

A DIALECTICAL APPROACH TO TRADITIONAL MEDICINE

A Lesson from the Chinese Experience

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The main protagonists in the debate on traditional medicine are the 'traditionalists' and the 'modernists'. The former argue that traditional medicine was suppressed by the colonising powers and should now be revived; the latter feel that traditional systems are inherently inferior to modern medicine which is more 'scientific' and therefore the best choice for the future. But both views, the author contends, are rooted in contradictory philosophical standpoints, and attempts to find a dialectical approach, using the history and development of Chinese medicine as an illustration. The discussion is in three parts: the first critiques both standpoints and contains a general discussion of the dialectical approach; the second and third parts attempt to illustrate the concrete application of this approach in Chinese medicine.

Extensive debates, often eluding any resolution, have been going on especially in the erstwhile colonies, regarding the exact status of traditional medicine as a science. On the one hand it is argued by the 'traditionalists' that traditional medicine has been suppressed by their respective colonisers and this has led to its decline. It should be extended institutional as well as financial support and developed further. On the other hand, the 'modernists' argue that modern medical science has made tremendous strides in knowledge regarding the human body, its diseases and their treatment. Thus, they consider it naturally superior to traditional medicine. The former reject modern medicine as being culturally alien and hold traditional medicine as having exclusively developed within the culture and thus the only appropriate system of medicine (cultural relativism). The former favour development of modern medicine only, as being the only scientific medicine devoid of any cultural and ideological factors (neutralism). Both views are rooted in two contradictory philosophical standpoints.

In this paper, we shall endeavour to identify the two standpoints, analyse them in the light of the nature of scientific knowledge and find a dialectical approach to this problematic; using Chinese medicine as an illustration.

The paper is divided into three parts. Part I deals with general questions on the nature of scientific knowledge and analyses the two standpoints mentioned above and contains a general discussion on a dialectical approach to this problematic. Part II and III deal with the concrete application of such an approach as seen in the development of Chinese medicine. Part II deals with the historical background and philosophical basis of medical science in People's Republic of

China and socio-economic and political determinants informing upon its development, while Part III deals with the current implication of the policy of combining western and traditional medicine in the People's Republic of China.

1. Nature of Scientific Knowledge

Like any other science, medical knowledge too, has not developed in a unilinear, orderly, from a lower to a higher level-evolutionary fashion, but its history reveals a zig-zag path of development interspersed by many breaks and jumps. In other words, science, instead of developing from a primitive level to its modern state by a careful, logical, screening of available 'objective' facts and later rejection of those not found to be true, has, having proceeded in one direction, taken an entirely different path later. No direct, internally consistent logical connections may be found between these paths. The essential aspect of these breaks and turnabouts has been the transformation of world-views, the sudden shifts in the attitude towards nature and the man-nature relationship. That is to say, these breaks are essentially philosophical in nature.

These breaks were the consequence of a struggle between different, often contradictory schools of philosophy. In this struggle, the school which fulfilled the ideological needs of the ruling class dominated the rest.

Now, if science is defined as a rational body of knowledge gathered by human beings during the social production of their material (and non-material) conditions of existence, then science (not with a capital S—the modern bourgeois science having an absolutised abstracted existence in the capitalist society) has been with human society since its very

inception. So has been medical science. An outgrowth of animism, wherein all diseases were seen as a result of inflictions of evil spirits, it was one of the earliest sciences. Human being's intercourse with nature produced on the one hand empirically verifiable facts having an objective existence, and a universal truth value. It also produced various concepts, thought categories and logic specific to natural science with which these facts were organised and various levels of generalisations were achieved. These specific thoughts, categories and logic are influenced by thought categories and logic of thinking process in general. That is to say that they are rooted in philosophy. In fact, for a long time science was indeed a part of philosophy.

Now, at different points in history, both in time and space, this non-cognitive component is influenced by different cultural and ideological factors and is thus shaped differently. This may even result in establishment of different "facts" in different cultures. (Here one is disregarding the question of validity and truthfulness of these 'facts'). Thus, for example 'geomancy' the Chinese science of wind and water which determines placement of house and tomb with respect to features of landscape and aesthetics of land use, has no counterpart at all in western science (Elzinga and Jamison, 1981). The development of both the facts—the content and the concepts, thought categories and logic with which they are organised—the form—takes place in an interpenetrating, dialectical fashion, each deriving support from the other. Many a times the development of facts comes into sharp conflict with the concepts leading to either transformation of the concepts themselves or to distortions of facts by ideological rationalization of the conceptual form. What happened to Ayurveda in India during the Medieval period was the latter. The anatomical, pathological and pharmacological insights gained by generations of experimenting physicians were distorted by the use of concepts like Karma Siddhanta, divine will, and transmigration of souls etc. On the other hand, the scientific revolution of the 17th century Europe was an example of the former when entirely new forms of logic was developed by Comte, Descartes, Bacon, Newton and other philosopher-scientists.

While the ideological rationalization of Ayurveda suited the purpose of the Brahmin-dominated, varna-jati based feudalism in a decadent state, the scientific revolution in Europe was in response to the growing strength of the European commercial and industrial bourgeoisie.

Thus the factual component and the conceptual component of scientific knowledge exist in a dialectical relationship, under constant tension and under the influence of ideological and other factors operative in the culture and the historical period of its origin.

This view is debated from two standpoints, positivist and cultural-relativist.

Positivist Standpoint

The basic tenet in positivist philosophy is that the scientificity of a proposition lies in its anchorage in empirical statement of facts. Therefore, the central part of a positivist programme is to build a theoretical structure which is understood in term of its interlinking with empirical statements. It does not allow for any hypothesis which cannot be or has not been verified empirically and objectively. This absolutisation of empiricity and objectivity results in a narrow delimitation of what can be called a Science. In particular, theories operative in premodern knowledge producing practices such as alchemy or Ayurveda that does not match upto some piece of modern science, falls outside its realm. They are not even considered as hypotheses yet to be verified.

Francis Bacon advocated a ruthless rejection of old 'idois' inherent in all the preceding knowledge systems but his methodology reinforced all of them by absolutising the objectivity of scientific knowledge. The attitude of positivism towards all the other knowledge-producing practices can be summed up, in his own words :

"It is idle to expect any great advancement in science from the superinducing and engrafting of new things upon old. We must begin from the very foundations, unless we would revolve forever in a circle with mean and contemptible progress" (Bacon, 1620).

This fetishism of facts has had the obvious consequence of converting science into scienticism with the metaphysical principles of objective consciousness basing itself in an alienating dichotomy of observing subject and observed object, the invidious hierarchy of nature which places man at the top and legitimises an experimental inquisition of nature, the mechanistic imperative that says that everything that can be known should be known and that such knowledge should be utilised regardless of consequences (e.g. genetic engineering unnecessary and unethical human

experiments—DM), the extension of instrumental domination of nature to man himself" (e.g. excessive reliance on medical technology in health care) (Elzinga and Jamison, 1981).

Such a perspective when applied in medicine means that those traditional medical sciences which have not adopted the positivist principles of objectivity are considered unscientific. The theoretical concepts and prescribed therapies of these sciences not having been tested under the modern, laboratory—'Controlled'—conditions are rejected as invalid. Concepts like acupuncture points or *prashna* in Ayurveda, which have no counterpart in modern medical science, are considered as non-existent. Even when, as in the case of acupuncture points, the functional if not the anatomical existence of a point, is demonstrated, it is not accepted. Thus the most 'advanced' scientific mode of enquiry into nature ends up by denying nature itself if it does not fit into its theoretical straitjacket.

Cultural Relativist View Point

From the other end, the opposite view point considers that the general concepts of sciences, the value promoted by them and the 'ideal' of what constitutes valid and proper knowledge differ from culture to culture. The cultural relativists argue that modern science is the cultural artefact of the west while ayurveda, astrology and others are oriental sciences. Thus, every science is considered to be an ethnoscience, having a theory, a logic and verification techniques of its own, specific to itself and thus, incommensurable. For example, they argue that the efficacy of ayurveda must be assessed by the principles laid down in ayurveda only i.e. on its own terms, and not on the terms dictated by modern science. They rule out any 'objective' assessment standing outside the premises and logic of ayurveda. They point out that "it is only when domination over nature is considered the highest ideal for civilization that we find western science becoming the universal standard for measuring the achievement in all the other cultures. However if we take the unity of man and nature as a predominant positive value, the Chinese and other cultures' scientific tradition stand out as more advanced". (Alvares, 1979).

While sympathising with the eagerness to do justice with the achievements of pre-modern societies including those of Egypt, China and India, one must be wary of the dangers of slipping into an extreme form of such relativism—a position denying the basic equality of human experience and

universality of certain scientific findings independent of geographical and cultural factors. Though it is true that science and technology of various civilisations should be understood on their own merits and not as abortive developments towards modern western science or worse as mere fiction, one must be cautious of how one formulates this point. "There is a danger ... of denying of the fundamental continuity and universality of all sciences. This could be to resurrect the ... conception of the various non-European civilization as totally separate, immiscible thought patterns ... a series of different views of the natural world, irreconcilable and unconnected." (Needham, 1954).

Thus, from the opposite end, the relativist view reinforces the positivist view that pre-modern and non-European sciences are different from modern science and thus incompatible. They differ only in their views regarding the relevance of these sciences. The positivists consider them as unscientific and thus irrelevant, while the relativists maintain that each are relevant only in their own culture.

This assumption of a basic incommensurability also implies that one must deny the contribution of these cultures to the universal body of knowledge, which is international. It also imparts a closeness to knowledge, the boundaries being limited by the culture. In fact, modern science is 'ecumenical', in the sense that historically speaking science is a product of diverse cultures and thus a common property of human kind. Secondly, this assumption denies any possibility of mutual exchange, thus legitimising elitist doctrines in each of these sciences. It also rationalises the doomsayer's conservative prophecy depicting modern science an uncontrolled and uncontrollable monster causing all the wars and social ills of our time. The only alternative such a view of modern science leaves is a total withdrawal into inner reality, an escape into 'privatised mystical experiences' aimed to create an 'inner' revolution. Thus, positivism and cultural relativism absolutise and/or universalise the form of scientific and technological development without considering the social context and the content of the various stages of its development

A Dialectical Approach

A dialectical approach to the problematic assumes that a) all knowledge is universal and humankind's common property; b) no scientific theory or methodology is perfect or unchanging and thus 'inherently' superior; c) science develops under the influence of a philosophical basis.

generated within the framework of various socio-economic, political and cultural factors in interaction. Therefore, even though direct comparisons may be difficult, because theoretical systems in each cultural setting were different, nevertheless mediated comparison is possible.

This could be done "by testing out the theories of traditional sciences in the light of modern concepts, without absolutising the latter and by studying how and how much the former had succeeded in discovering natural processes and in putting them in service of humanity" (not in order to achieve mastery over nature or human beings but for the benefit of all). Such a view opens up a possibility of integrating western and traditional sciences and a mutual exchange between the two. Having evolved under different historical and cultural conditions each embody different sets of strong points and limitations. The aim of such an integration is to reinforce each other's strong points and do away with the limitations.

Such an integration can contribute to the advancement of human knowledge in three ways:

- regional traditions embody useful concrete techniques, for example traditional herbal and mineral remedies that work without the side effects of many chemically manufactured drugs.
- regional traditions preserve an important body of data which can serve as a base for furthering existing fields of modern scientific research — examples are records of astronomers and meteorologists.
- regional traditions can open up new perspectives and avenues for modern scientific research, as in the case of acupuncture which has stimulated international neurophysiological research. (e.g. work on mechanisms of pain inhibition) (Elzinga and Jamison, 1981).

Such an endeavour demands a change in the world view and in the attitude towards history of science.

Only a dialectical understanding of the history of science, its relationship with philosophy and social context can produce the required 'break'. Such a conscious re-evaluation of the history of science also reveals a different future vision of an integrated science, wherein all the pre-modern and non-European sciences would find that their legitimate contributions have transformed the existing scientific knowledge and in turn have transformed themselves.

The most widely discussed illustration of such a process is Chinese medicine. A change in the

implicit world view of existing medical science—both modern and traditional—led to an integration and development of both the sciences. The most notable product of this development is acupuncture. In order to study how this happened we shall briefly trace the history of Chinese medicine.

Historical Background of Chinese Medicine

Chinese medicine is one of the oldest known medicines. Very little is known about its origin but like stone age medicine elsewhere it must have begun as a primitive medicine. Archaeological evidence shows that the earliest inhabitants of the Yellow River Valley were people of the Stone Age and like the religious beliefs of other tribes of Stone Age, animism and demonology must have been the characteristic feature of their religion. We may safely 'assume' that they believed in the spirits of the dead, and worshipped natural events like thunder, rain etc. Their medicine too must have consisted of witchcraft, sacrifices and oblations. The situation changes later, during 1200-300 B.C. when their religion enters the age of philosophy. From being direct and immediate response to the multifarious problems including illhealth faced by the primitive being, it enters a stage where the Chinese human being has formed a metaphysical view of the universe, of man and nature relationship. Medicine too is influenced by this change. Witchcraft gives way to institutionalised medicine using processed drugs. It is seen that during the Chou dynasty, (1100-250 B.C.) physicians incharge of internal medicine, surgery and veterinary medicine were appointed (Wong, 1979).

The oldest legendary figure in Chinese medicine is Shen Nung (2757 B.C.) who is venerated as the father of medicine and is considered to be the inventor of drug lore. The oldest treatise extant is *Huang Ti Nei Ching Suwen*. (Yellow Emperor's Inner Classic). Though *Nei Ching's* period is around 2000 BC, the treatise is supposed to have been written around 200 BC. It is believed to have been written by several anonymous authors over the period. It is a theoretical exposition of the basis of health and illness, closely related to the cosmological ideas taking shape during the philosophical period. It lays down the basic principles of anatomy, physiology, etiology of diseases and their treatment (Wong, 1979).

Chinese medicine begins to assume a rational, scientific character during the Han dynasty (200 BC-220 AD) with Tsang Kung, Chang Chung King and Hua To as central figures. Tsang Kung lived

around 170 BC and left records of personal observation of twenty five clinical cases. Chang Chung King's treatise of fever marks a new era in Chinese medicine. He has described many types of fevers including typhoid fever in this treatise and it contains one hundred and thirteen prescriptions. With this treatise, the diseases were studied more from clinical standpoint—signs and symptoms, course of an illness, treatment and actions of a drug rather than from the point of view of the theories of diseases as was the case during earlier period (Kuttumbiah 1971). This transition shows that a scientific outlook was permeating medicine in the grips of speculative philosophy.

The third important text is *Pen Tsao* which describes useful plants, animal and mineral substances and their applications. Unlike *Nei Ching* it is a practical text and has undergone many additions over the centuries as the experience of the Chinese physicians of using herbs and minerals accumulated. This period saw a great intellectual flowering in China. Confucius and Han Fei belong to this period. Though a surgeon, Hua Tu is claimed to have discovered anaesthesia and to have performed some major and minor operations like laparotomy, venesection etc., this aspect of medicine had fallen into neglect during the later period for reasons discussed elsewhere.

Although the pharmaceutical traditions of *Pen Tsao* expanded, the *Nei Ching* remained less emendable because of its classic and semireligious status. Both, the Chinese feudal rulers and the physicians themselves looked upon it as a divine gift. After the Han dynasty, this resulted in Chinese medicine, becoming not stagnant, but backward looking toward the sources of classical antiquity and hence continuing to develop within the theoretical framework based on the philosophy of that period.

This backward-looking character of Chinese medicine made it particularly vulnerable to the cultural aggression of the imperialists during the 19th century. During the rule of various imperialist powers overwesternization was stressed and rivalry was set up between Chinese and Western medicine. Maligning the former as unscientific and a 'stumbling block' to the development of modern medicine they barred practitioners of traditional medicine from city hospitals and medical colleges. The Kuomintang government in 1929 put forward measures to abolish Chinese medicine. Among these were "restrictions on the practice of medicine by traditional physicians, a ban on setting up schools of

traditional medicine and on publishing books and periodicals on Chinese medicine" (Li and Tsai, 1977).

It was in the face of Nationalist Blockade, during the liberation war, that efforts were made by the Chinese communists to utilise the locally grown herbs. In 1940, when liberated zones were established, this pragmatic step was taken up as a conscious policy of utilising indigenous medicine. (Liberated Zones were those areas in China where the Communist-led Revolutionary Committees had usurped political power from the Kuomintang government). This policy received official recognition when Mao Tse-Tung in his famous speech in 1944 at the Yen-an conference on culture and education, urged the doctors to work with and elevate the scientific level of traditional practitioners in order to better serve the people (Mao., 1965). However, after liberation in 1949, the communist government continued to have traditional practitioners as auxiliaries to the modern medical forces. The directive of unifying the two systems of medicines was probably interpreted as giving the traditional practitioners some training in modern medicine. It was only in 1955, when efforts were made by the communist party to raise the status of traditional medicine. Traditional doctors were brought to city hospitals and clinics. Special wards were set up for acupuncture and herbal medicine. Modern doctors were urged to learn from their traditional colleagues.

By 1958, thirteen new colleges for traditional medicine were opened. Over 50,000 students apprenticed themselves under distinguished traditional physicians. In 1955, a well-equipped Chinese Medical Research Institute with both modern and Chinese doctors on its research staff was setup. The entire body of knowledge was to be investigated.

In other words true integration of the two systems of medicine at theoretical as well as practical level was the goal.

The praise and support to traditional medicine reached its acme during the Great Leap Forward (1958-59) period. This period was characterised by over-enthusiastic policies of collectivisation of individual agricultural plots, formation of communes etc. This resulted in a reduction in the production of foodgrains and led to subsequent famine in some areas. With the retreat of its extreme policies, emphasis on traditional medicine also declined. Although the policy of combining the two kinds of medicine showed some triumphs notably in the

fields of resetting of fractured limbs using mobile splints, (Sheng, 1977) no major theoretical breakthrough towards a new synthesis was in sight.

With the advent of Great Proletarian Cultural Revolution, traditional medicine again came to the forefront. This period was probably the most turbulent one in the contemporary history of China. In 1966, the Chinese youth led by Mao, rebelled against dogmatism, bureaucratism and elitism of sections of the Chinese Communist Party, the government and other institutions. With the decentralisation drive, provinces and communes assumed responsibility of health services. Self reliance was the official policy, which meant depending upon local resources which often in rural areas meant traditional medicine and using locally grown herbs. Since then, by using combined traditional and modern medicine, many breakthroughs at both theoretical as well as applied level, have occurred especially in acupuncture analgesia, treatment of deaf, mute and blind (Chen 1973) and in nonsurgical treatment for conditions normally requiring surgery (e.g. perforated peptic ulcers) using acupuncture and traditional herbal medicine (Wu, 1977).

Thus, it should be noted that the introduction of modern medicine in China was not as a consequence of a natural transition from traditional Chinese medicine nor was it as a result of any 'inherent' superiority of modern medicine.

(It should be kept in mind that modern western medicine in 1929 when Kuomintang sought to suppress the traditional Chinese medicine, had in its therapeutic armamentarium a few herbal tinctures, like Belladonna and Gum Acacia, few mineral preparations like Arsenic and Mercury and dangerous procedures like purgation and leeching.) It was forced upon the colonial people. Ideological struggle has played a dominant part in the development of medicine everywhere and in China in particular.

This raises an important ideological question as to how the dominant philosophy of Chinese communists could reconcile with that of the traditional Chinese medicine. The answer lies in points of congruency between the philosophical basis of Traditional Chinese medicine and the Chinese interpretation of the dialectical materialist philosophy.

Philosophical Basis of Chinese Medicine

Chinese medicine assumed a scientific character in a period characterised by flourishing of great

schools of philosophy: legalism, Confucianism, Taoism, Yin-Yang and five element school and Naturalism. Developments in medicine have been influenced by all of them to some extent, but its scientific theory owes a great deal to the last three.

Although differing in many ways over their general world-views, there are certain common points regarding man-nature relationships, in all the philosophical schools of this period. Man is conceived of not as a master of nature nor as its slave but as an integral part of a cosmic system having harmony and order. Confucianism admits a hierarchy of heaven-man-earth where all the human and earthly events are willed by heaven which imparts to it harmony and order. In other schools, motive force of the cosmic order is considered as spontaneous internal self-movement rather than mechanical impulses from outside. This tendency to analyse phenomena in dialectical logic is reinforced by the Chinese language, it is claimed. Rigid 'A or not-A' categories are avoided (Needham, 1976).

According to ancient Chinese philosophy, in a healthy body there should be free flow of *Chi* (the basic principle of the entire universe) which is governed by the interplay of two opposite forces, the *Yin* (negative) and the *Yang* (positive). Disease results from their imbalance. *Yin* and *Yang* themselves evolved from nothingness which was the grand beginning of the Universe. Quantitative transformation of *Yin* into *Yang* or vice versa causes change.

Yin and *Yang* subdivide into five elements—water, fire, metal, earth and wood. Since the human being is conceived of as a product of Heaven-accumulated *Yin*, and Earth-accumulated *Yang*, the human being too, contains the five elements. *Yin* and *Yang* are not considered to be absolute and static.

The *Yin* and *Yang* concept is an example of conceptualisation in terms of contrariness, unity and transformation of opposites. One contemporary Chinese author maintains that dialectics in ancient China dealt with the interinfiltration, interdependence and mutual supplementation of *Yin* and *Yang*, the opposites of a contradiction.. (and) self adjustment of the system, which keeps the whole organic structure dynamically balanced. The keynote of the five Elements theory is that there is *Yang* in *Yin* and *Yin* in *Yang* functioning together and that, therefore neither of them alone can generate new things. (Li Zehou 1980).

Thus, like dialectical materialism, the philosophy of traditional Chinese Medicine, too deals with transformation, contrariness and unity of opposites. The Chinese medicine operated within such a conceptual framework. And with this concept, it sought to analyse and explain various observations regarding the human body, its diseases and their treatment. The only tools available to them were their five senses and the accumulated experience. This limits the validity of the empirical evidence available in support of such theoretical concepts. Now, the support or its refutation, is sought by intergrating the traditional Chinese medicine with modern medicine. Its analytical and experimental techniques as well as its empirical methodology is to be utilised for the purpose.

Generally, the philosophy of traditional Chinese medicine encouraged scientific enquiry. But historically, as Chinese medicine has come under the influence of different schools of philosophy at different times and places, its progress has not been a smooth one. For instance, under the influence of Confucianism, the official philosophy of the feudal ruling classes of China, Chinese medicine degenerated into dogmatism. For, although all the philosophical schools conceptualise the contradictory nature of reality, they differ greatly in tackling this contradiction. Confucianism propagates balance and harmony—the unity of opposites, Taoism opposition and revolt—the contrariness of opposites, and Legalism transformation of harmony into disharmony and vice versa in a cyclic fashion. Each world view represents a class ideology, with Confucianism being feudal, the ruling class ideology during the classic period (Elzinga and Jamison 1977). "Confucianism blocked the germination of new ideas and hamstrung the development of scientific discoveries in China " (Ren Jiyu 1980).

To understand how and why this process took place we shall have to go into the socio-political factors which influenced the rise of Confucianism, its subsequent pernicious effects on the development of Chinese medicine as well as the overthrow of this ideology.

Socio-Economic and Political Factors Influencing Development of Medicine in China

In the last section we saw that the traditional medicine in China was developing under a theoretical framework under the influence of Confucianism, Taoism and Naturalism. But it was Confucianism which set its stamp on it. Confucianism stressed balance of opposites in a contradiction thus

legitimising the stability and order of the feudal hierarchy in Chinese society. It was the official ideology of the feudal state, with the result that new ideas which could disturb this balance were not encouraged and scientific enquiry was stifled. "This backward trend was due primarily to the decaying feudal relations..... But stifling effect of Confucianism on man's urge to explore also contributed to the virtual halt in the march of science That feudalism held on so obstinately in China must be accounted for in part by the drawbacks of Confucianism" (Ren Jiyu, 1980). In concrete terms, it meant that analytical and experimental techniques not only did not develop but were looked down upon because they involved a work of manual nature quite like that of artisans who were considered low down in the feudal social order. For the physician to attain any social prestige and economic rewards, he had to be identified with the classically learned literati who constituted the social and political elite in feudal China. A similar situation existed in medieval India also (Chattopadhyay, 1977). The prestigious Confucian doctor was not a physician in the real sense because he acquired the necessary knowledge by reading medical classics and treated others only out of humanitarian motives. Full time medical practice as a profession was considered unworthy of gentry status and mandarinates. Yet amongst the ordinary folks, many practitioners continued to base their medical practice on experience and direct observation.

This has had all the adverse consequences for further development of medicine. It not only retarded surgery a messy business which even medieval European physicians left to lower class barber-surgeons, but also inhibited the development of supportive physical and biological sciences. (Crozier, 1973).

Thus it was no wonder that the radical movement that developed in China after World War I, rejected traditional medicine as a part of decadent feudal culture and society. Ever since then, traditional medicine, its rejection or its support, has become a political issue in China.

Several factors led to it being restored to a prestigious position. Firstly, having been faced with Nationalist blockade in the Liberated Zones, Chinese communists were forced to rely upon the traditional practitioners for medical care. Moreover, in the struggle against feudalism, traditional practitioners as artisans were considered allies of the proletariat

and the peasantry. Having gained some useful lessons during this period, the Chinese Communist Party after the liberation applied them in practice. There was an extreme shortage of trained medical personnel and traditional practitioners were too important a human resource to be rejected outright. Moreover, traditional medicine, after having been shed of its feudal ideology, was put forward as a symbol of national heritage. In the struggle against imperialism, this played an important part in rallying the people around the communists.

During the Great Leap Forward, when there was a drive to demystify technical expertise, traditional medicine with its folklorist features was particularly suited for the purpose. With 'mass line' (the term used by the Chinese communists to denote their stress on the wisdom of the masses—the peasants and the workers) in ascendancy, scientific knowledge was not considered to be a monopoly of highly educated. During the Cultural Revolution too with its anti-expert political line, modern medicine associated with its western trained specialists came under severe attack and traditional medicine of common folk-peasantry got a new boost.

Thus, the traditional physicians have now been reinstated to a prestigious position. They are encouraged to study modern medicine and along with their modern counterparts, to undertake research in various aspects of traditional medicine, using modern scientific methods.

In concrete terms, the integrated medicine now being practised is drastically different from either its original classical form or the conventional modern medicine.

III. Current Status of Medicine in China

Restoration of traditional medicine for the Chinese never meant rejection of modern medicine. Modern medicine continues to dominate all the aspects of medical care. In medical care, training and research, modern scientific methodology continue to be applied but now traditional theoretical and practical diagnostic and therapeutic knowledge is sought to be integrated with it.

For the Chinese "combining Chinese and western medicine does not simply mean addition of the one to the other and certainly not replacing Western Medicine... by (its) native counterpart or vice versa. What is meant is the organic combination of the two medicines filling the weaknesses of the one with the strong points of the other raising the level of both, eventually evolving a new medical

science incorporating the best features of both" (Li and Tsai, 1977).

Integration in Medical Practice

In medical practice throughout China more resources are now allocated to traditional medicine. Special wards have been constructed in the existing hospitals and new clinics have been set up. The traditional doctor now has a major role in OPD and with no loss of reputation is now calling for x-ray films and laboratory investigations, and when needed, western consultation (Grey, 1971).

* Rural health centres are staffed by both the traditional and modern doctors both of whom having received some training in the other system. There is considerable co-operation between them in day to day practice.

Barefoot doctors rely heavily upon traditional therapeutics including acupuncture. A barefoot doctor's manual lists around 533 traditional medicines. (Sidel, 1973). Reports indicate that model hospitals (usually Red Army hospitals) stress combined use of both the systems. One hospital reported that since 1969, 70 percent of the cases were treated in this way (Crozier, 1973). Diseases claimed to have been treated in this fashion include jaundice, pulmonary tuberculosis, inflammation of kidney (nephritis), inflammation of veins (phlebitis) severe burns, facial paralysis and fractures.

The most spectacular results by using combined traditional and modern medicine are in conditions where previously surgery was required, for example in perforated peptic ulcer (a condition where due to interaction between the inner lining of stomach and the acidic juice therein, there is first a small ulcer on the inner lining of the stomach, which may later burst to become a hole through the stomach wall with gastric juice sprayed over into the abdominal cavity causing severe inflammation of the abdominal lining). In such a patient, complaining of severe pain in abdomen, the modern doctors ascertain the part affected and the kind of disease the patient has by careful history taking, clinical examination, x-ray and laboratory investigation. "The ability to accurately determine local pathological changes is the advantage of Western medicine's method of diagnosis. Where it falls short however, is in understanding and analysing the functioning of the patient's body as a whole." (Wu, 1973). The Chinese doctors then ascertain the general status of the patient by traditional

method. After a careful study, a method has been developed using traditional and modern indicators like temperature and pulse and so on to judge the size of the hole and extent of fluid exuded. If the hole is considered to be large and fluid abundant, then the patient is operated upon, otherwise he or she is treated with acupuncture and herbal medicine. (Wu, 1973).

The other prominent breakthrough achieved by using the combined methods is in the field of acupuncture anesthesia and treatment of fractures.

Theory and practice of acupuncture has undergone significant changes as a result of self-evaluation on the basis of modern scientific concepts. Older theories and principles not verified in practice have been relegated to secondary importance. For example in diagnosis and prognosis, greater emphasis is placed on effective acupuncture points and their relationship to the autonomic nervous system and less on the theoretical aspects of Yin-Yang, the meridians and the Five Elements (though the latter are not entirely rejected.) (Chen, 1973).

Thus, in late 1950's Chinese medical workers reviewed their experience of acupuncture in relieving toothache and sore throat. They applied the experience to replace anesthetic drugs in minor operations like tooth extractions and tonsillectomy and achieved some success. The technique gradually improved with more points being discovered. Now success has been achieved with placing needles only on the ear, nose and face (Chen 1973). Many major operations like abdominal and chest surgery have been performed using acupuncture anaesthesia.

Another achievement has been in the field of treating deafmutism and blindness, using acupuncture (Chen 1973). Traditionally certain points were considered forbidden for deep insertion. But experiments showed that deep needling of these points produced return of the power of speech and hearing. Acupuncture therapy is combined with high quality speech therapy.

Acupuncture has also been used successfully in treatment of toothache, tonsillitis, jaundice, epidemic influenza, voice paralysis and polio (Chen, 1973).

Similarly, in the field of treatment of fractures, combined therapy is found to be superior (Sheng, 1977). The fracture is diagnosed using X-rays. The broken bones are realigned using acupuncture anesthesia. Then, the fracture is managed by tying

standardised bamboo splints used traditionally around the fracture site. Quite unlike the extensive immobilisation method of modern orthopedics, this method advocates combined rest and movement. This has resulted in better healing, and greater recovery of function, particularly of old, complicated fractures. The time of immobilisation is also greatly reduced.

No discussion on Chinese medicine today can be complete without the mention of prevention and treatment of mental illness in China. Quite unlike the western method based on Freudian thinking, the psychiatric care in China is based on the belief in man's ability to change given a sympathetic environment and education and re-education' (Sidel R, 1973), (Ho, 1974).

Since the Cultural Revolution, with increased emphasis on integrating traditional medicine, the western trained doctors have altered their psychiatric service to include traditional methods and political techniques. The methods currently in use are self-reliance, collective help, drugs, acupuncture, heart to heart talks, follow-up care, community ethos, productive labour and teachings of Mao. Thus the process involves hospital and community care, individual and group relationships, professional and nonprofessional help, mutual help and self-reliance and traditional and Western medicine. Here again one clearly sees a tendency to avoid stressing on either of the opposites.

Integration in Medical Research

Scientific research in China is guided by four principles (Stuttmeir 1973) (1) Research must serve production and solve practical problems generally. (2) The indigenous, social, economical and intellectual — both contemporary and traditional experiences must be tapped. (3) Research must involve the masses and should not be a monopoly of the professional elite. (4) It should be an integral part of Chinese way of life. Struggle for scientific experiment, struggle for production and class struggle are considered three major tasks of a revolutionary society. Medical research too, derives its orientation from the above principles.

The most outstanding feature of medical research in China is the concept of systematic co-operation built around small research projects. Research units having common interests work together regardless of their affiliations. For instance, production of new antibiotic 'Qingdmycin' according to the New China News Agency, was a result of combined

efforts of 36 agencies. The central body responsible for the medical research in China, the Chinese Academy of Medical Sciences maintains linkages with 24 different research institutes. The research areas include various specialities in the medical field like epidemiology and microbiology, surgery, pediatrics, pharmacology; areas in community and social medicine like environment, nutrition, labour hygiene, labour protection, occupation health, basic sciences like Medical Biology and traditional sciences like acupuncture, moxibustion and Chinese medicine.

Research in traditional medical sciences is organised under the Academy of Traditional Chinese Medicine. Its areas of research include medicine, surgery, acupuncture and pharmaceuticals. The diseases studied successfully include asthma, bone fractures, high blood pressure, tuberculosis of bone, leprosy etc (Stuttmeir, 1973). The unique feature of this Academy is the inclusion of western trained doctors in its research staff who have undergone training in traditional medicine. In 1966 there were around 200 such doctors out of a total research staff of 300 (Stuttmeir, 1973).

Another notable feature of medical research in China, is the combined use of traditional and modern diagnostic and therapeutic principles. In one instance 10 patients having a skull fracture with a large blood clot under the skull bone were selected on the basis of severity judged by modern diagnostic methods including x-rays. Then they were treated with intravenous mannitol and Chinese medicine. Conventionally, the blood clot would have had to be removed surgically. But this clinical trial showed that 9 patients recovered fully, the blood clot having been absorbed (Qiu Xiang et al, 1981).

Medical research also includes exploring the scientific basis of acupuncture. Based on extensive observation and research, it has been found that generally meridian system of traditional acupuncture corresponds with the neural pathways. But modern knowledge of anatomy and physiology of the nervous system cannot fully explain the theory of meridians. For example, on stimulating certain parts of limbs with heat, corresponding areas of the ears become sensitive to pain. Certain other unexplained physiological changes induced by acupuncture have also been demonstrated. For example, putting a needle through certain points in the body of a normal person causes increase in the number of white blood corpuscles and enhancement

of the process of devouring of wastes and bacteria by these white corpuscles. Hormones too may be playing a part in this process in which different levels of the central nervous system have been found to be involved. (Chen, 1973).

What is most revealing about the philosophical aspect of medical research is that dialectical principles are often used in achieving solution of a research problem. For example from the principle "the law of unity of opposites is the fundamental law of the universe" in the words of a Chinese doctor 'we drew a number of conclusions: immobilisation and movement are equally important, fracture healing and functional recovery ought to be mutually complementary... None of these aspects should be stressed to the neglect of the other. On this basis we formulated... new principles for the management of fractures" (Sheng, 1977).

Conclusion

Medical science developed in China under the influence of conflicting world-views, which represented the ideological requirements of the ruling classes or sections thereof. This struggle between contradictory philosophies was reflected in the sudden changes in direction which characterise the uneven course of development of medicine in China. Factors other than those intrinsic to science, played an important often determining role in shaping its course. The medicine that emerged after a conscious policy of integration was applied, reflected a change in the dominant worldview to one which is more organismic as opposed to mechanistic—a world-view implicit in bourgeois science.

Science and philosophy, two dialectical poles of a knowledge system, develop in an interpenetrating, mutually dependent fashion under the influence of the socioeconomic and cultural-ideological factors operative in a particular mode of production during a historical period. As Engels put it:

"Natural scientists... are still under the domination of philosophy. It is only a question of whether they want to be dominated by a bad fashionable philosophy or by a form of theoretical thought which rests on acquaintance with the history of thought and its achievements. Only when natural science becomes imbued with dialectics will all the philosophical rubbish... be superfluous, disappearing in positive science" (Engels, 1976).

Only a conscious appraisal of the history of medical science keeping in view the above perspective can provide a future vision of a new Integrated Medicine.

In this way by emphasising equally empirical observation and dialectical concepts, on positive science and dialectical philosophy and by combining the traditional and modern medicine, Chinese medical science has contributed significantly to 'humanity's broad onward march.'

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