



# DREAM 2047

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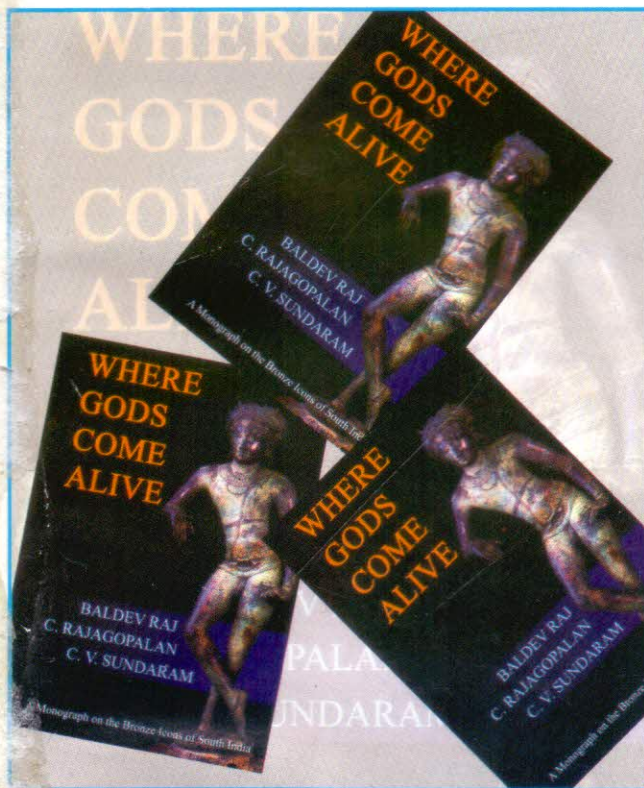
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## VP News

## Inside

### NEW PUBLICATION

The monograph\* is the second under this series 'India's Scientific Heritage'. The first monograph was on the Iron Pillar at New Delhi. The Bronze Icons of South India, particularly those from the Chola dynasty, cast by the *cire per due* process, are known worldwide for their antiquarian value, aesthetic beauty,



\*Where Gods Come Alive : A Monograph of the Bronze Icons of South India, By : Baldevraj, C.Rajagopalan & C.V. Sundaram, New Delhi, Vigyan Prasar, 2000, pp: 155+xxiv, ISBN:81-7480-033-6, Rs. 350/-

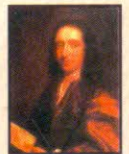
iconography and perfection in casting. However, to the discerning observers of these bronzes, the most striking feature is the methodology the ancient artisans developed, probably over a period of several centuries, to arrive at the right combination of the metals to form the requisite alloy, the procedure for casting, and the repair and finishing technology.

The Monograph looks at these celebrated bronze icons from both scientific and technological standpoints, also laying special emphasis on the artistic accomplishments. The major challenge before scientists is to preserve these unique artefacts of ancient Indian heritage for the future generation. The authors have discussed in detail about that characteristics and conservation. They have also discussed their own investigations on some icons cast in the 11th and 16th centuries, in an attempt to establish procedures for fingerprinting these icons necessary for conservation. The monographs would be useful to historians, artists, art lovers, scientists who study and analyse ancient objects, besides common readers.

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### EDITORIAL

Edmond Halley  
(1656-1742)



Science Club  
Activities

... think scientifically, act scientifically ... think scientifically, act scientifically ... think scientifically, act...

## MAKING SCIENCE MORE ACCESSIBLE AND LESS FRIGHTENING

**D**REAM-2047 wishes its readers a very happy and a prosperous new year. The year 2001, incidentally marks the beginning of the new millennium – the true millennium!

When we look back, especially at the last fifty years of the millennium gone by, we cannot help but feel a sense of pride and achievement. Our food production has more than matched the three-fold increase in the population. More than fifty per cent of our population can read and write (it could be much higher in the next census!). Availability of power has considerably gone up. There are more schools and colleges and hence better opportunities for education. Further, there also has been a general improvement in the quality of life – cooking gas and telephone connections are much easier to obtain, rail travel has become more comfortable, and so on and on.

New technologies are fast replacing the “what-were-once-new” technologies as they become obsolete. Just think, how fast the “latest” model of a computer purchased by you becomes obsolete, or how fast compact fluorescent lamps are replacing the good old tube lights. Well, this is how it should be. In the field of medicine, terms like ultrasonography, magnetic resonance imaging (MRI), organ transplant, and in-vitro fertilization (IVF) have almost become a part of everyday life. Consider the advances in the field of biotechnology. Genetically modified food products, transgenic crops, cloning, gene replacement therapy, stem cell harvesting and similar jargon is fast becoming a part of our everyday vocabulary.

Let us look at the other side of the coin. Undoubtedly, the new technologies have helped improve the quality of life, thereby significantly changing our lifestyles. However, it is also equally true that breakthroughs in the fields like biotechnology have instilled a sense of awe and fear – fear of the unknown - in our minds. Consider the question – are genetically modified food products safe to consume? Will transgenic plants with

built-in pesticides give rise to a new breed of pests which are resistant to these built-in pesticides? How shall we tackle the problem then? What is the guarantee that gene replacement therapy would be used only for the human good? Would it not be misused to produce new Frankensteins? Indeed, most of us are totally ignorant of what the new science holds in store for us. Such doubts and questions make the task of realizing our dream – even in a small part - of every citizen with a scientific outlook a distant dream indeed! Under the circumstances, how shall we make the developments in science less frightening and more accessible to the people?

Indeed, people do possess a keen desire to know and understand the new science and new technologies as they become part of their lives. The innate curiosity and the thirst for knowledge always co-exist. Otherwise, over a century ago, people in Punjab would not have thronged to listen to Ruchiram Sahni's lectures by paying a fee of two annas, or the Albermarle street in London to listen to the discourses of Michael Faraday at the Royal Institution of Great Britain. A recent example is the overflowing Siri Fort auditorium in Delhi where people turned up in thousands to hear Stephen Hawking unravel the mysteries of the Universe and the black-holes. True, there can only be one Faraday, Sahni or Hawking. But, there certainly are thousands of mini-Sahnis, mini-Faradays or mini-Hawkings amongst us, in our labs, colleges, university departments, schools and Government / non-Government organizations who could take people into confidence and engage them in discussions and free debates. This is how developments in science would become more accessible to people, and at the same time less frightening. For scientists and science communicators, this is both a challenge and a social responsibility. How shall we take the bull by the horns? Please do write to us.

□ V. B. Kamble

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