

SCOPE OF STUDY OF VETERINARY SCIENCE LITERATURE IN ANCIENT INDIA

V. K. SHARMA

Dean, College of Veterinary Sciences
Haryana Agricultural University
Hisar 125004

The theme chosen for the symposium is of great importance because it aims at searching the roots of scientific thinking in India's past veterinary science literature and also studying Indian literature in correct historical perspectives.

As at present, there exist two extreme attitudes with regard to assessment of growth of knowledge in India.^{1,2} One group regards all the available Indian knowledge as mere garbage, outright deadweight without content of science whatsoever, and recommends the study of Western literature alone to provide us the requisite stimulus. The other group takes the extreme position of describing the Indian literature as the sole source of all the current knowledge and recommends its study alone to enable us to match and excel all the developed nations even in the discipline of science. Given this opportunity of sharing my views with you, I wish to devote some of the time to searching the reasons for the existence of these unhealthy attitudes, leading to some kind of a compromise.

Gautama in his book *Nyāya Sūtra*,³ believed to have been created in fourth century B.C.,⁴ referred to perception (*pratyakṣa*), inference (*anumāna*) and comparison (*upamā*) as valid methods of cognition, besides verbal knowledge. Implied in this is that whatever is written in scriptures may not necessarily be considered absolute truth, rather the validity of knowledge is subject to assessment by these methods.⁴ The extent to which these methods free the observation from personal bias and create objectivity, they can be called scientific, and they were employed in the preparation of several scientific books, including *Caraka Saṃhitā*,⁵ in medicine.

Despite the evolution of scientific method at such an early period of history, the growth of scientific knowledge did not keep pace with time because of several constraints. Character of education at that time was elitist, because of the social taboos as well as the medium of instruction being Sanskrit.⁶ Besides, writing material was yet to find wide use, so that the tradition of oral transmission of knowledge, generation after generation, was sustained. It is no wonder then that the ancient literature was created in the form of verses, best fitted to be memorised. In the pre-British India, the technique of metre formation was taught as

an essential part of the course curriculum.⁷ We, at the present stage of knowledge, may well appreciate that writing is the best form of collection and preservation of information ; its deficiency then further restricted the existing narrow base of knowledge.

To elaborate on the elite character of education at that time, I would like to take you to the period of Buddha, 2500 years ago, at which time the process of systematization of knowledge started. In the next one thousand years, sufficient literature had been created, *viz.*, compilation of the six systems of philosophies, legal codes, several specific scientific books like *Caraka Saṃhitā* and *Suśruta Saṃhitā* in medicine, *Purāṇas* and Epics for common masses, *etc.*⁸ This most productive period also happened to be the period of the hardening of social stratifications, so much so that the people from lower castes, the sole care-takers of the economic activity for the society, and the female counterparts from all the four classes were being progressively debarred from acquiring knowledge.⁹ Common people obtained the knowledge of production techniques from their parents, priests in the temples who would teach them the bare minimum knowledge of arithmetic, and reading of Epics and *Purāṇas*. This is how religion became the way of life.

With the outright exclusion of the participation of the major section of society, the desired feedback for further growth was not coming. This led to stagnation, the natural outcome of which was ritualisation of practices. This was the state of affairs when Britishers took command of the administration of India. Exposed to the methods of science, amply enriched by newly investigated tools for experimentation, they were then riding the crest of renaissance. They were the products of modern schools, wherein they were taught to adopt pragmatic attitude to the existing source data. On the other hand, they found in India that the places for learning at lower levels were *paṭhśālās*, temples and *Mādrāssās*, wherein knowledge of writing, arithmetic and reading of religious books was amply provided. For higher education, accessible only to a section, media of instructions were elite languages of Persian, Sanskrit and Arabic. Component of science was minimum. The Britishers started considering Indian education system as irrelevant. Several Indian intellectuals, who were tired of stagnation in Indian progress then, also saw a hope in British pragmatism and joined the chorus of describing Indian literature, customs and everything as obsolete. This is how the first group of intellectuals came into existence. The foundation of modern education was thus laid not by reconstructing the old, as it should have been expected in the pragmatism of renaissance, but by the complete uproot of the knowledge, possessed by the masses. As an outcome, a new section of English elite was added to the existing Sanskrit, Arabic and Persian elite.

During the struggle for Independence, the Britishers highlighted the lack of science and polity in Indian traditions and took the plea for not granting the self-

rule. To defeat this logic as a demand of the time, a second group of intellectuals rose to prominence. It took upon itself the responsibility to reinvestigate Indian history. As a reaction, they overplayed their role and went to the extent of describing not only polity but every bit of knowledge, even modern science, to have originated in India.¹⁰

Subsequently, a compromise was witnessed between the two schools of scholars, cleaving Eastern and Western knowledge and describing it respectively as metaphysical and material. It is no wonder then that in veterinary science also, we are overshadowed by this attitude. All the literature and orientation in this discipline of science are in English and the history of this subject is European.

The hesitation on the part of the Indian scholars in relating scientific subjects to the growth of knowledge is not a pragmatic attitude. The sustained history of 3000 years is, in itself, sufficient to demonstrate that material development through science and technology did take place in this subcontinent. These developments, though empirical in nature, have become a part of our national heritage, preservation of which is considered to be the prime goal of our education.¹¹ What we need is not a butcher's axe to slaughter the growth of Indian knowledge, but expert surgeon's knife to remove the deadweight existing in the form of obscurities and superstitions. Read¹² rightly pointed out that "Modern science is like a furnace, through which we need not fear to put our precious love. The rubbish will be burnt up, but the purified and the glistening treasure will remain".

In this respect, I consider this symposium as the need of the hour, in this post-Independence era. Realising such need, the Indian National Science Academy is committed to sponsor studies on history of science in India. In fact, it publishes the *Indian Journal of History of Science* for the purpose of revealing duly synthesized empirical information contained in ancient treatises. Researches into the past growth of science have revealed that substantial progress was made in the fields of astronomy, mathematics, physics, chemistry and human medicine.

Before I conclude, I wish to underline the expected value of this exercise in associated areas also. Firstly, the cultivation of scientific temper among the people is an important component of our education.¹³ Acquaintance of our people with the scientific basis of past practices and with the relevant literature would lead them to realise that the concept of scientific temper is not foreign to Indian soil. Strong adherence of the Indian people to indigenous practices is well known and their use alone can help us cultivate in them the desired values. Secondly, scientific literature in this subcontinent has similar roots, be that available in any Indian language. When the rich literature in Sanskrit, Tamil, Telugu, Kannada, *etc.* would be brought to the mainstream to produce comprehensive curriculum for

our students, these languages themselves would at once acquire the respect they deserve. In the long run, it may prove to be an important tool for promoting national integration.

NOTES AND REFERENCES

- ¹ Landed aristocracy represented in Bengal by Raja Ram Mohan Roy, Devendra Nath Tagore and K. C. Sen and in Bombay by G. K. Gokhale, D. B. Narojee and Pherozshah Mehta could be considered the spokesmen of outright superiority of the West. Macaulay remarked 'a single shelf of a good European library was worth the whole native literature of India and Arabia'.
- ² Swami Dayanand, B. G. Tilak and Aurobinda Ghosh sought glorification of Indian past. Excavation of advanced civilization at Harappa and Mohenjo-daro (Marshall, J., *Mohenjodaro and Indian Civilization*, London, 1931) provided further impetus to this trend.
- ³ *Nyāya* is one of the six orthodox philosophies of Indian thought, termed *Ṣaṭadarsāna*, the other five philosophies are *Sāṃkhya*, *Yoga*, *Vaiśeṣika*, *Mīmāṃsā*, and *Vedānta*.
- ⁴ Raju, P. T., *The Nyāya and the Architectonic of Logic in Structural Depth of Indian Thought*, South Asian Publishers, New Delhi, 1985, pp. 192-250.
- ⁵ Mahadevan, T. M. P., Philosophical Trends in Relation to History of Sciences in India, *Indian J. History of Science*, 4, 27-41, 1969.
- ⁶ Majumdar, R. C., Raychoudhuri, H. C. and Datta, Kalikinkar, *Dawn of New India in An Advanced History of India*. Part II. Macmillan, India, 1967, p. 806.
- ⁷ Piṅgalā, Ācārya of Kauṭilya period is authority of prosody.
- ⁸ Bishop, D. H., in Introduction to *Early Indian Literature and Thought in Indian Thought*, New Delhi, 1975, p. 13.
- ⁹ Chattopadhyaya, D. P., *Social Function of Indian Idealism in What is Living and What is Dead in Indian Philosophy*, Peoples Publishing House, Delhi, 1976, pp. 171-215.
- ¹⁰ Arya Samaj, founded by Swami Dayanand in 1875, in several respects represented trend of reinvestigating Indian History beyond the logical dimensions.
- ¹¹ National Policy on Education-1986 commits itself to preservation of national heritage by delving ancient fund of knowledge and relating it to contemporary realities.
- ¹² Cited by H. C. Perera in *Indian Vet. J.*, 17, 261, 1941.
- ¹³ Para 8.5 of National Policy on Education-1986 emphasises on value based education by eliminating obscurities, religion, fanaticism, violence, superstitions, and fatalism.