enormous intellectual (cultural?) failure on the part of the ruling class.¹⁴ Abul Fazl, a reliable witness to the Mughal era, mourned.

The blowing of the heavy wind of *taqlid* (tradition) and the dimming of the lamp of wisdom. . .the door of 'how' and 'why' has been closed, and questioning and enquiry have been deemed fruitless and tantamount to paganism.¹⁵

Apart from the above-mentioned concerns of a general and societal nature, one may also ask certain specific questions as Roy Porter does in the context of late medieval England.¹⁶ How was healing practised and who practised it? How was disease perceived? Medical anthropologists have looked into the magico-religious rites, rituals and the shamans. Can these be contextualised historically? Who were the grass-root healers? How did professionalism emerge? What were the contours of medical pluralism? How can one chart the interaction between the great and little traditions in terms of folk medicine and ethno-history?¹⁷ Disease histories are many but we may need to look at them

¹² Pervez Hoodbhoy, *Islam and Science: Religious Orthodoxy and the Battle for Rationality*, Zed Books, London, 1991, 120.

¹³ The intellectual portion of the community being thus withdrawn from active participation in the arts, and how and why of phenomena – the coordination of cause and effect --- were lost sight of --- the spirit of enquiry gradually died out. Her (India's) soil was rendered morally unfit for the birth of a Boyle, a Descartes, or a Newton...

P.C. Ray, *History of Hindu Chemistry*, II, Calcutta, 1909, 195.

¹⁴ Athar Ali, 'The Eighteenth Century – An Interpretation', *Indian Historical Review*, 1-2, 1979, 175-86.

¹⁵ Quoted in Irfan Habib, 'Capacity of Technological Change in Mughal India', in A. Roy and S.K. Bagchi, *Technology in Ancient and Medieval India*, Delhi, 1986, 12-13.

¹⁶ Roy Porter, *Disease, medicine and society in England 1550-1860*, CUP, Cambridge, 1993, 2.

¹⁷ D.V. Hart, *Bumisayan Filipino and Malayan Humoral Pathologies: Folk medicine and ethno-history in South East Asia*, Data Paper No. 76, Cornell University, Ithaca, n.d.

from the patients' eyes?¹⁸ How did the sick evaluate doctors? Was a physician's position just that of a client bound to their patrons in expectation of a respectable income or did a general demand exist for their services among various sections of the society? How did the many distinct and competing practitioners relate to each other? This question is put to in a sharper focus when modern medicine entered new lands riding the colonial wave. Colonialism required bodies to travel from one place to another and this influenced the relations between the bodies and the pathogens. Moreover the colonizing bodies were naturally anxious about their fragility either in the face of larger natural and social environments or in relation to other bodies (indigenous or foreign) that constituted an implicit threat.¹⁹ What were its epidemiological consequences? Sanitation and concerns for public health? Then, how much 'public' was public health?²⁰ Colonial expansion strengthened the alliance between science and state and the concept of state science/medicine emerged. How did it function; what was its impact? Is there anything specifically colonial about colonial medicine? To this we will return little later after a look at the pre-colonial heritage.

Pre-colonial Medicine: Its Texts and Practices

As mentioned earlier, medicine has always been a significant part of the Indian heritage. Flourishing about 2000 BC, the architectural design of Harappa do point to a conscious concern for public health and sanitation. Does the fabled Great Bath of Mohenjodaro (like the Roman bath) refer to hydrotherapy as a therapeutic measure? Unfortunately very little is known of the Indus people. *Atharvaveda* is probably the first repository of the ancient Indian medical lore and these were later transmitted through *Brahmana* texts. It was magico-religious in nature and incantations (*mantras*) were

¹⁸ Elaborating on history of tuberculosis a new work has called for a new kind of history of disease that proceeds 'from the perspective of the patient' rather than the doctor. For details see, Shiela Rothman, *Living in the Shadow of Death: Tuberculosis and the Social Experience of Illness in American History*, Basic Books, New York, 1994.

¹⁹ Alan Bewell, *Romanticism and Colonial Disease*, John Hopkins University Press, Baltimore, 1999, 24.

²⁰ C. Hamlin, *Public Health and Social Justice in the Age of Chadwick: Britain 1800-1854*, CUP, Cambridge, 1998, 1-14.

frequently resorted.²¹ Ayurveda as ‘the science of (living to a ripe) age’, sans *mantras*, appeared around Buddha’s time. The concept of humours or *dosas* which has been central in Ayurveda is nowhere seen in the Vedic literature. Nor does it reflect Hippocratic or Galenic thinking. Ayurveda’s emphasis on humoral ‘balance’, moderation, etc. seem rather closer to Buddha’s ‘Middle Path’. Disease causation in Ayurveda is not only because of humoral ‘imbalance’ (*vaisamya*) but for a variety of reasons like weather, food, emotional agitations, sins from past life and even ‘sins against wisdom’ (*prajna paradha*).²² Its protagonists might have been inaccurate in their knowledge of human physiology but they were extremely good at plant morphology, its medical functions and therapeutics.²³ Both Charak and Susruta put emphasis on direct observation. But unfortunately their texts and later commentaries have no anatomical or surgical illustrations. It is difficult to see how such techniques like rhinoplasty could have persisted purely textually. In any case, ancient medicine or Ayurveda remains a living and fertile area of research and interpretations such as social history of medicine, non-Sanskritic medical practices, religions and folk-healing, barber-surgeon traditions, history of healing places from epigraphic records and other narratives of disease and healing.²⁴

The scenario becomes even more interesting when the Islamic medical men introduced the Galenic tradition. There gradually appeared a hybrid of Muslim-Hindu system known as the *Tibb*. They differed in theory, but in practice both traditions seem to have interacted and borrowed from each other. A fine example of this interaction is *Ma’din al-shifa-I-Sikandarshahi* A.D. 1512, which was authored by Miyan Bhuwah.²⁵ He leaned heavily on the Sanskrit sources and even thought that the Greek system was not suitable for the Indian constitution and climate. From the Islamic side the concept of *arka* entered Ayurveda. Several Sanskrit medical texts were translated into Arabic and Persian, but instances of Islamic works being translated into Sanskrit are rare. The eighteenth

²¹ K.G. Zysk, ‘Mantra in Ayurveda: A study of the use of magico-religious speech in ancient India; in Alper Harvey (eds.), *Understanding the Mantra*, SUNY Press, New York, 1985.

²² Dominik Wujastyk, *The Roots of Ayurveda*, Penguin, New Delhi, 1998, 1-38.

²³ G.P. Majumdar, ‘Health and Hygiene,’ *Indian Culture*, II, 1-4, 1935-36, 633-654.

²⁴ Dominik Wujastyk, ‘Indian Medical Thought on the eve of Colonialism,’ *IAS Newsletter*, 31 July 2003, 21.

²⁵ The manuscript was first printed by Nawal Kishore Press, Lucknow, in 1877.

century is significant because of the appearance of two Sanskrit texts *Hikmatprakasa* and *Hikmatparadipa* which refer to the Islamic system and use numerous Arabic and Persian medical terms.²⁶ The concept of individual case studies and hospitals (*bimaristans*) also came from the Unani practitioners.²⁷ In 1595 Quli Shah had built a huge *Dar-us-Shifa* (House of Cures) in Hyderabad.²⁸ During the reign of Muhammad Shah (1719-1748) a large hospital was constructed in Delhi, and its annual expenditure was more than Rupees three hundred thousands. Numerous medical texts, mostly commentaries, were written during this century, for example, Akbar Arzani's *Tibb-I-Akbari* (1700), Jafar Yar Khan's *Talim-I-Ilaj* (1719-1725), Madhava's *Ayurveda Prakasha* (1734), and *Bhaisajya Ratnavali* of Govind Das. A Christian Mughal, Dominic Gregory, wrote *Tuhafatul-Masiha* (1749), which, alongwith the descriptions of diseases, anatomy, and surgery, contains important notes in Persian and Portuguese on alchemy and the properties of various plants, along with drawings of instruments, and interestingly, a horoscope.²⁹ An outstanding physician of this century, Mirza Alavi Khan, wrote seven texts of which *Jami-ul-Jawami* is a masterpiece embodying all the branches of medicine then known in India.³⁰ Another great physician during the period of Shah Alam II (1759-1806) was Hakim Sharif Khan who wrote ten important texts and enriched *unani* medicines and indigenous Ayurvedic herbs.³¹ Some works were unique and ahead of their time. For example, Nurul Haq's *Ainul-Hayat* (1691) is a rare Persian text on plague, and Pandit Mahadeva's *Rajsimhasudhasindhu* (1787) refers to cowpox and inoculation.³²

A number of European physicians visited Mughal India. Francois Bernier, Niccolao Manucci, Garcia d'Orta, and John Ovington wrote extensively on Indian medical

²⁶ G.J. Meulenbeld, 'The Many Faces of Ayurveda,' *Journal of the European Ayurvedic Society*, 4, 1995, 1-9.

²⁷ S.H. Askari, 'Medicines and Hospitals in Muslim India', *Journal of Bihar Research Society*, 43, 1957, 7-21.

²⁸ D.V. Subba Reddy, 'Dar-us-Shifa built by Sultan Muhammad Quli: The first Unani teaching hospital in Deccan', *Indian Journal of History of Medicine*, II, 1957, 102-5.

²⁹ A. Rahman (eds.), *Science and Technology in Medieval India: A Bibliography of Source Materials in Sanskrit, Arabic and Persian*, INSA, New Delhi, 1982, 57.

³⁰ R.L. Verma and N.H. Keswani, 'Unani Medicine in Medieval India: Its Teachers and Texts', in N.H. Keswani, (ed.), *The Science of Medicine in Ancient and Medieval India*, New Delhi, 1974, 127-42.

³¹ Hakim Abdul Hameed, *Exchanges between India and Central Asia in the field of Medicine*, New Delhi, 1986, 41.

³² A. Rahman, *op.cit.*, 129, 165.

practices. The Western medical episteme was not radically different from that of Indian physicians; both were humoral, but their practices differed greatly. Neither of them was able to develop a comprehensive theory of disease causation, but there seems to be a general agreement that the Indian diseases were environmentally determined and should be treated by Indian methods. Europeans, however, continued to look at the Indian practices with curiosity and disdain.³³ They preferred blood letting whereas the *vaidyas* prescribed urine analysis and urine therapy. But in the use of drugs Europeans and Indians learned from each other, as the works of van Rheede, Sasseti, and d'Orta would testify.³⁴ The Europeans introduced new plants in India that were gradually incorporated into the Indian pharmacopoeia. They have brought venereal diseases such as syphilis which was noticed as early as the sixteenth century by Bhava Misra, a noted *vaidya* in Benaras, who called it *Firangi roga* (disease of the Europeans). Indian diseases received graphic description in Ovington's travelogue.³⁵ The best account of smallpox and the Indian method of variolation was given by J.Z. Holwell in 1767. To him this method although quasi-religious, still appeared "rational enough and well-founded".³⁶ The travellers depicted Indian medical practices more as a craft and one that was governed by caste rules and wrapped in superstition. Yet they could not help admiring the wonder called rhinoplasty (on which modern plastic surgery is founded), nor could they deny the efficacy of Indian drugs. The Indians for their part did not completely insulate themselves from the "other" practices. As the interaction grew in the eighteenth century, the *vaidyas* even took to bleeding in a large number of cases. Yet while the European medical men were gradually

³³ A European travelled, Edward Ives (1755-57) thus writes of the Indian belief that 'man was divided into two or three hundred thousand part; ten thousand of which were made up of veins, ten thousand of nerves; seventeen thousand of blood, and a certain number of bones, choler, lymph, etc. and all this was laid down without form or order, either of history, disease or treatment.' Quoted in H.K. Kaul, *Travellers India: An Anthology*, Delhi, 1979, 299.

³⁴ For details see John M. de Figueredo, 'Ayurvedic Medicine in Goa according to European sources in the sixteenth and seventeenth centuries', *Bulletin of History of Medicine*, 58, 2, 1984, 225-35.

³⁵ A. Neelmeghan, 'Medical Notes in John Ovington's Travelogue', *Indian Journal of History of Medicine*, VII, 1962, 12-21.

³⁶ J.Z. Holwell, *An account of the manner of inoculating for the small pox in the East Indies*, London, 1767, 24.

moving, thanks to the works of Vesalius and Harvey, from a humoral to a chemical or mechanical view of the body, Indians remained faithful to their texts.³⁷

The Colonial Watershed

Western medical discourse occupied an extremely important place in the colonization of India. It functioned in several ways: as an instrument of control which would swing between coercion and persuasion as the exigencies demanded, and as a site for interaction and often resistance. In its former role it served the state and helped ensure complete dominance. The European doctors who accompanied every naval despatch from Europe emerged as powerful interlocutors (for both political and cultural purposes). They not only looked after the sick on board ship and on land, but were also the first to report on the flora, fauna, resources and cultural practices of the new territory. They were surgeon-naturalists and adventure-scientists, roles in which they felt superior in their encounters with medical practices of other people although, intermittently, they did show respect for the latter.³⁸ Increasingly, however, the colonial doctors developed into a cultural force. They began to redefine what they saw in terms of their own training and perceptions. Their work encompassed not only the understanding and possible conquest of new diseases but also the extension of western cultural values to the non-western world. Gradual assimilation or synthesis was not on their agenda.

The colonial discourse on medicine was mediated not only by consideration of political economy but also by several other factors. Polity, biology, ecology, the circumstances of material life and new knowledge interacted and produced this discourse. The emergence of tropical medicine at the turn of the last century is to be seen in this light. It may be argued that tropical medicine itself was a cultural construct, 'the scientific step child of colonial domination and control.'³⁹ In now burgeoning literature, terms like

³⁷ M.N. Pearson, 'The Thin End of the Wedge: Medical Relativities as a Paradigm of Early Modern Indian-European Relations,' *Modern Asian Studies*, 29, 1, 1995, 141-70.

³⁸ Variolation, for example, impressed them most. Dharampal (eds.), *Indian Science and Technology in the Eighteenth Century: Some Contemporary European Accounts*, Impex, Delhi, 1971, 141-63.

³⁹ Lenore Manderson, *Sickness and the State: Health and Illness in Colonial Malaya 1870-1940*, CUP, Cambridge, 1996, 10-14.

tropical medicine, imperial medicine and colonial medicine have often been used interchangeably. But they have specific connotations. Tropical medicine and imperial medicine emphasize the tropics and the empire as units of analysis while colonial medicine stresses the colony. Each may attract different sets of questions. In tropical medicine what ought to be the determining factor – climate, race, geography or all taken together? What was carried over from the old medicine of tropical civilizations into the new tropical medicine? What attempts were made outside Europe to reconcile the older discourse of body humors and environmental miasmas with the new language of microbes and germs?

As for the use of the prefix colonial, post-colonial theorists have tried to challenge and even reject the binary division between the colonizer and the colonized. A recent work talks of the ‘tensions of empire’ based on the universalising claims of European ideology and the limitations faced by the rulers.⁴⁰ This is a smart subterfuge. The meaning of ‘colonial’ is neither elusive nor shifting. What makes colonization real is that even in its rejection there is an implicit acceptance of the standards set by the colonizer.⁴¹ Interestingly enough, a medical historian has described colonialism as ‘literally a health hazard’.⁴² But to dismiss the colonial doctors reductively as the handmaidens of colonialism or capitalism would also be to ignore a more complex, and more interesting, reality.⁴³ The doctors had to assume multiple roles. They had little choice. Still one can ask, what role did the ‘peripherals’ play? Could a synergetic relationship between the core and the periphery develop? These questions assume special significance when viewed against the four centuries of European’s struggles’ in the ‘torrid zones’ and their transition from early explorers, travellers, and traders to conquerors and ultimate arbiters of the trampled tropics. Earlier the ‘tropical discourse’ was viewed through its pioneers; now

⁴⁰ F. Cooper and A.L. Stoler (eds.), *Tensions of Empire: Colonial Cultures in a Bourgeois world*, California University Press, Berkeley, 1997, XI.

⁴¹ B. Surendra Rao, ‘The Modern’ in Modern Indian History,” *Presidential Address, Modern Indian History Section*, Indian History Congress, Calcutta, 2001, 22.

⁴² Donald Denoon, *Public Health in Papua New Guinea*, CUP, Cambridge, 1889, 52.

⁴³ Heather Bell, *Frontiers of Medicine in the Anglo-Egyptian Sudan, 1899-1940*, Clarendon Press, Oxford, 1999, 10.

issues and dichotomies have been given primacy.⁴⁴ However, these still abound in metropolitan theorizations and do not include the study of indigenous (non-settler) societies through their own literature and practitioners.

It is not difficult to see the close relationship between the microparasites and the macroparasites (i.e. the colonisers). Control over one was crucial to the success of the other. Yet, some scholars argue that its role in the ‘stabilisation of colonial rule was far more limited’. This role was conditioned and constricted by the values, opinions and opposition of the indigenous society and the ground realities of colonial economy.⁴⁵ This is a valid but limited argument. Parasitology had given many colonisers (especially those with lofty utilitarian views) a sense of purpose and a practical programme. It enabled and emboldened the coloniser, and sustained with this new will, the microscope supplanted the sword.⁴⁶ Given the political will, it was possible to move and deliver. Haffkine (a vaccine pioneer, 1860-1930) could show charts of success when he had political support and he flopped the moment it was withdrawn.⁴⁷

Mark Harrison rightly argues that the development of public health in India has to be seen ‘in terms of a dynamic matrix of motives and sectional interests within and between European and Indian communities.’⁴⁸ But he finds the scope and effectiveness of colonial medical intervention rather ‘limited’. Widespread indigenous taboos and suspicions, and the reluctance of the Indian rentier class to pay, precluded the possibility of ‘any vigorous programme of sanitary reform’.⁴⁹ In such explanations the role of the state unfortunately gets marginalized. Modern medicine entered India riding the colonial wave and, as a recent critique puts it, colonial medicine did not mean altruism, it meant uncanny

⁴⁴ David Arnold (ed.) *Warm Climates and Western Medicine: The Emergence of Tropical Medicine 1500-1900*, Rodopi, Amsterdam, 1996.

⁴⁵ Mark Harrison, *Public Health in British India, 1854-1914*, CUP, Cambridge, 1994, 228-34.

⁴⁶ Warwick Anderson, ‘Laboratory Medicine as a Colonial Discourse,’ *Critical Inquiry*, 18, 506-29.

⁴⁷ Deepak Kumar, ‘Colony under a Microscope: The Medical Works of W.H. Haffkine,’ *Science, Technology and Society*, IV, 2, 1999, 239-71.

⁴⁸ Mark Harrison, *op.cit.*, 228.

⁴⁹ *Ibid.*, 234.

imperialism.⁵⁰ No wonder, it failed to make the transition from state medicine to public health.⁵¹ And public health itself could never be defined in terms of ‘human rights’, in colonial conditions it was just the management of dangerous bodies. Notions about the ‘danger of contact’ grew stronger with the broad acceptance of microbial pathology at the end of the nineteenth century. Local people came to be seen as ‘natural reservoirs’ of germs. Medical theories that emerged thereupon exonerated the socio-economic conditions and the (ill) effects of imperialism and instead blamed the victims.⁵²

Marginalization

In the given scenario of complete hegemonisation, the possibilities of inter-cultural interactions were rather limited. The indigenous systems felt so marginalized that they sought survival more in resistance than in collaboration. Total acceptance of new knowledge sometimes did mean total rejection of the old. Under such pressure some of the ‘old’ withdrew into their own shell. Yet the majority of Indians had favoured revival and synthesis. There were several areas in which the Western and indigenous systems could collaborate but did not. The former put emphasis on the cause of the disease, the latter on *nidana* (treatment). Microbes and microscopes constituted the new medical spectacle. But the vaidyas put emphasis on the power of resistance in the human body. ‘The improvement of the *Kshetra* (body of the patient) is far more important than the microbe and its destruction.’⁵³ The Westerners were forced to take cognisance of indigenous drugs and the vaidyas took to anatomy, ready delivery of medicines, quick relief and so forth. But the comparison ends here. As a recent critique argues, they were inclined to borrow but could not ‘create a dialogue between the two epistemics.’⁵⁴ Borrowed knowledge seldom develops

⁵⁰ Anil Kumar, *Medicine and the Raj*, Sage, New Delhi, 1998, 218.

⁵¹ David Arnold, *Colonizing the Body*, OUP, Delhi, 1993, 3.

⁵² Warwick Anderson, ‘Where is the Postcolonial History of Medicine’, *Bulletin of History of Medicine*, 72, 1998, 522-30. On the contrary, some scholars argue that there never was a colonial divide between colonisers and the colonised. Instead, within a generation of conquest, local collaborators had emerged who saw that their family’s ways forward was through learning and imitating European ways. Sheldon, Watts, *Epidemics & History*, Yale University Press, London, 1997, 271.

⁵³ *Dhanwantari* (Malayalam), 4, Feb. 1925, 133-5; see also G. Srinivasa Murti, *The Science and the Art of Indian Medicine*, Theosophical Pub., Madras, 1948, 139-42.

⁵⁴ K.N. Pannikar, ‘Indigenous Medicine and Cultural Hegemony: A Study of the revitalization movement in Keralam,’ *Studies in History*, 8, 2, 1992, 283-307.

into organic knowledge. This was true also of the hundreds of doctors produced by the government medical colleges annually. In the melee some really good opportunities were lost. All guns were targeted at the government:

Let the government renounce its special care for English medicines. When fought on equal fields we can see the valour of this unscientific system. Then only we can understand whether native medicine is relevant to science and how far the science of English medicine is magnificent.⁵⁵

Such criticisms were never taken seriously by the practitioners of Western medicine. Perhaps they were too sure of their competence and superiority. They continued to ridicule the 'other'. As a professor of physiology at Lucknow wrote:

The financing of Unani and Ayurvedic institutes by Government in the hope of finding some soul of goodness in them is precisely on a par with the same government financing archery clubs to find out the possibilities of the bow and arrow in modern warfare.⁵⁶

Unfortunately the modern medical men were too sure of their competence and superiority.⁵⁷ The Bhoire Committee on medicine in India (1944) reinforced these

⁵⁵ *Dhanwantari*, 18, Oct., 1920, 146.

⁵⁶ *Indian Medical Gazette*, 62, 1927, 223.

⁵⁷ 'The indigenous system of India has been a cause of disappointment to us not because they are successful rivals of modern medicine, but because we have been able to borrow or steal from them so little that is of real value'.

J.W.D. Megaw, 'Confidential Note on the Working of the Punjab Medical Deptt., Sept. 6, 1928, IHD, 1.1, 464 India, Box 5, f. 34, Rockefeller Archive Centre (RAC).

convictions.⁵⁸ Nevertheless, thanks to the new developments in medicine, health was poised to become a rallying point of unity and a centre of cooperative action.⁵⁹

Health was to come on the political centre-stage in another sense also. A.V. Hill who in 1944 reported on the state of scientific research in India, talked of a quadrilateral dilemma, i.e. population, health, food and natural resources. To him the fundamental problems of India were ‘not really physical, chemical or technological, but a complex of biological one referring to population, health nutrition and agriculture, all acting and reacting with another.’⁶⁰ Colonial India no doubt had its limitations. Could independent India meet the challenge?

Exploring new sub-themes

Canonical medical texts have so far been a favoured area of attention. In India, for example, the texts of Charaka, Susruta, Madhav and Vagbhatta have been commented upon by many scholars.⁶¹ These need to be contextualised. It is possible to think of and attempt a balance between text and the context, between social constructivism and historical relativism. In the Indian context it is even more important. To achieve this a sound knowledge of the classical language in which a text is written is necessary. Then this needs to be related to the numerous commentaries that have followed an established text.⁶² After all in India knowledge advanced more through commentaries written in different periods than through a canonical text. Their critical assessment would require help from philologists and philosophers. It is a daunting task but nevertheless rewarding.

⁵⁸ A prominent member of this Committee was Sir Weldon Dalrymple Champneys (1892-1980). In a lighter vein he composed:

“My name is –er-Eustace, As you see, I’m fine specimen of the Master Race

You may think my conversation inane, but to manage these dirty Indian does not need a brain!

Champneys Papers, GC/139/H. 2/10, Wellcome Institute, London.

⁵⁹ It was argued that things like penicillin and the sulpha drugs could be ‘the ingredients of a new synthesis. But indigenous drugs and methods had no place in it. Diary of Raymond Fosdick (Director, RF. 1938-48). RG. 12.1, RAC.

⁶⁰ A.V. Hill, *Scientific Research in India*, Royal Society, London, 1944; *idem*, *The Ethical Dilemma of Science and Other Essays*, Rockefeller Institute Press, New York, 1960, 375.

⁶¹ P.V. Sharma, *History of Medicine in India*, INSA, New Delhi, 1992.

⁶² Jan Meulenbeld’s gargantuan *History of Indian Medical Literature* is an example.

Coming closer to modern times, a critical study of the travelogues, missionary accounts and the despatches of the surgeon on board a ship or on distant shores, would be extremely relevant. These may bring to fore the nuances of civilizational encounter. As colonisation set in, medicine acquired new dimensions. The colonial medical men, trained as they were in rudiments of botany, zoology, geology and other practical sciences, emerged as colonial scientists. Their works have received good attention in recent years. Yet lot more remains to be done. These colonial scientists showed remarkable understanding of not only the topography, flora and fauna but the cultures they encountered. For example, long before Darwinism appeared or was accepted, a medico-botanist wrote,

It is remarkable that the incarnations of their god Vishnu should be in conformity to the modern views respecting the gradation of animal forms, as displayed in ascending from the less to the more highly developed, so the incarnations proceed from the fish to the tortoise, thence to the pachydermatous boar, the carnivorous lion, dwarf and Ram, etc.⁶³

Others tried to convey to the Indians the message of William Harvey and the Age of Enlightenment that he represented:

True philosophers who are only eager for truth and knowledge never regard themselves as already so thoroughly informed but that they welcome further information from whomsoever and from whensoever it may come. Nor are they so narrow minded as to imagine any of the Arts or Sciences transmitted to us by the Ancients in such a state of forwardness or completeness that nothing is left for the ingenuity and industry of others. . .Neither do they think it unworthy of them to change their opinion if truth and undoubted demonstration require them to do so; nor do they esteem it discreditable to desert error though sanctioned by the highest authority.⁶⁴

Could this message be appreciated by the Indians, and if so, how and to what extent? This would be equally valid for other Asian societies and cultures as well. The Indians accepted British law without much fuss but not British medicine. The response was

⁶³ J.F. Royle, *An Essay on the Antiquity of Hindoo Medicine*, Allen & Co., London, 1837, 178.

⁶⁴ G.R. McRobert, 'William Harvey's Message to India', *The Indian Medical Gazette*, April 1929, 225-228.

basically three-pronged: (a) conformism, (b) defiance, (c) quest for alternatives. Several questions emerged in the debates at both national and local forums. Was indigenous medicine to be patronised because it was found to be ‘cheap’ and ‘popular’? What were the ‘pressure groups’? Was there actually a protest against modernisation of Indian medicine? Did the voice of ‘defiance’ end up being a voice on ‘defence’ of the indigenous system or was it also able to launch a critique of the western medicine at a deeper level? In any case the West loomed large. It was difficult to oppose the West, even more difficult to ignore it.

Here one may pause to reflect on how did different colonised societies respond to the colonial medical interventions. For this purpose, in-depth comparative studies are required. The Dutch incursions in East Asia, for example, created a ‘Dutch School’ of physicians as opposed to the traditional ‘Chinese School’.⁶⁵ Exchange in terms of medical ideas may not have been vigorous but the early colonial medical men did produce a number of medical-ethnographic, climatological and topographical descriptions. Some of these were of outstanding scientific value while some reinforced or even created myths about racial and physiological differences. The ‘natives’ had no means to defend themselves; there was (perhaps still is) no level field, much less level pegging.⁶⁶ In shamanistic healing human body is thought of as a microcosm that is constantly influenced by the macrocosm. And what happens within the microcosm is believed to affect the macrocosm. Thus, breaches of adat (customary rules) may cause natural disasters or epidemics. This etiology raised doubts and invited derision. Yet some recognised the time-honoured curing devices of traditional Javanese and Indian health care. The meridians used in acupuncture are very real links in the nervous system and the main chakra (energy centres) along the susumna (spinal column) in yoga theory do correspond to the main glands of the body.⁶⁷

⁶⁵ Peter Boomgaard, ‘Dutch Medicine in Asia, 1600-1900’, in David Arnold (ed.) *op. cit.* 1996, 42-46, Note 44.

⁶⁶ Deepak Kumar, ‘Unequal contenders, uneven ground; medical encounters in British India, 1820-1920, in Cunningham and B. Andrews (eds.), *Western Medicine as Contested Knowledge*, MUP, Manchester, 1997, 172-190.

⁶⁷ Ina E. Slamet-Velsink, ‘Some reflections on the sense and nonsense of traditional health care’, in P. Boomgaard et.al. (eds.), *Health Care in Java*, KTLV, Leiden, 1996, 65-80.

Unlike in India where there was huge distance between the coloniser and the colonised, in colonial Taiwan the government was much more interventionist. Here the traditional pao-chia system was integrated with a modern police network and was also utilised as the lowest level of public health administration.⁶⁸ This system of collective responsibility was effective yet oppressive. Its chief proponent was Goto Shimpei whose concepts of society and state were basically 'biological'. Had A.V. Hill this example in mind when he referred to India's problems as basically 'biological'?⁶⁹ In all the East Asian societies, rapid post-war development has created sophisticated modern healthcare systems. Yet at the same time each society has maintained traditions of medical practice stretching back over centuries with a shared Confucian heritage, Daoist medical lore and useful folk wisdom resulting in linked forms of traditional Chinese medicine.⁷⁰ In China modern nationalism rather helped. It offered 'license both to cultural iconoclasm and to cultural nationalism – the one to destroy the old culture as harmful to the nation, the other to cherish it as the hallmark of the national genius'.⁷¹

Apart from the forays into the dichotomies of cultural texts which has enormous relevance for public health debates, there are several other sub-themes which call for attention. How and to what extent medical pluralism is desirable?⁷² Acceptance of differing views may on the whole be encouraged but can one tolerate certain particular approaches like witchcraft or the Nazi medical experiments?⁷³

⁶⁸ One *chia* was made up of ten households, and one *pao* was composed of ten *chia*. The system was used to prevent epidemic diseases like plague. Kohei Wakimura, 'Mortality and Public Health under the Colonial Rule: India and Taiwan', *Osaka City University Economic Review*, 34, 1, Oct. 1998, 1-16.

⁶⁹ See ref. No. 60.

⁷⁰ Ian Holliday, 'Traditional Medicine in Modern Societies,' *Journal of Medicine and Philosophy*, 28, 3, 2003, 379-389.

⁷¹ The first important patron of 'reformed' or 'scientificized' Chinese medicine was Yen Hsi-shan, the Governor of Shansi. In 1921 he set up a 'Research Society for the Reform of Chinese Medicine', which would try to combine the best features of the Chinese and Western medicine.

R.C. Croizier, 'The Ideology of Medical Revivalism in Modern China', in Charles Leslie, *Asian Medical System*, CUP, California, 1977, 343-44.

⁷² For critical appraisal see, S. Cant and U. Sharma, *A New Medical Pluralism?*, UCL Press, London, 1999; R. Porter (ed.) *The Popularisation of Medicine, 1650-1850*, Routledge, London, 1992.

⁷³ As Ernst argues, 'one has to steer between the Scylla of imposing the well-trying and supposedly superior scientific criteria of bio-medicine and the Charybdis of leaving the public exposed to potentially unprofessional, unethical and fraudulent practices'. W. Ernst, *Plural Medicine: Tradition and Medicine*, Routledge, London, 2002, 1-18.

Long ago Thomas McKeown had argued for a sociological approach instead of a linear one. He called for a medical history with ‘public interest put in’.⁷⁴ In addition history of medicine must take cognisance of issues like gender and health, health and business, drug industry and bioethics, etc. Another area meriting attention is that of chronic diseases and disabilities. We need to move away from excessive obsession with toxicology and pathology and think of occupational health hazards and environmental medicine.⁷⁵ Who can forget the Bhopal tragedy of 1984? Industrial technology has probably killed more people than military technology. There are new developments, for example, nanotechnology. These fine tools often play the lead role in the patient’s treatment. Instead of the technology being just a tool in the physician’s hands, the tool becomes the focus of the care and the physician becomes the mechanism by which the tool is applied. The questions of law, technology and ethics here get intertwined.⁷⁶ In fact medicine itself emerges as techne, a concept that integrates theoretical, practical and evaluative aspects and bridges the conceptions of medicine as science and as art.⁷⁷ What a canvas and what a feast! I trust the historians would rise to the occasion.

⁷⁴ Thomas McKeown, ‘A Sociological Approach to the History of Medicine’, *Medical History*, XIV, 1970, 342-351; Reiterated in D. Porter, ‘The Mission of Social History of Medicine: A Historical View’, *Social History of Medicine*, 7, 3, 1995, 345-359.

⁷⁵ Paul Weindling (eds.), *The Social History of Occupational Health*, Croom Helm, London, 1985, 6.

⁷⁶ Lars Noah and Barbara Noah, *Law, Medicine and Medical Technology*, Foundation Press, New York, 2002.

⁷⁷ Bjorn Hofmann, ‘Medicine as Techne: A Perspective from Antiquity’, *Journal of Medicine and Philosophy*, 28, 4, 2003, 403-425.