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Mind and Medicine

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INTRODUCTION

It is with a strange feeling of happiness and family pride that I stand before you to deliver this year's Dr. K.L. Wig Oration. Kushwant Lal Wig was my father's younger brother and hence I had known him from my childhood. A flood of memories comes back to me when I think of him today. Though I never had the privilege to be his student or work with him in the same institution, he still guided me in all important stages in my career. Few medical men in the last fifty years have attained such eminence as a clinician and teacher as Dr. K.L. Wig did. In my travels over the years, I have met his students in many parts of India, Pakistan and in many other countries. It is no exaggeration to say that no other medical teacher of that generation is so fondly remembered by his students as Dr. K.L. Wig is. Anecdotes about his perfectionist nature, legendary clinical skills, fairmindedness, his humane concern for his patients are all too well known to his students, many of whom are sitting in the audience today.

The topic of my lecture today 'Mind and Medicine' is in a way, my effort to pay my tribute to him. After I passed my M.B.B.S. from K.G. Medical College, Lucknow, in 1953, it was he who encouraged me to take up a career in psychiatry while almost everybody else, family, friends or my teachers in Lucknow - thought it to be a 'crazy' idea. Dr. K.L. Wig's further advice to me was that if I am thinking of a career in psychiatry in a teaching hospital, I must do M.D. Medicine first, before taking up psychiatry. I would always be grateful to him for his advice. The second reason for choosing this topic is even more important than reference to my career. In K.L. Wig, I found a role model of an ideal physician who always took a holistic view of the medical problem. It is from him that I had my first lessons in the role of 'Mind in Medicine' about which I am going to talk today.

MIND AND MEDICINE

The main theme of my talk is how mind and its influence on health and disease, was once considered very essential part of medi-

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cine and how in the last few hundred years mind and medicine have slowly drifted apart. Over the years, a new biomedical or biotechnical model has emerged in which mind or mental functions find very little role. This new model seemed to function very well for a while and medicine made tremendous progress. In recent years a new awareness is coming that with the present biomedical model we are running into serious difficulties in solving the current as well as the newly emerging health problems. Meanwhile, new knowledge about mind, mental functions, role of behaviour and psychosocial factors in health and disease is rapidly accumulating which is forcing us to re-examine the inadequacy of the current paradigm of biomedical model of medicine.

The term 'mind' has been used in medical literature in many different ways, in various languages and cultures in different periods of history. It will be beyond the scope of this lecture to attempt to discuss different concepts of mind. In general the term 'mind' refers to our mental faculties, our thinking, our feelings, our memory, our will, our judgement and perhaps most of all our awareness of ourselves. Before the rise of modern scientific era, any discussion of mind would also include a reference to soul or spirit. As we know, the original meaning of the world 'psyche' from which terms like psychology or psychiatry have been derived, was 'spirit' or 'soul' and not mind in the sense it is used today. In fact the separation between body and spirit was always accepted in medical history in all cultures while separation between mind and body in our thinking is a relatively recent phenomenon.

CONCEPTUAL MODEL OF HEALTH AND DISEASE IN EARLIER SYSTEMS OF MEDICINE

Before the arrival of modern scientific medicine in Europe around the seventeenth century, there were many other organised systems of medicine visiting in all parts of the world. Some of them like Ayurveda or Unani Tib or Chinese medicine continue to be utilized by millions of people in many countries till today. The conceptual model of health and disease in these systems of medicines is considerably different from what we now understand in modern medicine. For example if one studies some of the well known Ayurvedic texts like *Charaka Samhita, Sushruta Samhita,* one is struck by a very different approach to the subject, as compared to the modern text books of medicine. I have summed up below some of the significant points in the earlier models of health and disease.

a) Almost all the ancient texts of medicine like *Charaka Samhita* open with a reference to the place of man in the universe, aims of medical sciences, purpose of life, role of religious duties etc. All this is, in great contrast to modern text books of medicine which are presented in a very secular way without any reference to God or sprit or man's place in universe etc. Of course this approach has both, advantages and disadvantages.

b) In earlier systems like Ayurveda, the living beings are considered as made up the same five elements which constitute the universe, i.e., earth (*prithvi*), water (*apa*), fire (*tejas*), air (*vayu*) and

ether (*akasha*). The sixth controlling element is the spirit of supreme consciousness; in the universe it is the *'Brahman'* or in the living being it is the *'Atman'* (1).

c) Health is conceived essentially as a balance between different forces like, the three *Dhatus* (*kaph, pit* and *vayu)* or the three *Gunas* (*sattva, tejas* and *tamas*). Disease is regarded as an imbalance between these forces.

d) In all ancient systems of medicine, role of mind and emotions is considered very important both in health and disease. Mental processes were repeatedly invoked for healing-may it be in shamanic or spirit-possession practices in many cultures, or temple healing and dream analysis in ancient Greece, or Yoga and meditation in India. There are repeated references to the role of emotions in the writings of great physicians of Islamic medicine like Ibne Sena or Al-Rhazi. Excess of negative emotions like *kama* (lust), *krodha* (anger), *lobha* (greed), *moha* (attachment) and *ahankara* (pride) are frequently mentioned as causes of physical and mental ill health in various Indian texts.

e) Another striking thing in the earlier systems of medicine was that a treating physician or a healer used to see oneself as "working with nature" and tried to revive what Hippocrates called "nature's healing powers". In contrast a doctor of modern scientific medicine sees himself as fighting and conquering nature (2).

SEPARATION OF BODY AND MIND IN EUROPEAN THOUGHT – THE ROLE OF RENE DESCARTES

In the history of Western medicine, the separation of body and mind is generally attributed to the writings of Rene Descartes (1596-1650). Few persons have influenced the history of Western science and medicine so powerfully as Descartes. His famous statement *"Cogito, ergosum" or "I think, therefore I am"* has been quoted in innumerable books of science and medicine. But behind this seemingly simple statement lay years of rigorous introspection. The basis of Descartes' thinking is radical doubt; doubting all traditional knowledge, the impression of his senses and even the fact that he has a body-until he reaches one thing he can not doubt; the existence of himself as a thinker. For Descartes, essence of human nature lies in thought and he divided nature into two realms; that of mind *"res cogitans"* or the thinking thing and that of matter *"res extensa"* or the extended thing. This was the beginning of the separation of not only body and mind in European thought but also led to the separation of the Humanities from Natural Sciences.

Descartes influenced scientific thinking in three major ways:

1. He separated mental from material phenomenon.
2. He encouraged the attitude of doubting all traditional knowledge till clearly proven.
3. He introduced the analytical method in science i.e., breaking all problems into smaller parts and arranging them in

their logical order. This is what has been later called 'reductionism' in science.

Descartes was also a great mathematician. He saw the whole universe as a grand machine controlled by strict mathematical laws. He also visualized living organisms in terms of machines - healthy body as a perfect machine and disease as something where the machine is not functioning. It is interesting to note how this model of man as a machine, has dominated our thinking for the last three hundred years. In the seventeenth century it was the mechanical clock with which human body was repeatedly compared. In the eighteenth century came the steam engine and internal combustion engines and human body was compared with them. In the nineteenth century the favourite theme was electricity and nervous system was being compared with that. In the twentieth century, computer dominates our thinking and it has become the favourite model to explain bodily and mental functions. Three centuries after Descartes, the science of medicine is still based as George Engel has said, on "the notion of body as a machine, of disease as the consequence of breakdown of the machine, the doctor's task to repair the machine" (3).

THE BIOMEDICAL MODEL OF HEALTH AND DISEASE

The rise of modern scientific medicine began in the nineteenth century with the great advances made in biology. Progress in physics and chemistry further strengthened these developments. Following the reductionist approach, two significant trends emerged. Rudolf Virchow postulated that all illness involved structural changes at the cellular level, thus establishing cellular biology as a basis of medical sciences. The second major advancement was the study of microorganisms by Pasteur and others that has laid the foundation of modern microbiology. These developments in the nineteenth century, led to the popularity of the 'germ theory of disease'— the doctrine that specific diseases are caused by specific microbes which dominated medical thinking for the next hundred years. Further developments in medical technology, antimicrobial drugs, anaesthesia and modern surgical techniques have all contributed greatly to the current progress of modern medicine. However, it is important to note that inspite of all the recent advances in medicine, our basic understanding of the phenomenon of health and disease continues to be dominated by what is generally called the "biomedical model". I have put down the main features of this model in Table 1.

Table 1. *Main features of biomedical model of health*

- Living organism viewed as a machine. Disease viewed as malfunction of the machine
- Diseases viewed as specific entitles with specific single causes may it be microorganism or a genetic defect or a molecular change
- Medical technology viewed as the main solution to health problems
- Physical mechanisms viewed as basis of life mental events seen only as secondary phenomena

THE CURRENT DISSATISFACTION WITH MODERN MEDICINE

There is no doubt that modern medicine has made tremendous advances in the last 200 years. In our life time the life expectancy of an average Indian has nearly doubled from thirty years to sixty years Small pox has been eradicated. Polio and many other infectious diseases have been greatly brought under control. The prevalences of nutritional deficiency diseases has been greatly reduced. Modern surgery has saved the lives of many people and prolonged the lives of many others. Treatment of a large number of other medical conditions has been greatly improved.

Inspite of such spectacular progress in the medical sciences, it is surprising and a bit disturbing to note that society at large is not particularly pleased with the performance of medical profession. In fact the criticism against medical profession is mounting in the last few decades. There are largely three types of criticism which are levelled against us - all three of them are interrelated. The first and the most common criticism is that medical treatment has become very costly. Even the rich countries like USA, where health budget has reached over 10% of the national income, are finding it difficult to bear this burden. The second criticism is about the inequity and maldistribution of the benefits of modern medical service. While the rich people in big cities can have the best of medical help, the poor people especially living in the rural areas and city slums, have very little access to good quality modern health services. The third type of criticism is related to the attitude of medical professionals. People complain about too many specialists and too many investigations. They feel that doctors do not have sufficient time for patients and medical services are becoming mechanical and dehumanised. It is said that health is becoming more and more like a commodity, produced by technology and controlled by market forces. This does not mean that there are no more good and humane doctors – there are many of them and hopefully will continue to be there – but we have to take note of the increasing criticism against the current system of medicine. If we look closely at this phenomenon, we will find that essentially the present state of medical profession is directly related to the medical model which has evolved in the last three hundred years, in which diseased organs, cells and molecules have become more important than the individual human beings; where technology and machines have become more important than the doctor-patient relationship.

EMERGING HEALTH ISSUES FOR THE TWENTY FIRST CENTURY

Let us now have a look at what are the new challenges that are appearing on the medical horizon when we are approaching the twenty first century. It is true that we have partly solved the problems of common infectious diseases and nutritional deficiencies but the newer problems which are emerging appear to be even more formidable. I have put down some of these issues in the Table 2.

The main point to be noted in this table is that the pattern of serious health problems is undergoing a major change. In this list of new problems, human behaviour and

Table 2. *Emerging health issues for the twenty first century*

Rising population
Changing health dynamics
Care of the aged
Care of the chronically ill
Mental, alcohol and drug abuse disorders
Management of somatisation disorders
Violence, accidents, suicides
AIDS
Concen with quality of care (health expectancy vs life expectancy)

psychosocial factors are fast emerging as the main common theme. The conventional technology-oriented medicine as being practised today many not provide the solutions to these problems. Communicable diseases are losing their prime place as the major killers. As the life expectancy is increasing, we are now faced with increasing mortality and morbidity from non-communicable diseases like cancer, diabetes, hypertension, heart disease, strokes etc. Social pathologies like alcohol, drugs, violence, suicide are becoming new threats to health. Problems of old age like dementia are looming large as a major health concer. Long term medical care instead of cure is suddenly becoming a very important issue. There is the problem of somatisation disorders which is one of the largest groups of patients who visit primary health care services, especially in developing countries. These are the patients who have vague, ill-defined multiple somatic symptoms often expressed in colourful local cultural terms like the movement of *'ga'* or *'gole'*, displacement of viscera (called *'dharan"* in North India) or loss of important body fluids like *'dhat'* and so on. Most of these patients have dysphoric mood of anxiety and sadness and often have significant interpersonal problems in the family or at work. Our technologically oriented biomedical model of health care has very little to offer to these patients except costly irrelevant investigations and more costly medications without demonstrable benefits. The medical care of this group is a great financial drain on the limited national health resources and in the coming decades we must find some better solution to this problem.

Mental disorders of various kinds including alcohol and drug disorders are rapidly emerging as the leading causes of morbidity and disability as reported in the World Health Report 1997. Christopher Murray and Alan Lopez in their much talked about book "The Global Burden of Disease" published by Harvard University Press on behalf of World Bank and World Health Organization has projected that by the year 2020, the leading cause of disability in the world would be ischaemic heart disease while the second leading cause would be unipolar major depression.

The dramatic increase in the life expectancy is creating new problems for the health planners for the next century. Half a century ago, the great majority of the global population died before the age of 50 years. Today the average life expectancy in developing countries is 64 years and is estimated to reach 71 years by the year 2020. But while extending our life span is desirable in itself, it is much more so if it can be accompanied by freedom from additional years of suffering poverty, pain or disability. Qual-

ity of human life is at least as important as the quantity. Individuals are entitled to be concerned not so much about their life expectancy as about their health expectancy (4). In the search for quality of life indicators, one new concept which is being talked about is the 'Disability Adjusted Life Years' (DALY) which combines the years of health lost through premature death, with the years of life lived with disability. This measure was extensively used in the World Bank's 'World Development Report-1993. Investing in Health'. Percentage of DALYs lost due to mental health problems occupy an important position with 8.1% , more than heart diseases (4.4%) and cancer (5.8%). A more significant finding in this report is that 34% of disability in the world is related to behaviour related problems - in addition to the mental disorders. These include conditions such as violence, accidents, diarrhoeal diseases, malnutrition, sexually transmitted diseases etc. (5)

THE ROLE OF MIND IN HEALTH AND DISEASE – NEWER EVIDENCE

The role of mind in health and disease has been recognized from the earliest times in medical history. The powerful effect emotions have on our bodies is obvious to all of us as soon as we get angry or anxious or fearful or depressed. In the beginning of this century with the influence of psychoanalysis the term psychosomatic diseases became quite popular and referred to conditions like peptic ulcer, bronchial asthma, ulcerative colitis, urticaria etc., in which it was postulated that excessive unexpressed negative emotions produce physiological changes which in turn lead to tissue damage in the organs. A little later, attention was directed not to specific emotions but to the whole personality pattern. It was postulated for example, how 'Type A' personality traits of excessive drive, time urgency, competitiveness, need for control etc were associated with higher incidence of coronary artery disease.

In recent years a new kind of evidence has been accumulating which has led to the emergence of a new multidisciplinary speciality with the name of "psycho-neuro-immunology" or PNI (6). This term was coined by Robert Ader who was working as Clinical Psychologist in the University of Rochester School of Medicine. PNI has been defined as the study of intricate interaction of consciousness [psycho], brain and central nervous system [neuro] and the body's defence against external infection and aberrant cell division [immunology]. In a short time, researches in this field have shaken our conventional style of thinking in terms of body and mind. It seems wrong now to think that mind "located" somewhere in the brain - as we have been taught in the past. As Volhardt (8) has summed up:

"The field of psycho-neuro-immunology is in its infancy but research already make a good case for breaking down old dualistic notions that mind and body are separate systems. In fact much research indicates that the brain and immune system form a closed circuit."

Let me refer to the original experiment of Robert Ader in 1974 which led to this new direction of thinking. As we know the immune system is a surveillance system which protects the body against infection and foreign substances. There are two basic types

of immunologic reactions: humoral and cell-mediated which involved B-lymphocytes and T-lymphocytes, respectively. In this experiment, white rats had been given a medication that artificially suppressed the quantity of disease-fighting T-cells circulating in their blood. Each time they received the medication, they ate it along with saccharine-laced water. Ader accidentally discovered that giving rats only saccharine-flavoured water, without the suppressive medication, still resulted in lowering of T-cell count – to the point that some of the rats started getting sick and even died. Their immune system had learned to suppress T-cells in response to the flavoured water only. This was not expected to have happened according to the best scientific understanding at the time. Till that time all the medical scientists believed that central nervous system and immune systems were separate and neither was able to influence the operation of the other (9). As the well-known writer Francisco Varels (10) at a meeting titled 'Mind and Life', held in Dharamsala in India in 1990, beautifully put it, "the immune system is the body's brain, defining body's own sense of self, of what belongs within it and what does not". Subsequently the work of Felton and others have confirmed through electron microscopic studies that neurotransmitters and polypeptides convey the messages between autonomic nerve endings and lymph cells (11).

Through the researchers in psycho-neuro-immunology we are now increasingly aware how situations of stress, such as depression, loneliness, hopelessness lead to immunosuppression, which makes us prone to various infections, allergies and auto immune disorders. Immunosuppression also increases the risk of proliferation of cancer cells. With these new researches it suddenly makes sense why students under examination stress, develop more illnesses and why appearance of cancer is often linked with disturbing life-events. The common knowledge that when one partner of a long and happy married life dies, the health of the other partner is also likely to be seriously affected, has now acquired a new scientific validity. It is now well established after the death of a spouse, survivors are generally at greater risk of death from a variety of illnesses-including heart attack, infectious diseases, strokes, cancer as compared to other people of some age and sex (12). Life stress has also been implicated in many other disorders like tuberculosis, acute respiratory illness, the common cold, genital herpes and mononucleosis (8). It is interesting to note that just as now researches have shown that stress leads to immuno-suppression, the corollary is equally true. Behaviour interventions such as psychotherapy, relaxation techniques, family and social support leads to enhancement of optimization of immune function (13). In his popular book "Anatomy of Illness" Norman Cousins (14) has dramatically brought out the effect of affirmative emotions on disease. By watching Laurel and Hardy's comic movies and with uninhibited laughter he was above to reverse the process of a mysterious ankylosing spondylitis.

A word of caution must be put in at this stage. The science of psycho-neuro-immunology is still very young. It has a long way to go. For example, at present, we are hardly familiar with half a dozen neurotransmitters but the list in this field is

going to be very long. Pert and others (15) have roughly calculated that there may be a family of 60 to 100 powerful informational biochemicals such as neurotransmitters, hormones, neuropeptides, growth factors and lymphokines which carry messages back and forth between CNS, the endocrine system and the immune system. It will also be wrong to think of one cause – one effect relationship between an emotional event and specific pathology. This would again be an old style of thinking like the germ theory of the nineteenth century. The reality is a complex interaction between body-mind and environment. As Robert Ader (6) has said, we need a multidetermined concept of health and disease rather than a linear, single cause-single effect approach. However, psycho-neuro-immunology even in a short period has made two significant contributions to medical knowledge:

- It is now possible to scientifically understand how stress and emotions affect various bodily stems.
- It is no more appropriate to talk of mind and body as two separate systems, as there is constant interaction between them.

IN SEARCH OF A NEW PARADIGM

As pointed out in the introduction of this paper, a slow awareness is coming to the medical profession that the currently popular biomedical model which some people have called Technomedicine, seems to have serious limitations in solving many of the existing and certainly the newly emerging health problems. This is even more evident when we consider the question of prevention of illness and promotion of health. This model has provided us with spectacular successes in the last two hundred years but we are now reaching a stage where more and more technology is giving us less and less good results. The nature of health problems is changing and technology alone - does not seem to be right answer. As Fritjof Capra (2) has pointed out the current biomedical model is a part of the larger western science model. The Newtonian mechanical model of science which dominated out thinking till the end of nineteenth century has outlived its utility in the twentieth century, in the light of Einstein's theory of relativity, quantum theory and Heisenberg's uncertainty principle. The existing biomedical model of medicine with its mechanical rigidity also needs to undergo change just as the scientific model is changing with the advent of sub-atomic physics.

The main direction in which this change is taking place is from reductionism to synthesis, from mechanistic to holistic model. In the paper "The need for a new medical model" published in Science in April, 1977 George Engel (3) proposed the term "biopsychosocial" which over the years has won wide acclaim. From the field of psycho-neuro-immunology, Borysenko (12) has suggested a similar tripartite model of genetic, environment and psychological factors in disease susceptibility. The important point Borysenko (12) makes is that each one of these factors can be the primary determinant of disease or can interact with other two factors in producing disease.

Thomas Kuhn in 1970 (16) introduced the concept of 'paradigm shift' in his famous book 'The structure of scientific revolution'. It refers to a profound change in the thoughts, perceptions and values that form a particular vision of reality. Such a para-

digm shift took place in Europe in 16th century when Renaissance replaced the Theological paradigm of the middle ages (15). The new scientific paradigm had dominated the life of man for the next four hundred years. This thinking included our belief in scientific method as the only valid approach to knowledge; the view of universe as a mechanical system composed of elementary material building blocks; the view of life in society as a competitive struggle for existence; and the belief in unlimited material progress to be achieved through economic and technological growth. As Capra (2) has said, it is only in recent years that all these ideas and values have been found severely limited and in need of radical revision. We are on the threshold of a paradigm shift.

How will this paradigm shift affect medical science? My submission is that the central role of mind, our thinking, our feelings, our emotions, will once again come back to medicine as an important dimension both in understanding of disease phenomenon, in the treatment of patients, in prevention of disease as well as in promotion of health. Is it not strange that as clinicians, all of us swear by the art of healing but 'healing' does not even constitute a subject in our curricula these days! Healing process is not only the eradication of disease but a coordinated response of the whole organism, body and mind to stressful environmental influences. The art of healing is our heritage for the last five thousand years, much before we learnt the modern medical technology. Hippocrates, the great Guru of modern medicine, recognised the healing forces inherent in living organisms and called them 'nature's healing powers'. The main difference which has come over is that, earlier doctors saw their role in assisting the natural forces; now we want to fight and dominate nature:

The second important shift which I foresee is the inclusion of the cultural dimension in our medical model. As Capra (2) has observed "Any system of health care including the modern Western medicine is a product of history and exists in a certain social and cultural context. As this context keeps changing, the health care system also changes. Hence the usefulness of any medical system as a model for another society is quite limited". We have worked with the borrowed model of Western medicine for the last two hundred years. Sadly it has made us aliens in our own cultures. Our ideas of health and disease as learned from Western medicine, often do not fit in with the ideas of our patients and general population. In Indian cultural tradition, mental and spiritual dimension is very much an integral part of health sciences but unfortunately this finds no place in modern medical science. While we bemoan the lack of scientific sophistication our patients, they in turn are baffled by our utter lack of cultural sensitivity. In the past, poets and philosophers, doctors and common man shared the world view about the nature of man, nature of health and is disease. Five elements - earth, fire, water, air and sky were the basis of our existence, three *Gunas* - *satva*, *rajas* and *tamas* were the basis of human personality, the imbalance of three *Doshas* – *kaph*, *pit* and *vayu* caused disease; *kama*, *krodh*, *lobh*, *moha* and *ahankar* were seen as the toxic emotions which produce psychological disturbances. All this was the shared common knowledge. Alas now, the doctors and common man speak different languages.

BRINGING MIND BACK TO MEDICINE

How to bring mind back to Medicine? How to restore the balance between currently dominant technomedicine with the desirable humanistic medicine? How to add psychosocial dimension to the biomedical model? Paradigm shift does not come easily. It takes a life time to bring attitudinal change. At present we are so deeply immersed in the biomedical tradition that we see technology as the only solution to our health problems. When technology fails we seek still more of technology as a possible way out. Medical profession changes very slowly. To change the clinical practice we must bring changes at two crucial levels, medical education and medical research. The science is dismal in both fronts currently in India. Inspite of numerous workshops, symposia, pious resolutions on the need of psychosocial component in undergraduate education, no meaningful impact has been made on our medical teaching which shapes our new doctors. Similarly there is very little money allocated for research on psychosocial factors in health and disease and whatever money Indian Council of Medical Research had been giving for this purpose has been drastically reduced in the last twenty years. Only good research can give us direction how to acquire and apply knowledge in this area.

I sometimes feel that perhaps more than medical profession, it is the general public, the society at large which is going to force us to change. Dissatisfaction with the existing techno-medicine and in fact with the whole western science, is growing. There is repeated talk of alternative to science. In the last fifty years, all around us there is rapid growth of the alternative medicine. There are large groups of new practitioners of such alternative systems of medicine. There are a number of new journals on this theme now with some highly respectable people associated with them. There have been many national and international conferences on this subject. All the talk of alternative medicine has basically one common theme, the need for a holistic approach, instead of the current reductionist approach of medical science. This does not mean to abandon technology or to give up evidence-based medicine but to restore the balance between the science of medicine and the art of healing. It is time to bring mind back to medicine.

Some times may medical colleagues have questioned the reality of mind–we can not see it, feel it or touch it. Is it really something more than the functions of the brain? I do not know the answer. I would close my talk with the following lines from the great Chinese book of wisdom. "Tao Te Ching" compiled somewhere between three to four thousand years ago. The English translation is by Stephen Mitchell (17).

> We join spokes together in a wheel,
> but it is the center hole
> that makes the wagon move
>
> We shape clay into a pot,
> but is the emptiness inside
> that holds whatever we want
>
> We hammer wood for a house
> but it is the inner space
> that makes it livable
>
> We work with being
> but non-being is what we use.

Thank you.

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