

CONVERGENCE OF SCIENCE AND HUMANISM

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Science by its very nature delves deep into the mysteries of physical and biological world. But the prevailing rational scientific approach on its own fails to comprehensively unravel many mysteries due to inherent limitations of rational-logical approach. Search for true knowledge and to enquire into the trans-empirical realities the scientists will have to transcend logic to ensure complete happiness leading to physical, mental and spiritual satisfaction of human beings. Man and his world cannot be fully appreciated within the limited sphere of reasoning, experimentation and observation. Engineering of the inner world would call for contemplation, meditation and intuition.

This would require a synthesis of two aspects of human life, namely, material and spiritual. Physical, intellectual and spiritual development must go hand in hand to maintain balance. Purely intellectual or heavily material culture bears in its heart the seed of death. Exclusive emphasis upon science and technology today has been able to produce only a materialistic civilisation and consumer culture in which the higher values of mankind especially the spiritual well-being is ignored. It has led to the present crisis of humanity. The author, therefore, suggests that a complete reversal of direction is necessary to conceptualise a new concept of science that is holistic in approach towards mankind and that transcends the sphere of the rational.

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Science and Humanism

Gandhiji diagnosed seven social sins. 'Science without Humanity' was one of them. Thus in his opinion, it is a sin if science considers itself as omnipotent and forgets the human being. Humanism on the other hand lays ultimate faith in humanity. Humanism believes that human beings possess the power or potentiality of solving their own problems. Of course they solve these problems relying primarily upon reason and scientific method. We also term it as Scientific Humanism. Scientific Humanism, as a matter of fact, must represent 'a synthesis between humanism and scientific spirit'.

Science is an interesting discipline. Learning of science becomes meaningful if we are rational in thinking, ready to analyse things and happenings critically, believe in doing and experimenting and are ready to revise in the face of new evidences. Scientists are always open to new ideas. With the progressive refinement of technological tools, science becomes more exact and thus reaches nearer to truth. There is no denying of the fact that it is science alone that can solve the problems of hunger, poverty and conditions of insanitation and illiteracy. It can remove many social evils like that of superstition and forgetting our customs and traditions. Science can explore and utilise vast resources and stop their wastage by

recycle and reuse. Proverbially, science has conquered the planet. It has explored the moon, overcome the natural limits of travel and communication. It stands at the dawn of a new era ready to move further into space and perhaps inhabit other planets. With the help of science we can control our environment, markedly reduce diseases and extend our life-span. The most vital and positive changes that it has brought about has been the development of the scientific outlook in man. Einstein with his rare foresight had commented long ago that the unleashed power of atom is bound to change everything. And now we find ourselves in a situation that requires the evolution of a common humanity founded on a comprehensive view of man which alone can guarantee the survival of mankind.

Science has brought about changes in every field of life but not all of them have been for the good of humanity. Exclusive emphasis upon science and technology has been able to produce only a materialistic civilisation. The prevailing consumer culture ignores the higher values of mankind. It has led to a crisis situation wherein humanity is faced with the threat of nuclear war, exhaustion of earth's natural resources, imbalance in the eco-system, environmental pollution and widespread moral degeneration. Jawaharlal Nehru declared at the 1947 Science Congress that the vital role of science in India is to fight ignorance, poverty and disease, and function as a powerful instrument to bring about a social transformation, so that millions could live longer and happier lives. He says humanity cannot live on reactors alone. The great path of science is to be tempered by something and that something is spirituality. Indeed, "Technology without spiritual life is blind and spiritual life without technology is lame". If

the world is not to destroy itself, there is need for human values for survival and for scientific temper and rational outlook.

The prevailing rational scientific approach alone may not be able to solve many mysteries of nature. One must realise the limitations of rational-logical approach. Search for true knowledge may require the scientists to transcend logic to ensure complete happiness – external happiness and internal happiness leading to physical as well as mental satisfaction of human being. The present day scientific culture at best can be termed as lop sided because it leads the humanity to complete materialism with the total neglect of life values like tolerance, unity in diversity, peaceful living, divinity of mankind and respect for all forms of life. This has resulted in the culture of violence, creating fear through terror and distrust among fellow human beings. The answer may lie in the synthesis of two aspects of human life, namely material and spiritual. Erwin Schrodinger maintains "Our science – Greek Science – is based on objectification, ...But I do believe that this is precisely the point where our present way of thinking does need to be amended, perhaps by a bit of blood-transfusion from Eastern thought".

We find that on one hand, science is an ongoing quest for the knowledge of reality as much as it is accessible to reason and experience. On the other hand, it has no means to enquire into the trans-empirical realities. Science, therefore, has been always honest enough to be silent about the spiritual realm which is beyond its scope. Hence the rejection of trans-empirical reality on the basis of scientific knowledge based on empiricism is in itself an unscientific attitude. Denial of the supernatural and the non-empirical realm of reality on the basis of our partial knowledge of natural empirical

world has no justification either in science or in human experience. Within a human being, both the spiritual and temporal aspects have to be perfectly harmonised. Education was defined by Gandhiji as "Drawing out of the best in man – body, mind and spirit." For a balanced development of an individual his physical development, intellectual development and spiritual development must go hand in hand. Purely intellectual or heavily material culture bears in its heart the seed of death. Arnold Toynbee predicted "It is already becoming clear that a chapter of world history which had a Western beginning will have to have an Indian ending if it is not to end in the self destruction of the human race."

In spite of all the scientific and technological advancements resulting in vast materialistic achievements, man is hardly able to rest upon secure foundations. As the world shrinks and it becomes 'one world' or a 'global village' through technological unification, the forces that make for destruction are intensified. In spite of all pervading rational outlook it is hard to ignore that there is something beyond the scientific positive knowledge. The ideal of world peace can be realised only if modern scientific thought admits the fact that the universe has a divine origin and that man has a trans-empirical dimension as well. Swami Vivekananda firmly believed that India could be saved only by preserving its spirituality and cultural heritage.

The very survival of mankind depends on creating a new kind of social institution and tradition without which the new knowledge of science would bring the ultimate disaster. It is by continuously striving to make man the focus of science, that we imbue it with a sense of values, without which science may act as a destroyer of mankind instead of being a liberator. Albert Einstein put it, "a passionate sense of social

justice and social responsibility would tell us that statements of scientific facts and relations cannot produce ethical directions which are so badly needed for the world today."

Scientists and technologists particularly in developing countries need to seriously deliberate upon the vision of Acharya Vinoba Bhave of a true scientific society. In his view "a true scientific society will be one where men will build houses of one storey rather than ten, and see that each house has open space around it so that light and air can enter. Science will improve health so much that medicines will scarcely be needed, though the very best remedies will be available if need should arise. There will be doctors, but their services will not be much in demand. Good spectacles will be available, but men of scientific outlook will take care of their eyesight. In the same way aero planes will continue to fly, but they will be needed only occasionally; men will prefer to walk, and in a scientific world there will be little need of artificial lighting, for people will prefer to spend the night sleeping under the stars. Science will not be used to deprive man of healthful bodily labour, but to lighten his burdens and to increase his vitality and vigour."

The fact of life is that the exclusive emphasis upon science and technology today has been able to produce only a materialistic civilisation and consumer culture in which the higher values of mankind are ignored. It has led to the present crisis of humanity. Pollution of air, water and land has become a universal problem. Diseases associated with urban living have increased, noise and congestion add to physical and mental distress. The reliance of modern technology upon the combustion of fossil fuel has brought an increase in atmospheric carbon dioxide. There is a significant increase in the amount of waste products. Unfortunately there

is grossly inadequate facilities for their scientific disposal. The land upon which man depends for his food has been seriously impaired. Well meaning scientists have to change these trends to save humanity.

Man's concern for a peaceful life and harmonious coexistence with his fellow-beings seems to have been never so explicit before the modern age. The International Commission on Education in its Report 'Learning the Treasure Within' talks of one of the pillars of education in this millennium as 'Learning to live together'. To deprive man of his essential transcendental dimension which finds its expression in his religious and spiritual experiences, is to reduce him to something less than what he really is. Many thinkers lay great importance to the achievements of science and technology while they totally disregard the genuine religious and spiritual experiences of saints and seers. The scientific community refuses to take into account the supernatural and extra-empirical facts of reality in its interpretation of man and the world. Obviously a partial view of existence based upon the rational and empirical findings of science can yield only a distorted picture of human reality. A philosophy which does not take into account all the facts of experience whether physical, psychological and spiritual will always be proved inadequate to lead mankind to a life of happiness and peaceful existence.

Further the organised religion is found to be a challenge to the idea of world community. War and global terrorism have marred the modern world more than ever before. Humanity is living perhaps through the most dangerous period in all its history. A deep feeling of insecurity has gripped us all. Man must and will always have some form of religion because to live without faith is impossible. We are aware of the emptiness of our life but we are not able to

find a way out of it. The dogmas of traditional religions cannot solve our problems anymore. This is because they have neglected the deeper humane element. The cause of present tension is the lack of adjustment between science and humanism. Science has to be coordinated with the spirit of humanism and that is the most urgent need of mankind today.

In this world of science and technology one confronts with the artificial environment, observes the sophisticated manipulation of machines and techniques but alas the human element is gradually being eliminated. We may recall that in the medieval period the world was considered a sacred order established by god. Every natural resource in the form of plant, bird, or animal, the sun, moon, and stars, the waters and the mountains all were seen as God's creation. Consequently these were considered sacred. A great deal of effort in the mediaeval medieval world went into preserving, fostering and nourishing the sense of realities which we now call supernatural. The highest activity was contemplation. But intoxicated by scientific power and technological superiority we have destroyed this world. At present our society is man-made, not a divine order. It represents a projection of the human mind that has cut its links with the divine. Its ideals are purely temporal and finite and concern only the material welfare of its members. We are told that we can exist in this world only on condition that we adapt ourselves to it. The inorganic technological world seeks to eliminate whole emotional areas of our life. It only demands that we be a new type of being – a type that is not human, has no heart, no affection, no spontaneity, and is as impersonal as the metals and processes of data manipulation in which it is involved.

Fortunately scientists themselves now admit that the best of their theories are but hypotheses. They are aware that these, far from being reached inductively on the basis of objective data, are for the most part simply postulated as the most probable explanation or interpretation of certain data. Also this again is done in accordance with a particular model which the scientist in question happens to have accepted. Basically, scientific theories, or hypotheses, or explanation or scientific truths are statements which either can be verified with reference to empirical evidence or experiment or at least cannot be shown to be false with reference to such evidence or experiment.

The above clearly directs us to critically examine and determine the characteristics and limitations of the scientific reasoning because knowledge of science and technology is primarily based on rational analysis. This reasoning is limited to the material and to the conceptions. Man and his world cannot be fully appreciated within the limited sphere of reasoning, experimentation and observation. Such a science gets restricted to the outer world only. For engineering of the inner world, one has to take recourse to contemplation, meditation and intuition.

Rational science believes in the pursuit of knowledge through senses and intellect. We know sensory knowledge is deduced from sense experience and is probable knowledge. Sense perceptions are often distorted. Observations are always subjective. Since knowledge of modern science is not taken as a matter of deduction but as a result of observation and experimentation they are truth that are contingent and probable and therefore, negation is always possible. Science of inner self, on the other hand insists on development of faculties of

intuition. Spiritual science crosses the borders of sense and knowledge. It crosses the borders of intellectual knowledge. It, instead, believes in growing inward, discovering inner self, inner unity through inner vision and intuition. Hence, reducing man to the level of what the reason can perceive or understand about him is to dehumanise him.

If our society is to recover its health, science and humanism must converge by declaring the welfare of mankind as its central theme. Similarly we must get away from a religion that does not have respect for the dignity of man and the rights of human personality. That religion has no place in society which has lost the power of creative expression in conformity with the needs and demands of our age. No religion can hope to survive if it does not satisfy the scientific temper of ours and foster the unity of the world. What is needed today is the preservation of the precious substance of religious reality by translating it in terms and needs of our own day. As a matter of fact there should be only one religion in the world and that should be the religion of humanity.

A complete reversal of direction is necessary to conceptualise a new concept of science that is holistic in approach towards mankind and that transcends the sphere of the rational. Let me end with the saying of Leo Tolstoy "The highest wisdom is one. The highest wisdom knows but one science – the science of the whole, the science that explains the whole creation and the place of man in it."

Keeping in view the inhuman social realities of present day society, it may be concluded that the scientific intelligentsia should come together and review the science curriculum based on a balanced and holistic approach in search for the ultimate truth and meaning of life. Science and

technology education should transform itself into a complete philosophy of life capable of bringing about genuine happiness and universal

peace and harmony through recognition of the material, rational as well as spiritual and transcendental dimensions of reality.

References

JALALUDDIN, A. K. AND U. MALLIK. 1983. *Science and Man – An Anthology*. NCERT, New Delhi.

SEN GUPTA, M. 1980. Nehru the Humanist (cash award under Nehru National Solidarity Awards 1979) *National Solidarity Journal*. Delhi.

SINGH, T.D. (Ed.). 2010. *Towards a Culture of Harmony and Peace*. Bhaktivedanta Institute, Kolkata.