My Encounter & Reflections on Indian Medical Heritage

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As a person from the city, I was a student of western knowledge in school, college and university, and was not exposed to any other form of knowledge. I did not know that other useful systems — indigenous systems, existed in an organized form in our society and moreover, that they were still functional and were used regularly by a vast number of people.

Later, while working as a social activist, I lived in the Karjat tribal block, Dt.- Raigad, Maharashtra, for 12 years. There, I was exposed for the first time to plants and forests. I could not fail to notice, often with amazement, that the local Thakur, Mahadev Koli and Katkari tribes use plants and animals for health care. The treatments I saw at first-hand were incredible, and impressed me deeply. Lactating mothers used Ipomoea mauritiana Jacq. (vidari kand) to enhance breast milk. The leaf of the common plant Calotropis gigantea (Linn.) Ait.f. (arka patra) was used to reduce a testicle swollen to twice its size (presumably hydrocele) in just four days. The latex of the same plant applied on the skin could draw out a thorn from deep within. The fruits of Terminalia bellirica Roxb. (bibhitaka) were used to treat dry cough. The roots and bark of Holarrhena pubescens (Buch.-Ham.) Wall. ex G. Don (kutaja) could cure dysentery. Helicteres isora Linn. (muradasinge in Marathi) could stop diarrhoea. The plant Mimosa pudica Linn. - ‘touch me not’ or lajjawanti was used to stop uterine bleeding. Durva grass (Cynodon dactylon Pers.) juice could dissolve gall bladder stones.

I discovered that the tribals of this area know of the uses of over 400 plants, animals, birds and reptiles. The people who had and used this kind of knowledge were ordinary households as well as the more specialized village healers. Households knew of home remedies for managing more than 30 common health conditions. Every village had a birth attendant (called Sueen) and at least one socially recognized healer whom the villagers called “Vaidu” (healer). There were Vaidus who had specialized in treating snakebites, others had specialized in treating broken bones and there were those who treated veterinary problems. None of the Vaidus depended on healing...
for their livelihood. They had other occupations and healing was only a social service.

Once a colleague of mine had severe case of jaundice and I consulted a Vaidu. He promised to get me a remedy the next day. In fact he did not show up for two days. When he returned he cheerfully explained that he had to go deep into the neighbouring forests to locate the herbs he needed. He had spent two whole days looking for the plants. The plants were used by my colleague with dramatic results. The healer however did not ask for any compensation for the trouble he had taken. It was left to the patient to express his satisfaction in whatever way he could afford. In the tribal culture no patient expects a ‘free service’ and they show their gratitude by giving the healer some grain, a chicken or a bottle of the local brew, but all this is not demanded or a precondition for service.

I asked university-based phytochemists and pharmacologists for their opinion of these practices and if they could scientifically verify these remedies. They had no clinical data on the application of these materials. In a few cases, the chemistry of a plant was known and the biological activity of an active compound had been studied on rabbits or mice. This information was not sufficient to validate tribal practices. The tribals did not use just active compounds, they used flowers, fruits, bark, root, latex and gums as wholes. Chemists and pharmacologists unfortunately did not know the biological activities of the plants as a whole but know only of certain chemicals derived from them. The scientists I approached worked in reputed institutions. However, they could not help. They needed huge funds and several years of research time to carry out systematic studies. Hence, in my pursuit for the validation of local health practices, I was led to the traditional physicians of Ayurveda (the word itself means ‘Science of Life’).

The Ayurvedic physicians I met impressed me. Their response was quick. They knew the materials the tribals had used and they had books on indigenous pharmacology (Dravya Guna Shastra) in which the useful materials had been studied by using 10-15 different parameters. They could, therefore, confirm the validity of tribal treatments. At times, they could suggest modifications to the local practice, or even substitute plants, in case the original plant was unavailable. These doctors knew the systemic effect of plants, their metabolic effects at different stages of ingestion, the action of plants on body tissues, organs, etc. They also knew the side effects and contraindications as well as how to cancel these by adding other natural substances to balance, synergize or improve their assimilation. I was surprised by the depth of their knowledge, which also included the knowledge of processes required to convert plants into various dosage forms.

I was deeply impressed by the attitude and conduct of an eminent Ayurvedic physician of Pune. He had been publicly felicitated for having cured a case of leukaemia wherein a patient who had been given a verdict of a few weeks to live, had survived without remission for 5 years and was still healthy. In his response to the public felicitation the
physician declared “Ayurveda does not have a term equivalent to ‘cancer’ and there is no mention of a condition called leukaemia. I did not bother to study the case sheets and the diagnosis from the cancer hospital that my patient presented to me for scrutiny because I have not studied and therefore do not understand bio-chemistry. I examined the patient afresh and diagnosed his condition using Ayurvedic principle. The patient’s status had to be classified under a provisional diagnosis that was not described in the diagnostic literature of Ayurveda. The Ayurvedic science does enable a physician to make provisional diagnosis of new health conditions that is not previously described. I next designed a treatment to suit my diagnosis. The patient was cured”.

He added “I do not, however, claim to be able to cure cancer but I do claim that I have the capacity and willingness to look at any new health condition and with the help of Ayurvedic science, a physician may be in a position to diagnose and treat and even perhaps cure the disease”. This statement gave me an insight into the dynamic nature of Ayurvedic science.

In the context of pharmaceuticals, I observed that although the manufacturing technology used by indigenous medical system was pre-industrial, the logic behind the dosage forms like wines (Asava, Arishta, etc.), bhasmas (baked powders) and oils was sophisticated. The number of traditional methods of processing were far more than those available in any other medical tradition. I appreciated the range of the diagnostic acumen of traditional healers, their reading of the pulse for instance appeared incredibly sophisticated. Their acute clinical observations, even for a simple condition like a cough, were impressive: according to them a dry cough was a wind disorder, a cough with heavy congestion and expectoration was due to an imbalance of water and earth, and a cough with inflammation and sore throat and mild congestion was due to an imbalance of agni or fire. These are expressions of a scheme of “systemic” diagnosis. In this scheme it is not important to identify a causative agent like virus or bacteria, etc. which may in fact be present, but important to read from the symptoms-specific nature of systemic imbalance that has taken place and to choose natural products for treatment which will restore the balance. Scientists may subsequently discover that this treatment scheme may also inhibit the bacteria and virus in unexpected ways.

As an Indian citizen, my exposure to the rich indigenous culture and knowledge of my own people both inspired as well as angered me.

I felt inspired by this decentralized folk health knowledge. The rural scene in India already appeared to have the futuristic ideal of “health in your own hands” that social thinkers dream of. Every village household had knowledge of dozens of common ailments and also of preventive and promotive measures. Health-promotive practice is aimed at introducing practices that result in total health care rather than in fighting individual illnesses alone. Along with this every village has its own folk healers who
have the appropriate skills to manage most primary health problems.

It is extremely important to note that folk traditions are not only rooted in the community but that they are also community supported. The size of the folk tradition in any locality and thus all over India is so large that it is only the community that has the capacity to sustain the tradition. In the eighties the Health Ministry made the mistake of declaring that they would pay Traditional Birth Attendants (TBAs) for every delivery conducted. It was soon found that State Governments could not afford to pay thousands of TBAs. This is in addition to the difficulty of monitoring this process. So today the estimated 600,000 TBAs of India continue to be paid by their own communities.

I also felt proud to see that apart from the folk tradition there was another layer in this Indian medical heritage. These were the codified traditions (Ayurveda and others) that possessed sophisticated theoretical foundations. The codified traditions appeared to have a symbiotic relationship with the folk tradition.

From the Karjat experience I could infer that the Indian medical traditions have an amazingly large resource base. In the Karjat tribal block itself, an area of 30 sq. kms in a dry deciduous forest, the tribals knew of the medicinal uses of around 400 plants, as well as of a dozen birds and animals.

But along with this pride I also felt anger at the neglect of this wisdom. The younger generation in Karjat was not keen to be apprenticed to healers and the respect for the vaidya tradition outside the tribal setting was quite low. Even in the institutionalized tradition I observed that, the self-confidence and self-esteem of vaidyas, hakims and siddhas are quite low. This is because educated Indians do not regard them as highly as they deserve. I asked myself why mainstream students and teachers in schools and universities do not engage in studying indigenous knowledge when it is so rich and relevant. I felt sorry that outstanding physicians of folk or codified systems were not sufficiently respected and honoured in their society. I also felt pained that ethnic communities are not encouraged to continue with their amazing innovations.

These feelings inspired me to try and do something to revitalize Indian medical traditions to demonstrate their contemporary relevance. Thus, the years since 1984 have been spent in trying to work at a grass root as well as regional and national levels in the pursuit of this dream. In 1993, with the help of a very open minded telecommunications engineer who is also a great nationalist, the “Foundation for Revitalization of Local Health Traditions” (FRLHT) was established. In the last eight years FRLHT has done some pioneering work in conserving the plant resource base of Indian medicine. It has also built up valuable databases on the traditional codified knowledge of plants and initiated pilot projects in south India for revitalizing folk medicine.

This is illustrated in the case of Dr. Baruch Bloomberg’s work on Phyllanthus amarus and “viral” hepatitis and also in the case of Dr. N.H. Antia’s work on Holarrhena pubescens on amoebic dysentry.
There is a wealth of knowledge of natural products in both the folk stream as well as in the codified stream of traditional Indian systems. Knowledge in both streams deal with prevention, health promotion as well as cures. Each dimension is given equal emphasis and practical advice is provided in all three aspects. The folk stream knows of the medical uses of over 8000 species of plants, as well as several hundred species/types of animals, minerals and metals. There are estimated to be around 40,000 herbal and natural product formulations known and used in the folk tradition. The folk stream has nutritional knowledge of thousands of ecosystem-specific food resources that are not documented in modern books on the subject. It has a unique knowledge of the therapeutic and processing techniques of local resources.

In the codified stream the extent of knowledge is reflected in the large number of medical manuscripts and the range of subjects they cover. Physicians, scholars and seers have generated much classical medical knowledge. This is an addition to the information drawn from the empirical knowledge of the folk stream. Apart from the knowledge of drugs, there is an extensive knowledge of diagnostic methods, therapeutic techniques, surgery, specialized lines of treatment, physiological concepts, as well as an understanding of the body-mind relationship. There are an estimated 50,000 herbal formulations in the traditional formularies of Ayurveda alone. Unfortunately there is no complete catalogue of Indian medical manuscripts. They lie scattered in oriental libraries and private custodies not only in India but also in Sri Lanka, Nepal, Burma, Mongolia, China, and Thailand as well as the libraries of Western Europe and the USA. This situation is indicative of the severity of neglect of the Indian medical heritage by both State and Central Governments. Other potential patrons too seem to be indifferent. The Tamil University in Tanjore has carried out a preliminary analysis of all Tamil manuscripts in public collections in India and other parts of the world and their work shows that there are a total of 24,000 Tamil manuscripts. Of these 4000 manuscripts were on the subject of medicine. We must also bear in mind the fact that medicine is an area where there are still a substantial number of manuscripts outside of public collections, in the families of practitioners.

Traditional Indian systems of medicine have had their own theoretical foundations, worldviews, methods, logic, principles, concepts and categories; these are quite distinct from western knowledge systems. The indigenous knowledge system was active and creative till the beginning of the 20th century. That the creativity is tested till the 19th century is borne out by the Ayurvedic studies recorded in Nighantus of the properties of exotic plants like tea, coffee, green chillies, brinjal, tomato, potato, pineapple, etc. These entered Indian soil only in the last 200 years.

As there is this readily useable large source of reference material one might

2Nighantus are Lexicons or Glossaries.
assume that their importance is recognised. Unfortunately this is not true. Both the folk medical culture and the codified classical health systems are being eroded. This erosion is especially alarming because it does not appear to be on account of medical inefficiency but rather for economic, cultural and political reasons. In part this is due to the suicidal attitude of the Indian elite and policy makers who ignore and in fact discourage serious research on the theoretical foundations of indigenous medicine. Ironically such work is under way in western universities.

In the folk tradition the erosion is evident at the household level in the reduced use by households of home remedies, traditional diets, and health customs. There is the classic example of the plant 
Phyllanthus amarus
Schum. & Thonn. It is called keezhanelli in Tamil and 
Bhumi amalaki
in Sanskrit. Traditionally, this plant was widely used by rural households all over southern India and the Andaman & Nicobar Islands for jaundice (Kamala). Today there are very few rural folk who use this plant. It is certainly not because the plant is medically ineffective. Recently an American Nobel prize winner claimed a patent on the use of the whole plant as a safe drug for Hepatitis B/C. This brings home the point that the erosion of folk health traditions is more to do with cultural and sociological processes rather than on grounds of efficacy. We need to either strengthen the tradition or destroy it if it is useless. We simply cannot afford to ignore it when it is so resourceful.

The erosion in these specialized folk traditions is also evident in the age profile of contemporary folk practitioners. In all the categories of folk practitioners — traditional birth attendants, bonesetters, herbal healers, vets, etc., the average age group of the practitioners is above 40. This is the decline in interest in the last two decades. In comparison, in the last century the number of physicians (500,000) in the codified practice does not appear to have significantly dropped. However, the level of the self-confidence of the practitioners as well as the quality of their knowledge seems to have declined significantly. This assessment, although subjective, has been the consensus judgement of leaders of the codified tradition, and this assessment has been made consistently in various internal reviews of the codified tradition during the last century right up to the present times.

What are the causes of this erosion? The folk medical system has depended almost entirely on community and family support. Its erosion suggests some degree of loss of confidence of the community in their health traditions. This has had its effect on the morale of the practitioners. It is not a total lack of confidence on the part of the community. Else, the traditions

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5 Data from micro-studies. The book edited by R.M. Nanal on “Tribal traditions of Karjat Tribal Block” (Date of Publication - 2000, published by Academy of Development Science, At and post Kashele Village, Taluk: Karjat, Dt. Raigad, Pin - 410201, Maharashtra)

6 Figure given in draft policy of the Department of Indian Systems of Medicine, Government of India, 2001.
would have completely died out. What then is the reason for the decrease in social support?

Random social surveys suggest that a prejudice has been created in the minds of the younger generation regarding traditional knowledge. It is unfavourably compared to modern knowledge. This prejudice has also been inadvertently nurtured by the formal education in schools and universities. There has actually been no systematic effort to evaluate traditional medical knowledge. No appropriate cross-cultural research methodology has been developed for assessing indigenous knowledge. Since there has also been no serious and balanced attempt to defend indigenous medical knowledge, this unfounded prejudice continues to prevail. Practitioners of traditional medicine who could be expected to defend themselves are unable to do so because of their own demoralized state.

Meanwhile, in the last 200 years, the scientific, economic and political influence of western biomedicine has been overwhelming. It has only grown from strength to strength. This influence has touched all sections of society, including tribals. They have been influenced by advertisements. The village shops today sell neatly packaged pills, syrups and the magical injections that can efficiently anaesthetize. Their attitudes have been reconditioned by the “government” doctor who only practices western biomedicine in an impressive white coat with a stethoscope around the neck and who also often expresses his disbelief in “Jadi buti” (herbal stuff).

While the application of western medicine has provided relief for several problems, and made great strides in surgery, the prejudice against indigenous medicine has led to some glaring distortions in the faith of the public towards its own traditions. There was a time a few years ago when rural mothers were led to believe that powdered milk was superior to breast milk; or that the neatly packed and expensive Electrol drink was superior in controlling diarrhoea than the traditionally used soup of boiled rice and lentils; or that a bottled soft drink is a better drink to offer a guest than coconut water.

In respect of the codified tradition too the loss of self-confidence of practitioners has been partly due to reduced social support and partly due to the totally irrational demand that they “justify” their knowledge in western biomedicine parameters. If the situation were reversed and western doctors were asked to prove the efficiency of their practice on the parameters of panch maha bhutas one can well imagine their plight. Whereas it is unfair to expect the average physician of one medical discipline to be proficient in another inter-disciplinary work, deployment of some multi-disciplinary specialist physicians needs to be encouraged at least in specialized centres. In this case the situation has also been compounded because of insufficient state and private patronage. This has resulted in sub-critical investment during the last 100 years in formal education, research, manufacturing and in health services. Indian systems of medicine even today
receive less than 3% of the national health budget\(^5\).

The erosion of indigenous medical knowledge has taken place not only in India but also in all countries around the world and the reason in all cases is due to cultural, economic and political processes but not medical inefficiency. At a global level WHO spends less than 0.1% of its global budget on indigenous medical systems\(^6\).

There is reason to believe that there are outstanding practices of traditional physicians that can make contributions to the frontiers of medicine. For example, traditional bonesetters in India can strengthen out a club foot without surgery. They also make use of bamboo and wooden splints for bandaging a fractured limb. They do not use plaster casts. Leading modern orthopaedic surgeons are now suggesting that the Plaster of Paris casts have several limitations and the use of splints or flexible bandaging offer a definite advantage. The Indian bonesetters are experts in this field. A WHO report has stated that in China they have been able to significantly reduce the time taken for recovery from bone fracture by using a combination of modern methods and traditional bone setting practices\(^6\).

If we accept the view that indigenous medical knowledge is not eroding on account of its insufficiency or incapability and that given its vast knowledge base, it has a tremendous potential to contribute to health care, a strategy for revitalization of the Indian medical heritage must be urgently promoted. The concern for revitalization of indigenous culture must, however, be viewed not as a concern for blindly reviving the past but rather be seen as a serious attempt to broaden and deepen the scope, quality and content of modern civilization. Unfortunately, over last two centuries the process of Western modernity got wedged into a narrow mono-cultural track and resulted only in the harmony of a worldwide cultural uniformity. This cultural uniformity is extremely dangerous for the survival and evolution of civilization. Uniformity narrows down the alternatives and options available to the peoples of the world as well as their capacity to cope with the present or prepare for the future.

All cultures have a potential stake in supporting the revitalization of indigenous cultures because world civilization as a whole stands to gain from a state of flourishing cultural diversity.

\(^5\) see 7\(^\text{th}\), 8\(^\text{th}\) and 9\(^\text{th}\) year plan allocations, Dept. of ISM, Ministry of Health, Govt. of India.

\(^6\) Personal communication, Prof. Gerard Bodekar, Chairman GIFTS, Oxford.