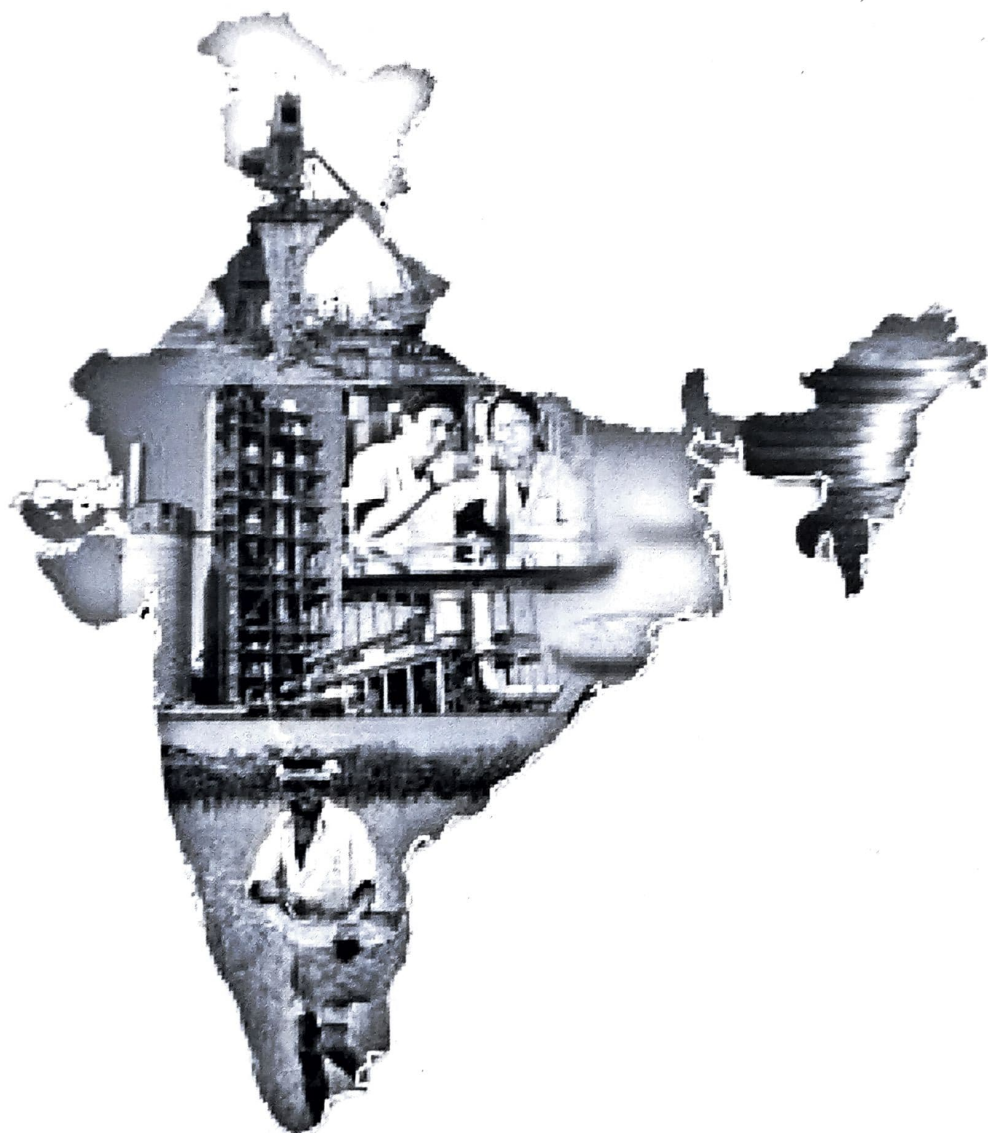


Socio-Economic and Technological Advancements in 21st Century India

21वीं सदी में भारत में सामाजिक-आर्थिक
और तकनीकी प्रगति



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Spirituality is the root of all sciences

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Without spiritual wisdom, science can be dangerous. Spirituality gives meaning and value to science. As science needs spirituality, spirituality needs science. Without science, spirituality can easily and quickly turn into blind faith and fundamentalism. Science and spirituality are mutually illuminating, and mutually dependent. We are on a journey: a journey from separation to relationship and from dualism to unity.

Holistic science

The outstanding German poet and scientist Johann Wolfgang von Goethe worked with a profound scientific spirit. In his books *Metamorphosis of Plants* and *Theory of Colours*, he challenged the narrow and linear view of science. The same is true of Leonardo da Vinci. Everyone thinks of him as a great artist, but hardly anyone recognises him as a scientist. However, our contemporary science of complexity and systems thinking finds its roots in the work of Leonardo because he was concerned with living forms and therefore embraced the science of quality as well as quantity. The moment we think of a science of quality, the word 'spirituality' comes to mind.

Einstein respected the religious dimension of human experience. He said: "Science without religion is lame, religion without science is blind." Einstein was not talking about institutionalised and organised religious establishments - he was talking about religious experience, which is beyond measurement. Bringing spirituality and science together will help to bring meaning and measurement together. These two should not be fragmented or separated. A sense of unmanifested wonder and curiosity, and a sense of intuition and inspiration exist before there is empirical knowledge through experiments, evidence and proof to create a scientific hypothesis and theory. Dismissing that unmanifest intuition or inspiration, as some materialist scientists do, is a grave folly.

The word 'spirit' simply means 'breath' or 'wind'. We cannot see the wind, we cannot touch it, or measure it, but we can feel it. As trees are moved by wind, humans are moved by spirit. Breath or wind is the invisible and subtle force that makes life possible. The visible is sustained by the invisible.

Spiritual guidance

The outer and material reality is held together through the power of the inner and spiritual reality. Acknowledging one and denying the other is like wanting a bird to fly with only one wing. The reality of wholeness is composed of two interrelated aspects. The Chinese called it the harmony of yin and yang. The Indians called it the balance of Shiva and Shakti: positive and negative, dark and light, silence and speech, emptiness and fullness.

Science and matter, unmanifest and manifest are part of one single whole. Uniting science and spirituality has a very practical purpose. Science without spirituality can easily lose the ethical, moral and values-based perspective. Scientists without the guidance of spirituality can engage in the invention of nuclear bombs and other weapons of war, genetic engineering, artificial intelligence, factory farming where animals are reared in cruel conditions, and technologies that create waste, pollution and the destruction of Nature.

Science without the guidance of spiritual values has created many of the problems the world faces today. Science by itself is not benign, value-free or neutral. Therefore, science needs the helping hand of spiritual wisdom in order to maintain its integrity and modify its power. Without spiritual wisdom, science can be dangerous. Spirituality gives meaning, value and purpose to science.

Thus, to understand the fundamental difference between the living and non-living, we might need to look in the space beyond the known physical universe. We might need to differentiate between 'energy and intelligent energy', 'motion and emotion', 'mind and matter'. Given that the same carbon atom that makes charcoal also makes a human being, it is clear that the science of matter cannot explain the fundamental difference between living and non-living. Several questions arise when we leave known physical dimensions and move into the unknown space of life energies.

What is the composition of soul? Does soul have a periodic table? What needs to be added to solar energy to make it 'soular energy'? How many layers beyond the physical body are we composed of? Are there any scientific means to explore spiritual dimensions? What are the technological innovations needed to capture each layer? Can we photograph mind and soul? What is their address? Does the address remain static or does it change?

We know about DNA, RNA and proteins. We are also familiar with terms like genotype and phenotype, genomics, proteomics, metabolomics and so on. Currently, biological science deals with the space between molecular inventory of an organism and its phenotypic outcome. The trouble is that DNA, RNA and protein molecules are 'practically dead' on arrival. They can be chemically synthesized and crystallised. What is chemically synthesized can be part of the living system but cannot be the 'life giving substance' itself.

Thus, to get a fundamental understanding of life, we must connect chemistry with consciousness and beyond. To do so, it would be important to define relevant terms first. Three terms have been explained below. They could be more, depending upon our perception and experience.

Body is what we experience at the gross level. A chemical analysis of the human body shows that it is made of 28 elements of the periodic table.