

COLLOQUIUM

“Two Faces of Beauty: Science and Art”

Abstract: There is inherent beauty in what Nature generates, or gives rise to, following natural laws—from the lowest level of resolution as is obtained with the naked eye, to the highest as is obtained with electron microscopes, X-rays or telescopes. All that happens in Nature follows laws of mathematics, physics, chemistry and biology. These four sciences represent a hierarchy among themselves, with mathematics at the top and biology at the bottom; mathematics can be considered as the ‘vital force’ of whatever Nature does and whatever is found in Nature. Certain mathematical relationships are dominant in nature over others so that they recur over and over again, often in apparently disparate fields. We are probably genetically programmed during evolution to recognize these relationships and respond to them through aesthetic experience. Appreciation of beauty is thus built into our genes and implies intuitive recognition of certain specific patterns and relationships that we then designate as beautiful. The appreciation of beauty, built in all probability into our genes, must have conferred an evolutionary advantage to the human species, which alone seems capable of the aesthetic experience that is the basis of all art. When man creates, he is essentially generating beauty. His success depends on the extent to which what has been created by him is analogous to what is found in Nature and is in consonance with certain natural laws. Consequently, in man’s eternal search for beauty, he is also—sometimes consciously and sometimes subconsciously—seeking similes in Nature. Creativity and beauty are linked in all areas of human endeavour, including science. This suggests that all creative activities must have common elements in terms of methodology to the extent it can be formalized. Given two theories, a good scientist would intuitively choose the one that is aesthetically more satisfying.

By

Dr. Pushpa M. Bhargava

This colloquium speaker, aptly called the Architect of Modern Biology in India is Pushpa M Bhargava, an eminent biologist and the founder-director of the Centre for Cellular and Molecular Biology situated in Hyderabad. He has pioneered the modern biological research in India in many ways and is regarded as the architect of modern biology and biotechnology in India. An advocate of scientific temper in society and a rationalist, Dr Bhargava obtained his Ph.D. at a young age of 21 in 1949 in Synthetic Organic Chemistry from Lucknow University. In 1953, he went the USA on a postdoctoral fellowship in the McArdle Memorial Laboratory of Cancer Research, University of Wisconsin, Madison (US). It was there that he developed interest and started research in Biology in the laboratory of Charles Heidelberger and was involved in discovery of 5-fluorouracil- a famous anti-cancer drug. He also worked at National Institute for Medical Research, UK as a special Wellcome Trust Research Fellow for one year. In 1958, Dr Bhargava returned to Hyderabad and joined the then Regional Research Laboratory (now known as Indian Institute of Chemical Technology as scientist B. He has over 125 major scientific publications to his credit, as well as over 300 articles and write-ups on a variety of subjects in the best known publications around the world. He is a recipient of over 100 national and international honors and awards including: Legion d'Honneur from the President of France (France’s highest honour) and Padma Bhushan from the President of India. It may be added that the marvellous architecture of CCMB is the manifestation of his inherent love for art. It is this inherent love for both science and art that he will be discussing in his talk.

Day & Date : Tuesday, April 8, 2014
Time : 14:30 hrs
Venue : Seminar Room, PF-AG-14, Prefabs, Near Annabhau Sathe Bhavan, University of Mumbai, Vidyanaagari, Kalina Campus, Mumbai - 400 098.

All are Welcome