

Editorial

N Mukunda, Chief Editor

The ‘saintly’ figure of Albert Einstein looms so large over the landscape of modern science in general, and over the relativity and quantum theories of twentieth century physics in particular, that it is extremely hard – in fact impossible – to do justice to him in a single issue of *Resonance*. Yet for how long can one stay silent and not speak of him?! In this issue we look at but a few aspects of his personality – as a social being concerned with the human condition, moral and political and economic issues, the problems of the world in his times, and the uncompromising attitudes he displayed in the face of political pressures. But how can one talk of all this and say nothing of his science? To make some amends, Rajaram Nityananda recaptures the events of the glorious year 1905 – the unbelievable explosion of seminal ideas on relativity, the quantum theory of the photon, the Brownian movement, and the equivalence of mass and energy – and as he says, the existence of the 1905 volume of the journal *Annalen der Physik* is proof for the skeptical that all this did happen! We follow this up with the text of a talk given in December 1997 by John Stachel, titled “Albert Einstein – the Man Behind the Myths.”

A few words at this point about Stachel. Einstein died in 1955 at the age of seventysix. Yet the publication of his collected works did not get going for several decades, and this cannot be explained merely by the enormity of the task involved. Only since the mid eighties or so have we been seeing the successive volumes of the Collected Papers appear at a steady rate; to date some eight volumes have been published by Princeton University Press in association with the Hebrew University in Jerusalem. And John Stachel is one of the principal figures involved in this mammoth task. The basic resource is the Einstein archive maintained at the Hebrew University holding



Direct observation
of facts has always
had for me a kind
of magical
attraction

Albert Einstein

A(Success) =
X(Work)+Y(Play)+
Z (Keep your
mouth shut)

Albert Einstein

some forty thousand documents, and it is estimated that in all, the Collected Papers will run to forty volumes. All working scientists and students of the history of science are indebted to Stachel and his colleagues for their dedication to this immense effort.

Stachel's account quotes Einstein on many problematic issues of his, and even of our, times – the true nature and purpose of education; the importance of “a passionate sense of social justice and social responsibility” in at least a few individuals; his pacifist convictions; the relations between the individual and society, the meaning and extent of individual freedom; and many others. One can easily see how gifted Einstein was in expression. On the other hand, just as “a cat may look at a king”, we ‘ordinary mortals’ often presume to judge the motives and actions of the supremely gifted. In this context it is well to remember that even Einstein grew in many ways, that he was not born and was not always the figure we see at seventy. Stachel makes a particular point of this. All critics and criticism – be it in music or art or literature or science – must be tempered with this sobering thought.

J Chandrasekhar pays a poetic tribute to Erich Hückel, the chemist who was academically humiliated and whose creativity was suppressed – so such things do happen in science. And in a Guest Editorial, R K Varma reflects on the problems of science education in India. What the situation should have been, and what it is – what a falling off there has been. Time indeed to try one's best to improve matters.

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