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THE ETERNAL GLORY OF AYURVEDA

IN the inscrutable Providence of political conflicts among nations and the resulting domination of one civilisation over another the cultural heritage of the fallen nation very often fails to get due recognition and support from the new Government and its agents and in consequence becomes decadent by sheer discouragement and neglect. This has been the fate of the Ayurvedic system of medicine during the last over one century. The further establishment of Western medicine as the official system enjoying the sole monopoly of State patronage till very recently has made matters more difficult for the practitioners of the indigenous systems of medicine. This circumstance has driven the best brains of the nation from cultivating their cultural heritage.

During the last fifty years, however, patriotic attempts have been made by interested individuals as well as public bodies to get fairplay and due recognition for the National healing art which was performing its duty successfully before its replacement without adequate reason and enquiry by the more costly Western system. The writer has been taking a purely scientific and especially chemical interest in this subject and has profited by taking part in the Fourteenth All-India Ayurvedic Conference, Colombo, 1924; in the Second Karnataka Ayurvedic Conference, Bangalore, 1926; and in the Twenty-first All-India Ayurvedic Conference, Mysore, 1930; in addition to professional discussions with Ayurvedic practitioners, and reviews of reports published by the various committees of enquiry appointed from time to time into the indigenous systems of medicine and their drugs.

In view of the recent rather acrimonious controversy in the Madras Daily Press, over a recent alleged public announcement by the Honourable Minister for Public Health of her intention to encourage the indigenous systems of medicines, the writer welcomed an opportunity to place his own scientific impressions on this subject for the patriotic consideration of his fellow-workers in modern scientific pursuits.

It should be remarked at the outset that it is to the lasting credit of the votaries of the ancient Indian system of medicine that they called their professional art by the name of Ayurveda (*Ayur* = life, *veda* = scientific knowledge), that is, the science of life and of healthy longevity. Medicine in their eyes was not a catalogue of makeshift devices to get over disease and re-establish bodily ease, but it was the synthetic embodiment of all the scientific facts underlying and regulating the life of man in its varied physical, physiological and psychical aspects and stages, in a word, the science of life as a whole.

To the critical student, the *Vedas*, which form the holiest of Hindu scriptures, are known to be important treatises on medicine and surgery, the *Rigveda* dealing mainly with the former and the *Yajurveda* and *Atharvaveda* with the latter. These three *Vedas* are the principal sources of Ayurveda. With these as foundations, fundamental treatises of Ayurveda have been written by Charaka, Susruta and Vagbhata. Among the important branches of Ayurveda treated in these works are, (1) the science of pulse examination, (2) the science of bacteriology and (3) the science of vivisection.

The science of pulse examination formed the basis of the doctrine of *Tridhatu* or *Tridosha*, popularly known as the *vata*, *pitha* and *kapha*.

These are supposed to represent the respiratory, circulatory and nervous mechanisms of the human system and the maintenance of bodily health is believed to depend upon a perfect equilibrium and interdependence of these three essential functions.

The Ayurvedic writings of Bodhayana, Kausika and others are full of references to different kinds of bacteria relating to different diseases.[1]

Regarding vivisection, it is interesting to know that the sacrificial texts of *Yajurveda*, especially the *Adhana panchaka* of the *Srowta bhaga*, deals with nothing but vivisection not of some sporadic instance of the animal world but of a systematic and graded study ranging from birds and reptiles upto man himself who is the crown and completion of all living creation with clear references to as many as forty different species of the animal kingdom.[2] In such studies the subjects to which importance was attached were of three kinds:—(*a*) the functioning of individual visceral organs, (*b*) the five main physiological systems of alimentary-circulatory, respiratory, cerebro-spinal, autonomic, and the genito-urinary, called respectively in Samskrit as *annamaya*, *pranamaya*, *manomaya*, *vignanamaya* and *anandamaya kosas*, and (c) the phenomenon of sex metamorphosis which is still a mystery to modern scientists; besides various other interesting studies relating to the therapeutic action of certain drugs on animal bodies. These are fully explained in the *Soma panchaka* of *Srowta bhaga*.[3]

As the Calcutta University commissioners truly observe in their Report (Vol. V, p. 58), "the ancient system of Indian medicine possessed an imposing treasure of empirical knowledge and technical achievement which cannot be safely ignored even in these days of rapid progress". The chief difficulty, however, lies in the fact that all this learning is written in Samskrit without a knowledge of which it is difficult to get at the originals. Owing to long neglect the art has decayed along with the practitioners but in the interests of knowledge it should be resuscitated and made efficient in practice by taking the fullest aid of modern scientific knowledge and vitality.

As *Rajamantrapravina* P. G. de Souza put it before the Mysore Ayurvedic Conference,[4] "it is imperative that every university should open a department of Indian Medicine not only to qualify persons wishing to do so but to carry on research in order to make the Indian system of medicine fully self-sufficient and efficient. It is rather strange that a proposal to establish a chair of Indian Medicine is often met with a chorus of opposition on the plea that such activities are not consistent with modern traditions though people have no objection to create chairs in fanciful subjects like archæology or palæontology. The training of Ayurvedic practitioners should include a study of the general principles of all sciences connected with medicine. The science of Ayurveda itself should be subjected to constant examination in the light of modern scientific methods and a spirit of growth and vitality infused into it."

So much for the essential value and necessity for the restoration and development of Ayurveda on its original foundations. In this respect as the President of the same Ayurvedic Conference remarked,[5] "it should be borne in mind that the official system of Western medicine is constantly trying to evolve better methods of diagnosis and sounder methods of treatment and forge new weapons of precision to combat diseases. In fact for this purpose they have absorbed in their practice many medicinal agents from the Ayurvedic materia medica, *e.g.*, *Kutaja* (Kurchi) and several others. In fact, when Ayurveda was official and flourishing in this country the great living maxim of Charaka was well kept in mind by every physician :

तदेव युक्तं भैषज्यं यदारोग्याय कल्पते ॥

(Whatever is conducive to the cure of diseases is the proper remedy.)

Looking at the matter from a chemical point of view one is struck by the large number and variety of natural products employed successfully as curative materials by the Ayurvedic practitioners as a result of the immensity of valuable therapeutic knowledge of these accumulated by centuries of observation. It has been the practice among advocates of indigenous drugs for use in the Western system of medicine, to extract some of these drugs for what are known as active principles with a view to employ the latter for the same purposes as the crude drug. This practice, which had currency for some time, soon proved dangerous as it was frequently found that the extracted principles very often had not even a fraction of the efficacy of the crude drug. As has been shown recently by Miss Irani in the case of Kurchi seeds the constituents of a crude drug responsible for its curative action may be in a different and much more complex stage of combination than the substances usually isolated from them in the form of the so-called active principles.[6]

The question therefore of substitution of Ayurvedic drugs by their so-called active principles may be fraught with dangerous consequences and hence researches on indigenous drugs should be undertaken with simultaneous proper arrangements for systematic clinical trials of extracts or principles prepared from them.

Besides the chemical aspect of indigenous drugs the botanical and horticultural aspects require to be attended to also. Without going into fuller details of other aspects of the matter one may conclude that it is the imperative duty of the Indian Government as well as of the practitioners of Ayurvedic medicine to develop its usefulness and hidden wisdom with the aid of all modern scientific knowledge. This is best done by the establishment of Ayurvedic Colleges wherein full facilities for the cultivation of medicinal plants, their proper characterisation and their investigation by organic and biochemical methods and their application in medicine by clinical trials will be provided. The main responsibility is on the practitioners of the profession and on scientists in general who should organise the necessary professional associations and laboratories and seek governmental assistance on the financial side. In that way only lies the surest road to establish the fundamental glory of Ayurvedic Medicine not only in India but in the whole world as the soundest and yet the

most inexpensive system of medication ever propounded.

All the above arguments regarding Ayurveda apply with equal force to the Siddha and Unani systems of Indian medicine which are based on Ayurveda as pointed out by the late renowned Janab Hakim Ajmal Khan Bahadur in the scheme of the Ayurvedic and Unani Tibbi College established at Delhi as an immortal tribute to his professional patriotism.

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1. *Report of the Twenty-first All-India Ayurvedic Conference, Mysore*, 1930, p. 75. 2. *Ibid.*, p. 80. 3. *Ibid.*, p. 81. 4. *Ibid.*, p. 25. 5. *Ibid.*, p. 39. 6. *Curr. Sci.*, 1946, **15**, 106

EMPIRE SCIENTIFIC CONFERENCE

ON the occasion of the Opening Ceremony of the Royal Society Empire Scientific Conference held in London on June 17, His Majesty the King declared:—

It gives me great pleasure to be here to-day to open the Empire Scientific Conference, and to greet the delegates. It is the first Conference of its kind but I hope it is destined to be the beginning of an era of closer contact in scientific affairs within the Empire. Nothing can take the place of personal contacts. However clearly a man may write, the spoken word has a directness of appeal which cannot be achieved in any other medium.

I am, therefore, very glad to know that you will discuss whether there should be more such meetings as this Conference and this is a question which, I do not doubt, you will answer in the affirmative. Furthermore, I hope that you will arrange meetings of a more specialised character; and that, whether the meetings be general or related to specific activities, they should not always be held in London but periodically in one or other of the capital cities of the Empire.

We have recently emerged from a terrible war in which, with God's help, we and our Allies were victorious. For six years, the means of waging war and securing peace have filled our minds and occupied our days. Our energies were concentrated for the most part upon destroying the power of our enemies. Not only had old weapons to be continually improved, but new ones had to be devised, and in this work the scientists played an essential part. But not all the work of scientists had destructive ends in view. Great advances have been made which are of the highest importance to civilisation in times of peace. They cover a vast range and I will mention only one or two of the more important.

In Penicillin we have a powerful means of fighting disease, the potentialities of which have certainly not yet been fully explored. New insecticides enable us to control and perhaps to defeat the malarial mosquito.

We have increased our knowledge of the effects of shock on the nervous system and of the reactions of the human body to rapid changes of temperature and pressure. We have made great strides in the discovery and production of organic chemicals and synthetic drugs.

Our necessities have led us to make substantial advances in agriculture and veterinary science. We are also better able to forecast the weather, a development which has been, and must increasingly be, based upon international co-operation. It is, of course, of great importance to the growth of civil aviation. So, too, with Radar, which has developed for our protection from attack by hostile aircraft, will contribute greatly to the safety of navigation by air and sea. New methods of wireless communication have been evolved, and electronic methods have been adapted to the timing of events which occur so rapidly as to be beyond the scope of any purely mechanical system. Jet-propulsion has opened up the possibility of flight at speeds greater than that of sound.

Finally, the production of the atomic bomb through scientific prediction and scientific collaboration has brought home to the world with terrifying directness the fact that the increase in man's knowledge of the material universe may be fraught with infinite possibilities of good and evil. This must never be used as an argument against scientific research. It should rather lead us all to seek for ways and means of increasing our respect for moral principles and to endeavour under God's guidance to reject the evil and choose only the good.

There is good reason to believe that the nearness of the war to the civilian population in their homes and in their daily lives, has brought about an awareness of the power of the scientific method and a realisation that what has helped to win the war will also be of service in making the world healthier, happier and more prosperous. We now have to make good the wastage of the last six years and restore our shattered economy, and scientific research must play a great part in reconstruction. It is, therefore, very gratifying to me to note that my Governments in the United Kingdom and in the Dominions and India have all made provision for increased expenditure upon scientific education and research, in spite of many other calls which they will have to meet. We must see to it that the available resources, both in money and manpower, are efficiently applied.

The Empire is a laboratory richly stored with materials and it covers a very wide range of terrestrial and climatic conditions. By co-operation in the Commonwealth we can, therefore, develop a greater and wider field of scientific investigation than any other community, always excepting the United Nations Organization, with which we intend to work to the full. The nations of the British Commonwealth will, I am sure, be ready to play their part.

I now declare the Empire Scientific Conference open and I pray that God may prosper your deliberations.