PRESIDENTIAL ADDRESS
SPIRITUALITY, SCIENCE AND MENTAL HEALTH
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My dear colleagues, ladies and gentlemen,
I consider it a great privilege and pleasure to address you this morning as the next President of Indian Psychiatric Society. I am most grateful to the fellowship of the society for bestowing their trust and confidence in me and having elected me to the highest position in the profession at the national level, which had been a cherished dream for me. I feel humble when I think of the great stalwarts who have been the past Presidents of this great society. Amongst this galaxy of luminaries are my mentors, senior colleagues and friends who had contributed in a big way to the development of psychiatry and moulded the mental health services in our country. I shall endeavour to hold the great traditions led by them for the furtherance of the aims and objectives of our society. I have been participating in the affairs of the society for more than twenty years now, and was actively involved in different capacities as a fellow, member of the executive council, the honorary treasurer, as Vice President and now as the President. With your good wishes and kind co-operation I shall try, to the best of my capacity, to carry out the onerous duties and responsibilities that you have entrusted to me.

Each of my honourable predecessors had delivered their presidential address on a specific theme; I too will like to do the same. The theme of my today's address is, "SPIRITUALITY, SCIENCE & MENTAL HEALTH".

INTRODUCTION

Spirituality or spiritualism is considered as something abstract which is concerned with the higher aspect of life. To many it is synonymous with religion and philosophy, usually considered beyond the realm of modern physical sciences. It carries different meaning from one part of the globe to the other; and from one group of persons to the other. But every one seems to agree that the spiritual aspect of one's life is intimately related to the mental processes i.e. mind, and affects the psychic functions of an individual. To me, the spirituality in all its aspects seems to be a function of functioning human brain. No dead body of man in coma may respond in any spiritual manner.

My knowledge of life science is shallow and understanding of human mind and the phenomena of our universe is poor. Yet, dwelling about the mental health problems it is my concern, as much yours, to what affects the mind or the psyche of a person. As we go through the annals of history of mankind on our planet, it appears that the spiritualism in its various forms had been in existence since eternity and what happens after one's death had been the query in every mind. Although saints, sages, theosophists, the men of religion and philosophy had answered this query from time to time: a fool-proof scientific understanding of the phenomenon is still out of sight. Reports and writings of prophecies and precognition, apparitions, thought transference and clairvoyance keeps on bogging our head and make us feel that, we the scientists and healers of mind still do not understand the human mind in all its propensity and potentialities. Psychobiophysics & Psychobiology does not find any distinct place in our curriculum of medical studies. If we have to believe the spiritualism and various psychic phenomena put on record, there exists no doubt that it consists of a good body of facts, and spiritualism is an oldest

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science out of focus from the present day scientific mind.

It is thus high time we put this occult phenomenon of spiritualism to the scrutiny of modern science and study it systematically, utilising our knowledge and advances made in various physical sciences, neurosciences including neurophysiology, cybernetics and other fields. Scientific understanding of spiritualism may enlighten us on those various issues of day to day concern to every curious mind, including the phenomenon of life after life. It may provide holistic approach in improving the mental health care for the afflicted, and preventive & promotive mental health gains to the individuals improving the family ties. Restoring better social order, it may benefit the nations & humanity at large at global plane. Specially, when the very existence of civilisation and mankind on this planet is under the threat of withering & extinction due to drug abuse, epidemics of disease like AIDS and nuclear holocaust.

Let us now examine the relevant issues in detail:

**SPIRITUALISM**

Scanning the literature it is revealed that in the Western Countries during the last few centuries spiritualism was rampant. It is believed to do something with supernatural & continuity of life after death. The possibility of communication between dead and living through the agency of a medium was well recognised and documented (Podmore - 1910). A medium is a person with unusual sensitivity which enables him to be readily controlled by the disembodied spirits. A medium formed a link between dead and living. What qualified a person to be the mouth piece of supernatural is not known. Besides, spiritualist was known to carry certain power in varying proportion thorough which they were able to perceive and communicate beyond time and space. They were able to exhibit certain physical manifestations such as materialisation of spirit form, apports i.e. production of material objects by supposedly occult means at a spiritualistic seanse, moving of inanimate objects without any visible contact and performing other mystic feats like going to trance state, thought reading, crystal gazing, levitation i.e. rising and floating in air, automatic writing and slate writing etc. The spiritualism by many was considered to be the act and influence of spirits of the deceased. The witchcraft, demonic possession, poltergeist disturbances and animal magnetism was considered to be part of it.

The concept of animal magnetism was first described by the illustrious famous physician Paracelius. But, it was Franz Antoine Mesmer in 1776 who united the two phases of this magnetic philosophy. As per which, a force radiate from every substance, animate as well inanimate including heavenly bodies i.e. planets and human beings, making them to interact. The Mesmer's animal magnetism was utilised to induce hypnotic trance. The term Mesmerism came in vogue and hypnotism which was a part of spiritualism was used as a treatment modality for some diseases. Mesmerism was later replaced by the new doctrine of suggestion, advanced by a Paris physician Alexander Bertrand in 1823. The doctrine of suggestion, as we all know, still holds good in the present day practice of Psychiatry. The hypnosis still forms a modality for treatment for some. Recchenbeck in 1845 demonstrated the existence of an emanation called Odicforce radiating from every substance which can be seen by the clairvoyants. The German investigators Jung and other recorded the phenomenon of clairvoyants in their somnambules. In France, Planchele in 1853 invented a simple instrument giving it his name and used it for spirit communication. Allen Kardec (1898) attributed these phenomenon as inferior phase of spiritualism and expressed belief in reincarnation. As the wave of this spiritualism swept in Europe and America during the last century, many people started practising trickeries and frauds. This brought under clouds the
genuineness of those reports. The rationalist disbelieved these so-called spiritualistic phenomena but were unable to refute them on many occasions. To investigate those claims the Society for Psychological Research was established in 1882 in UK; which made the first organized and united attempt to study those spiritualistic claims in a purely scientific, impartial and unbiased manner, avoiding cautiously any prejudice and preconceived approach. They called them psychical phenomenon and could detect great deal of fraud in mediumistic performance like slate writing and other physical manifestations. About 17,000 cases of apparitions of the dead and living were collected and studied. The apparitions coinciding with death or other crisis were found to occur much in excess than that could be ascribed to chance alone, which testified the occurrence of apparition & accredited the phenomena of telepathy & telekinesis. But the reports about telepathic power were a few. Similar psychical phenomena and mystic feats are reported from India and other countries also.

**TELEPATHY**

It means intercommunication between one brain and another brain by means other than that of the ordinary sense channels. It has a bearing on all psychic phenomena. Many cases are on record, where most vivid impression have been transmitted from a distance. It is believed that telepathic communication goes direct from one mind to another irrespective of the distance. The trivial circumstances can be transmitted to a percipient near, at a hand, while as a rule only the more intense & violent impressions are received from a distance. The theory of thought transference is no new one. It is said to be a daughter of the hoary science of astrology. Podmore (1902) was the exponent of theory of telepathy. The telepathy experiments were conducted long back by Sidgwick in 1889-91. Since that time onward increasing body of scientific opinion is developing favouring the presence of this surmised mode of communication, which may be within a reasonable distance of becoming an acknowledged fact (Lewis Spence, 1988). The mechanism of telepathy is generally supposed, so far, to be in the form of yet unknown etherical vibrations or "Brain Waves". The study of coincidental hallucination i.e. hallucinatory apparitions, coinciding the death of a person represented or with some other crisis in one's life are also attributed to this phenomenon of telepathy.

**CLAIRVOYANCE (Clear Vision)**

A term denoting the supposed supernormal faculty of seeing person and events which are distant in time and place and of which no knowledge can reach to the seers through the normal sense channels. Three types are described:
1. **Retrocognition** - perception of past
2. **Premonition** - perception of future events
3. **Perception of contemporary events happening at a distance** - outside the range of normal vision.

What telepathy is in auditory modality, clairvoyance is in visual modality. Based on the clairvoyant experiences the great prophecies have been made. To illustrate this, I shall quote a best-seller widely acclaimed, The GREAT PROPHECIES BY NOSTRADAMUS by Erika Cheethan. To explain these prophecies, Erika Cheethan (1975) has made some unbelievable observations. To quote him, "The modern disciples of Einstein recognise nothing but an eternal present which was also what the ancient mystic believed. If the future exists already then precognition is a fact. The whole trend of advance knowledge is to place the laws of physics in a four dimensional continuum, that is, the eternal present. If this is so, then past, present and future exists simultaneously. Perhaps it is only our consciousness that moves?"

Ladies and gentleman, it appears a very funny concept that time is static and consciousness is moving. But quite a thought provoking one. It may mean similar to, as with the primitive man who observed the moving sun and
believed that earth is static or like a passenger in a train who seeing the moving horizon forget for a while the speeding train. We know that both sun and earth are in motion. So it may not be improper if it is to be believed that like sun and earth in motion, it is the time as well our consciousness both are in relative motion maintaining a fixed proportion or ratio.

**TRANCE STATE & PHENOMENON OF DISSOCIATION**

Trance state is found to occur in mystics & men of proven spiritual attainment other than those suffering from psychomotor seizure and in state of possession. But the quality of experience differs. The stage of samadhi or eternal bliss which is also called state of super consciousness is not definitely devoid of dissociation. We in psychiatry understand the dissociation, meaning the disruption of normal integration of cognition, affect, behaviour, sensation and identity. This may range from day dreaming and transient lapses in attention through deja vu phenomenon to pathological failures (Atchison & Mc Farlane, 1994) which are well known to all of us. But very little work is done to know the psycho physical basis and the psycho physiological and biochemical correlates during the process of dissociation.

**REINCARNATION**

Literally speaking, reincarnation means entry of a soul into another body after death. The doctrine of reincarnation is avowed in a large part of Asia and particularly by Vedanta philosophy and the various other religious philosophy like Buddhism and Jainism. Its evidences are found in Greek thought, Zoroastrian scriptures, and others. Existence after death presupposes existence before birth. As per Vedanta philosophy and other eastern thoughts, doctrine of reincarnation is associated with the doctrine of Karma. The man is reborn for the sake of his Karma and attainment of their fulfilment liberates the soul from the chain that ties him to the wheel of birth and rebirth (Vivekanand). Similar thoughts are shared by the Scottish philosopher and historian David Hume. Theosophist believes in astral form of body called astral body which parts away from the physical body on death and moves in astral world. The astral philosophy essentially remains same as that of Vedanta philosophy on this subject with some minor differences. I shall not go in to the further details on this subject which is in the real of religion and philosophy. However it will be worth mentioning here that the study of reincarnation type of cases is gaining recognition by the scientific communities world over and claims of children who say that they remember previous lives have been under investigation in many cultures both in east as well in the west. The work done at NIMHANS at Bangalore in India during last two decades is worthy of appreciation. Thousands of cases investigated so far by different workers around the globe (Stevenson 1974,75) and analysis of those date had shown certain common features which points towards the universality and some authenticity of this phenomenon. (Pascricha & Stevenson 1977, Pascricha et al 1980, Pascricha 1990). The investigation of the phenomenon of survival of bodily death by Moody (1975) as reported in his book “Life after life” is also worth acknowledging.

If that is so, then it appears that folklore, mythology and religious philosophy, which is shared universally since ancient time, has some scientific wisdom. It remains to the present day scientific community to work out the high-tech modality and develop equipment to seize, once again, the stark reality.

**SPIRITUALISM IN INDIA**

The spiritualism in India and many eastern countries is recognised as a way of life with eternal joy and bliss beyond the precinct of sense pleasures. It is identified with some thing superconscious, supernatural and towards divinity. Spiritual inspirations are considered as a rare blessing and it is believed that through the
path of spiritualism a man attains perfection, immortality and ultimate fulfilment. The spiritual experiences not only brings the knowledge of super consciousness but also solves the problem of unconscious mind. The spiritual joy is considered more super than the intellectual joy which, in turn, is higher than the sense pleasures: as it does not lead to frustration, disappointment but provide ultimate satisfaction (Yatiswamandana 1979). The Indian Vedanta philosophy describes four approaches for making advance in the spiritual life namely Karma Yoga, Raja Yoga, Bhakti Yoga & Jnana Yoga. Out of these four yogas Raja yoga shows the path of meditation which may be of direct concern to us. Patanjali, the great sage, was the chief exponent of this Yoga. He considered eight stages called Ashtanga Yoga.

1. Yama - Moral conduct encompassing truthfulness, non violence, chastity, control of greed, non covetousness & non dependence on others.
2. Niyama - Self discipline, contentment & cleanliness.
3. Asna - Postural exercises
4. Pranayam - Control of Prana (subtle life energy) by regulating breathing
5. Pratiyahara - Withdrawal of senses from the external world & introspection
6. Dharma - Concentration
7. Dhyana - Meditation
8. Samadhi - Super conscious experience.

To attain super conscious state one is required to pass through first seven stages. Yogas had been a subject of great research. It is found to be of positive help in stress management and relief of anxiety and mental tension (Vahia 1973, Sahay 1982, Selvamurthy 1983, De Souza 1984).

Dhyana or meditation is an important stage through which depending upon the state of achievement a person enters into the stage of samadhi a state of blissful trance. A state of super consciousness and supreme awareness where the mind transcends. The various psychic phenomena described earlier are the manifestations of the psychic powers one attains during the process of attainment of this state of super consciousness. They have been described by the different persons who had spiritual attainment. Meditation stabilises the autonomic nervous system and make a person withstand environmental stresses better (Orme Johnson 1973; Venkoba Rao 1978). EEG recordings during meditation had shown better synchrony of the alpha and beta frequencies (Wool Folk 1975, west 1979). There are many methods of meditations viz. Transcendental meditation, Vipasana meditation, Prekshyadhyan and others. A Mahapurush or the Guru guides his disciple in the finer approach at sensitive stages. Vipasana meditation is an ancient Indian method of meditation which was followed in east & south east Asian countries since the time of lord Gautama Budha. The method involves observance of Sila (Moral Conduct), Anapanas (Awareness of Breathing), Vedna (Feeling of sensation). Another ancient method Prekshyadhyan is taken from Jainism. It is reported to lead one to spiritual path, reduces & relieves the various tensions of mind and improves the physical & mental health of the person practising it regularly. As per Bhamgra (1990), spiritual dimension of health pervades all other dimensions of health i.e. physical, mental & social. The Vipasana meditation may also help in deaddiction (Scholz, 1990). For that purpose I may add, any type of meditation if followed regularly, may help in deaddiction as they all advocated the similar prerequisites and practices. I shall not go in to the details of yoga & meditation here as they are aptly described by their proponents.

MYSTERIOUS ENERGY FIELD

Psychophysicologists had been of the view that there is some thing like bioenergy. Recognising the animal magnetic force of Mesmer, Odic force of Reichenback, N rays of Blondot, Bioplasmic energy of Soviet scientists & psychotronic energy described by Czech scientists, most of them are in agreement regarding the general characteristic of this energy, (Schul
which do not abide by the various physical laws. The experiments with psychotronic generators and with Kirlian photography are being conducted to understand this human psychic force and to identify it under the known laws of physics.

Whatever it may be, we do not yet know what it is. Neither we are able to accept it, nor refute the claim. There is a saying worth quoting here that is "All that glitters is not gold". I too, like most of you, firmly believe in it. But unless there is existence of gold somewhere no one would be talking about its glitter. Hence, ladies & gentleman, you would like to agree with me that even if a grain of truth is found in all that what we have deliberated upon so far, it is worth continuing to know further.

CYBERNETICS

The science of system control and communication in animal and human brain had provided many clues about electrophysiological and biophysical functioning of brain. These clues provided the possibility of developing the artificial intelligence which led to the development of present day computer science. Today we know how helpful the computers are in every walk of our life. When we look back and think about human brain and its potentialities it becomes apparent that it is a very magnificent and highly developed, rather evolved, electromagnetic organ. We can identify in it presence of various electromagnetic gadgetry developed by man. If we look at the Cybernetics in a reverse way the visual perception right from retina to occipital cortex will appear a beautiful and very efficient close circuit TV camera & TV set; our ears and auditory perception from ear drum through auditory nerve to the cortical area are similar to the telephonic system, memory is like a tape recorder, calculating faculty like a calculator, intellectual faculty is alike to a computer in the brain. If that is so, then, what is left out or missing is a radio. It is difficult to believe that radio which was made by man much before the other gadgets, would not be existing in a human brain.

RADIO PHENOMENON IN HUMAN BRAIN

When acknowledged as a scientific fact it would be able to solve and explain many of the puzzles. It may provide better understanding & acceptance of various occult and spiritual phenomenon. The evidence in its favour is already provided by the various observations made by different groups working with ESP i.e. extra sensory perception and thought transference or telepathy. Once the radio phenomenon in human brain is proved it will be easy to understand the phenomenon of clairvoyance also. By radio phenomenon I mean communication beyond time & space by means other than known physical contacts or through speaking, reading & writing. I have called brain a most highly evolved electromagnetic organ. The structure of this highly evolved organ is not a physical one as that of man made gadgetry, but is is a biological structure. As we know the biological material is self developing, self evolving, self reproducing, capable of training or learning & self repairing one. It is interdependent to the systems & body it belongs to. Its survival and functioning depends on the genetic coding it received and oxygen & nutrition it is supplied with for its metabolic needs. Each neuron, the functioning unit of the brain is a very sophisticated high tech workshop in itself, dealing not only with various molecules and atoms, but subatomic particles as well, and functions in a very precise precoded manner.

We must also understand that the laws of physics remain same for both the inanimates as well as animates, but they are cast in to a biological mould for the animates. Radio phenomenon seems to be a dormant faculty of the brain which could be activated & developed with certain practices, which, I think Yogis & spiritual persons are better qualified for. Its experimental demonstration become difficult as it may need
lve human brain where this phenomenon is activated and already developed. However certain experiments conducted on human volunteers at the yoga lab of Defence Physiological Laboratory at Delhi for the study of Agnihotra, a vedic ritual for enhancing tranquillity by Selvamurthy (1989), revealed startling findings. Dr. Selvamurthy is at present the Director of Defence Institute of Physiology and Allied Sciences and also the Director of Defence Institute of Psychological Research. They found the delta wave suppression and alpha activation in computerised EEG recording while Agnihotra was being performed. The adequate control were utilised to rule out any artefacts & contaminated results. Selvamurthy attributed these results to the effects of mantras. Golechha et al (1987 & 1991) used Agnihotra procedure as an adjunct in the treatment of drug abuse and alcoholism. They found a clinically demonstrable positive effect of enhanced tranquillity in these subjects. The effect was of the degree that counterbalanced the urge for drugs and alcohol. It was hypothesised that this positive effect could have been due to the changes, in the electromagnetic milieu (EMM) surrounding the subjects, which was brought about by Agnihotra. Due to lighting of the fire in the Agnihotra copper pot there occurs emanation of some energy which might have enhanced or amplified the EMM prevailing at the prescribed timing of sunrise and sunset. The cosmic rhythm of EMM prevailing at the time of sunrise and sunset, are known to be mind soothing. The finding of delta wave suppression and alpha activation as recorded on computerised EEG during Agnihotra in the frontal leads indicate that there exist some mode of non contact communication between Agnihotra energy pot and neuronal group producing the EEG effect. This may be through the emenance of certain electromagnetic waves whose frequency and amplitude is not known and requires to be ascertained. Once ascertained this may help to break some ice about a neurophysiological phenomenon of finding a neuronal group in frontal/ prefrontal area responding to this cordless wave form of communication, which may come to our rescue for demonstrating and acknowledging the much talked about radio phenomenon in human brain. And, the further dedicated research may dispel the various myths about telepathy and thought transference and may throw better light on the occult phenomenon. Already a sea of scientific data are getting accumulated regarding effect of geomagnetic field on the brain which I shall touch upon shortly.

**ELECTROMAGNETIC MILIEU (EMM)**

When we have a global look at the spectrum of electromagnetic field one may get flabbergasted for a while, and can not save himself from pondering on the mythological concept of shakti. The spectrum of energy i.e. the electromagnetic waves could be divided in to the two broad groups. The ionising group of electromagnetic waves encompassing nuclear radiation, X - rays, gamma and cosmic rays of high frequency. They carry enough energy to project electrons out of their orbit. Where as non ionising electromagnetic waves are of low frequency which includes ultraviolet, visible spectrum VIBGYOR, infrared, microwaves, lasers, short waves, middle waves and long waves used in radio, TV and space communication i.e. satellite and inter planetary communication. It will not be wrong if I say that we are surrounded and engulfed not by the shades of light & darkness or heat or cold but by the different frequencies and amplitude of perceptible and imperceptible energy form of electromagnetic milieu all through our life, wherever we are and in both states of waking and sleep. Being a highly evolved and sophisticated electromagnetic organ, it is likely to respond to the changes in the surrounding electromagnetic milieu whose rhythm keeps on altering depending upon the geomagnetic field and solar cosmic radiation and eminence from other similar sources.
MENTAL HEALTH AND NEUROPHYSIOLOGICAL CORRELATES OF EMM

The biological effect of various radiation are known to us to a great extent. Case reports of effects of microwave producing psychic changes are on record (Wurster et al., 1988), the seasonal affective disorder is a well documented and extensively studied entity. The effect of light therapy is also well accepted (Ronald Kay, 1994). The pineal gland has been shown to be sensitive to changes in the magnetic field exposure in laboratory animals. The alteration in geomagnetic field is associated with decreased serotonin N-acetyl transference activity (Welker et al., 1983), decreased pinealocyte electrical activity (Semmler et al., 1980) and decreased melatonin synthesis (Olesse et al., 1985). The pulsed field, at geomagnetic field strengths, increases nor-adrenaline secretion by more than 25% in cloned neuronal cells in vitro (Dixey & Rein, 1982). Our retinal rods, which are the magneto receptors, are responsive to low energy changes in geomagnetic field (Olesse et al., 1985), which may also explain the effects of Agnihotra on human mind. The solar flare emanating charged particles produces geomagnetic storms accounting for seasonal variations in the incidence of depression. It is also shown that in vivo, magnetic fields may affect pineal function via the complex adrenergic system which also provide main euvation to pineal gland (Vanecek 1985, Ebadi & Covitrapong, 1986). It is now established that low energy geomagnetic field decreases the hydrophobic character of the cell membrane leading to changes in its permeability and enhance calcium channel activity (Karaiers & Ossenkopp, 1987-1988). Persinger and Levesque (1983) in their study described upto 40% variation in daily mood of the subjects, which can be accounted for by the daily mean index of geomagnetic disturbances. A positive correlation was found in solar radio flux levels and indices of geomagnetic ionosphere disturbances with monthly total Psychiatric admission (Raps et al., 1991). Thus we find that the changes in the electromagnetic milieu surrounding us has great effect on our mood, behaviour and psyche. Whether this provide any answer for the various Psychical or spiritual phenomenon already discussed remains to be seen.

LABORATORY METHODS AVAILABLE FOR STUDY OF SPIRITUALISM

In addition to the available neuro endocrinical & neurophysiological investigations, advances made through studies like positron emission tomography (PET), single Photon emission tomography (SPECT), Nuclear magnetic resonance (NMR) and functional magnetic resonance imaging spectroscopy, it is now possible to probe functional neuroanatomy of human emotions both in normal state as well during mentally disordered state (George et al., 1995). The change in regional cerebral blood flow and other metabolic parameters have opened the door for more objective study of neural substrate involved in human emotional behaviour. Through this innovation it is now possible to map brain activity associated with emotion (Robinson, 1995) and imaging the mind and functional brain is not a fetched thing (Cohen et al., 1995). These advances associated with electro physiological study through computerised EEG evoked potential studies and other means may be of great importance for the study of various psycho physiological and psycho physical changes occurring in the brain and thus make it possible to study spiritualism further in all its dimensions. These efforts may be further supplemented by the physicist who are better knowledged about geomagnetic phenomena and electromagnetic waves and contribute to the concept of electromagnetic milieu affecting human brain. They may also help to identify the spectra which may act as brain waves during thought transference of telepathy.

CONCLUSION

Thus we find that the field of spiritualism
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encompassing various psychical and super psychical phenomena are of direct concern to not only psychiatrists, psychologists and neuroscientists but to the whole mankind. Better understanding of various psycho physical phenomena and role of electromagnetic milieu in the psychophysiology of thought, emotions and behaviour may provide newer avenues to peer into the phenomenology of various psychiatric illnesses. The knowledge gained with further research in this direction may lead to change in the attitude of mankind towards life and living, which may be of ultimate benefit to all and a balanced approach equalising materialism with spiritualism, may provide a more fruitful & meaningful life for all of humanity.

Before I take my place, I very sincerely thank this august gathering of eminent psychiatrists, scientists and other mental health professionals for their most attentive participation and patient hearing. My sincere thanks to the organisers, for making the magnificent arrangement for this conference in this Tata Science Auditorium in this city of science which would remain a memorable event for us, for a long time to come.

BIBLIOGRAPHY

Atchison M & Mc Farlane A C (1994), "A review of dissociation & dissociative disorder", Australian & New Zealand Journal Psychiatry 28 : 591-599.

Allen Kardec (1898), "The book of spirits", Kegan Paul, New York.

Bhamgara M M (1990), "Spiritual dimension of health - the neglected dimension" Proceedings of international seminar on Vipassana Meditation and health, Vipassana research institute, Dharmagiri, Igatpuri - 422 403, Distt Nasik (India).

Bill Schul & Ed Pettit (1975), "The secret power of pyramids", Fawcett Gold Medal, New York, 43 - 45.

Cohen B M, Renshew P E, Yurgelun D (1995), "Imaging the mind: Magnetic resonance spectroscopy and functional brain imaging", American Journal Psychiatry, 152 - 155, 655 - 658.

Desousa Alan, Desousa D A (1984), "Yoga Meditation and Mysticism", Psychiatry in India, Bhalani Book Depot, Bombay, 21 - 52

David Hume, "immortality of the soul", George Routledge and sons Ltd, London, 424 - 427.

Erika Cheetham (1975), "The prophecies of Nostradamus", Corgi Books London, 15.

Gurnay E, Myers F W H and Podmore F (1918), "Phantasms of the living", Edited and Adrived by Mrs Henry Sidgwick, Kegan Paul (Dutton, New York).

George M S, Ketter T A, Parekh P J, Horenitz B, Hervcuvich P, Post R M (1995), "Brain activity during transient sadness and happiness in healthy women", American Journal of Psychiatry, 152 (3) : 341 - 351.

Goodrich Freer (1982), "Essay in psychical research proceeding and journal of the society for psychical research", London, UK.

Golechha G R, Deshpande M, Sethi I C, Singh R A (1987), "Agnihotra a useful adjunct in the recovery of a resistant demotivated smack addict", Indian Journal Psychiatry, 29 (3), 247 - 252.

Golechha G R, Sethi I C, Deshpande M, Usha Rani (1991), "Agnihotra in the treatment of alcoholism", Indian Journal Psychiatry, 33 (1) : 44 - 47.

Kay R W (1994), "Geomagnetic storms associated with incident of depression as measured by hospital admission", Brit. Journal Psychiatry, 164, 403 - 409.

Lewis Spence (1988), "Psychical research, The encyclopedia of the occult", Bracken Books London, 330 - 332.

Moody Raymond A Jr (1975), "Life after life, the investigation of a phenomenon - survival of the bodily death", Walker & Company, New York.

Orme Johnson D W (1973), "Autonomic stability and transcendental meditation : Psychosomat medi", 35,341.
Pascricha S & Stevenson I (1977), "Three cases of reincarnation type in India", Indian Journal of Psychiatry, 19 : 36 - 42.
Pascricha S & Stevenson (1979), "A partly independent replication of investigation of cases, suggestive of reincarnation", European Journal of Parapsychology, 3 : 51 - 65.
Pascricha S, Murthy V N, & Murthy H N (1980), "The scientific investigation of rebirth cases: Problem of fieldwork & analysis of data", Indian Journal of Psychiatry, 22 : 206 - 210.
Potdar M M (1990), "Agnihotra for equilibrium of nature & enhancement of human life", Inst. for studies in Vedic sciences, Shrivpuri, Akalkot - 413 216 (India).
Robinson R G (1995), "Mapping brain activity associated with emotion", Editorial, American Journal of Psychiatry, 152 (3), 327 - 329.
Gerhard S (1990), "The significance of the dialectic of physical sensation and craving for the drug addiction, a new addiction theory and perceptions of intervention", Proceedings of International seminar on Vipassana research Institute, Dharmagiri, Igatpuri - 422 403 (India).
Sahay B K, Sadasivudu, R Amanda Yogi, Basharacharyulu C, Raju P S, Madhavi S, Reddy M V, Anupamma N, Murthy K J R (1982), "Biochemical parameter in normal volunteers before and during yogic practice", Indian Journal of Medical Research 75 (Suppl) : 144, 148.
Schildkraut S J, Hirschfeld A J, Morphy J M (1994), "Mind and mood in modern art II: Depressive disorder, spirituality and early death in the abstract expressionist artist of the New York School, American Journal of Psychiatry, 151 (4), 482 - 488.

Selvamurthy, Nayar W H S, Joseph N T & Joseph S (1983), "Physiological effects of yogic practice", NIMHANS Journal, 1, 71 - 80.
Selvamurthy W, Deshpande M, Mukhopadhyay S, Ray U S, Thakur L, Anand J P (1989), "Physiological effects of mantras on mind & body", Proceedings of conference on "Mantra Yoga", Defence Institute of Physiology & Allied Sciences, Delhi - 10.
Stevenson I (1974), "Twenty cases suggestive of reincarnation", Charlottesville, University Press of Virginia.
Stevenson I (1975), "cases of reincarnation type", Vol I, Ten cases in India, Charlottesville, University Press of Virginia.
Vahia N S, Doongaji, Jeste D R, Kapoor D V, Ardhapurkar S N, & Ravindranath S (1973), "Further experience with therapy based on concepts of Patanjali in the treatment of psychiatric disorders", Indian Journal Psychiatry, 13,32.
Venkobalao A (1978), "Psychiatric thoughts in ancient India", Presidential address Indian Journal Psychiatry, 20 - 107.
West M (1979), "Meditation, A review", British Journal Psychiatry, 135, 457.
Wool Folk R L (1975), Psycho physiological correlates of meditation", Archives of General Psychiatry, 32, 1326.
Wurster K, Rubsammen G, G Kas U Ikongr (1988), "The biological action of microwaves", Medical Corp International, 2, 43 - 46.
Yatiswarananda (1979), "Meditation and spiritual life", Sh. Ramakrishana Ashram, Bangalore (India).