

**Yash Pal: A Life in Science.** Biman Basu. Vigyan Prasar, Department of Science and Technology, A-50, Institutional Area, Sector 62, Noida 201 307. 2006. 109 pp. Price: Rs 225.

Scientists have used a host of methods to reach out to the world at large. Some like Dyson take the philosophical approach, and discuss the implications of scientific theories and developments to human thought. Others like Steve Jones explain to the non-specialist, or the 'laity', what these developments mean. The third kind takes the approach of 'science is doing' and engages the audience as a partner. Didactics or teaching here is surreptitious, such that the 'aha' moment of what it means is teased out of the audience. The answer is now positioned on the larger canvas of everyday experience

Yash Pal is a seasoned practitioner of this approach. His way is not the demonstration of an experiment or a principle; he invites questions and when you do so, he responds with questions of his own. The affair turns into a duet of minds, or a 'jugalbandhi'. People who watched him in the famous TV programme 'Turning Point', saw this in full play. He was bombarded with questions in postcards. He would turn each question into a dialogue, tease out aspects of the answer from your own mind, and as the answer emerged the pleasure would be almost

sensual. As a frequent sidekick of his in 'Turning Point', I would share this joy; the fun was similar to hearing a 'sawaljawab' session between Ali Akbar Khan and Alla Rakha, or Rajam and Zakir Hussain in music. Science thus becomes engaging and enjoyable, no longer esoteric. To add to the effect, Yash Pal even sports the Einstein - Alla Rakha hairdo. and the colourful kurtas that Ravi Shankar or Amjad Ali Khan are famous for. Sporting such a persona has not been deliberate, but natural for him. The image of a staid white lab-coat scientist gives way to that of a friendly uncle. This, combined with his love of people, earthy style of interaction, and easy use of language has made the audience discover not just the prosaic answer to the question, but the diverse implications which blossom out of the tete-a-tete. Science is doing doing with the mind, without a test tube or magnet and coils.

Biman Basu, a reputed science writer, has captured this persona of Yash Pal in this short biography. This is an engaging account - starting from how Yash Pal had to be dug out of the debris just in time, when his home in Quetta was devastated by a massive earthquake, when he was nine. The phrase 'dhool ke phool', comes to mind. Schooling was an itinerant affair and self-study and thinking became the normal. The volcano of partition made him a refugee, landing up in Delhi during his college days. Basu writes with sensitivity of the ready help rendered to Yash Pal and colleagues by the physicist D. S. Kothari and the Deputy Commissioner M. S. Randhawa, to establish the campus of East Punjab University right in Delhi. Obviously they found a gem in the persuasive youngster. He had no marksheets or degree certificates to show, yet they admitted him and he obtained his Master's there. Would this be possible today? The moment produces men, but men too produce moments. These were the times that changed India, and Indian science itself. Yash Pal turns out to be both a product of the spirit, and its sustainer in ample scale to others later. No wonder he took to the balloon experiments at TIFR, Mumbai with guts and gusto, and easily moved to start the satellite instructional television experiment or SITE, the first of its kind anywhere, while at Ahmedabad. Indeed the SITE project, conceived and carried out by him, stands out as testimony to his originality and the ability to turn high technology to large-scale public use. His experiences, chronicled well in the book, show how he was convinced, and convinced others as well, that we can do anything if we set our minds and hands to it.

This is a book that should be brought out in paperback (so that it becomes affordable) and given to youngsters. It is an absorbing biography, the ripening of a gregarious country lad who accepted life as it came, moulded it and himself for betterment - not just of himself but also of people who touched him and whom he touched. He was a youngster during the freedom movement and its Zeitgeist. The pages describing his move to Delhi during partition are moving; at the worst of times, he did not lose spirit but grabbed, and made opportunities for himself and his neighbours. His success in persuading authorities to create the ad hoc campus of East Punjab University in Delhi, and then have it move to Hoshiarpur exemplify this spirit. Not only did he study for his own degree, but helped other refugees do so through voluntary teaching. Here is a man who rose from rubble, with spirit, humour, joy of life and an enthusiasm that he passes onto everyone he touches. For him, sharing science is a joy and putting science to everyday use a passion. Above all, he believes in people and enjoys them. Basu tells us how this came about. An inspiring account!

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