Editorial

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Resonance is a journal of science education, and it may not be inappropriate to mention in this piece a little bit about my experience from teaching in two universities for thirty years. It has been none too happy. The classroom instructional activity is generally dry, dull and uninteresting, even despairing, especially at the graduate and postgraduate levels. There is stoical indifference, and very little interactive learning. The students never challenged me with inquisitive questions or made critical comments, even when encouraged. So I had no opportunity to know whether I am a good or a bad teacher. I firmly believe that the students inspire a teacher as much as he inspires them. That situation sadly lacks in our postgraduate classroom environment. However, my occasional interaction with high school and pre-university students was happier and exhilarating, as they are inquisitive, exuberant, bright and motivated. The unfortunate part of our education is that these brilliant young minds are diverted away from basic sciences. If we want to be a first-rate nation, we need first-rate technology, which can be achieved only through first-rate science.

Resonance focuses on the life and scientific achievements of a great scientist every month. The biographies of such scientists reveal that they made basic science their career; some of them against many odds, and some even after having basic training in medicine or engineering. Indeed, Paul Dirac, featured in this issue, had a basic degree in electrical engineering, though his exceptional ability in mathematics had already come to light when he was only in primary school. However, his passion for mathematics was so intense that he plunged into it with his heart and soul. He was one of the extraordinary scientists of the twentieth century and a founding father, along with Heisenberg, Schrödinger, and a few others, of the theory of Quantum Mechanics, which was first developed to explain the behaviour of atomic particles. Its application is extended to cosmological problems, and it narrowed the

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barrier between the physical and the metaphysical worlds. Among many other contributions of Dirac is the unifying theory of quantum mechanics and relativity theory. Such ideas have taken us to the very beginning of Creation when,

न मृत्युरासीदमृतं न तर्हि न रात्र्या अहन आसीत् प्रकेतः ।
आनीद वातं स्वधया तदेकं तस्माद्यान्यन्न परः किं चनास ॥

– Rig Veda

Death was not there, nor was there immortality
No sign was there, the day's and night's divider
That one thing, breathless, breathed by its own nature
Apart from it was nothing whatsoever

You will find in this issue articles by eminent authors who have an intimate knowledge of the work of Dirac.

We at *Resonance* hope that the life-sketches of such brilliant scientists and their contributions to science would inspire some of the bright young minds of our nation to make science their passion.

This issue presents other interesting articles on such topics as Babylonian algebra and geometry, Wollemi pine and on K Wüthrich one of the 2002 Chemistry Nobel Prize winners, in addition to the regular features.

"Of all physicists, Dirac has the purest soul".

– Niels Bohr on Dirac