

Snehamoy Datta - His Scientific Work in International Context

Rajinder Singh



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Preface

In India, C.V. Raman, M.N. Saha, S.N. Bose, H.J. Bhabha, and J.C. Bose are well-known. There are a number of books and articles which explore different aspects of their lives. Over the last few years, biographies on lesser known scientists like Debendra Mohan Bose, Sisir Kumar Mitra, Sukumar Chandra Sirkar, Bidhu Bhushan Ray, Kedareswar Banerjee, N.R. Sen, Bibha Chowdhuri and Purinma Sinha has been written.

While reading about M.N. Saha, I came across the name Snehamoy Datta. It is told that he introduced M.N. Saha to the British astrophysicist Alfred Fowler. I was curious to know more on S. Datta, who belongs to the ‘Golden era of Indian physics’, but remains unknown. I found only two short articles on his life and science. To satisfy my curiosity, I collected documents. Preliminary result of their analysis is given in this small book.

SD was ‘Registrar’ of Calcutta University. He had no executive power to influence science and science policies. Therefore, I ignore this part of SD’s life. S. Datta was a brilliant scientist, writer, educationist and translator. In the present book, I attempt to highlight his life and scientific work.

His name has different variations like Snehamoy/Snehamay Datta/Dutta. I decided for Snehamoy Datta, because this name appears in most of his publications.

SD was related to the famous politician Jyoti Basu, one of the prominent members of the Communist Party of India (Marxist), and former Chief Minister of West Bengal. In the present book, I have not discussed SD’s political views, as my aim is to highlight his scientific work.

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Thanks are due to Ms. Ann Brew - Librarian for: Mathematics, Computing, Physics and Electrical & Electronic Engineering, Central Library, Imperial College London, for sending information of S. Datta’s D.Sc. thesis. I thank Prof. Arnab Rai Choudhuri IISc., Bangalore, for sending me the translated version of his article referred to in this book.

I thank Prof. Dr. Michael Komorek, Head – Physics Didactic and Science Communication, University of Oldenburg, Germany, for providing research facilities. Thanks are due to my wife Birgit Krah, children Amer Simone and Hira Michael for moral support. I appreciate the help of Ms. Petra Raue and Ms. Simone Treunert, Head “Grund- und Oberschule”, Syke for assisting me in one way or other.

Last but not the least, I thank Ms. Kristina Ladwig and Shaker Publisher Dueren for publishing the present book.

Foreword

I felt privileged with the desire of Dr. Rajinder Singh that I pen a foreword of a biographical memoir of Prof. Snehamoy Datta, who spent a considerable time of his career at the famed and revered Presidency College. In asking me to do so, he so kind-ly provided me with a rare opportunity to pay my tributes to a senior colleague. I also seized this opportunity to acknowledge and applaud Dr. Singh's efforts in bringing alive, the stories of unsung heroes of Indian science. I have truly admired his effort in this direction.

Science is a cooperative process, where progress accrues slow-ly and incrementally through innumerable high quality contri-butions. These contributions slowly aggregate and, lead to new knowledge, new concepts and thereafter new technolo-gy. We often applaud, the known and acclaimed Heroes of science, but very rarely even know about and recognize the contribution of somewhat quiet, but equally competent work-ers. Such people, remain unknown and unsung till such time that, a dedicated science historian like Prof. Singh discovers them through their scientific literature and educates us about their contributions. Dr. Singh has been assiduously carrying out this work with exceptional dedication and regularity, such that we now know of the works and lives of exceptional workers like D.M. Bose, S.K. Mitra, S.C. Sircar, B.B. Ray, N.R. Sen, Bibha Chowdhuri, and Purnima Sinha. But for the efforts of Prof. Singh, the contribution of these eminent contributors to the Indian Science would perhaps have remained undocumented and unapplauded.

Dr. Singh has also analysed the history of Nobel Prizes and has written several books dealing with Indian Nobel Prize nomina-tors and nominees. He tries to assure us that in respect of No-bel Prizes, India as a nation has accredited itself reasonably in the global context. However, as an older person (and then by definition, more cynical), I beg to differ with him as the scaling of nations in this regard, has to be done based on the popula-tion and the number of scientists per million. We than realize that we have a long way to go towards developing an enabling and a merit based competitive academic

ecosystem for India to do well in the high strata of International Science. As Robert Frost said, .. there are miles to go before.... I however do ap-preciate Dr. Singh's positivity about Indian Science.

Biographies provide a window into contemporary academics, tell us about the science, the working conditions and the infra-structure during yesteryears and, inform us about the cultural environment and the thinking process of people in those times. Very few of us may know of the fundamental contribu-tion of Prof. Datta in absorption spectroscopy in system of astrophysical significance such as the detection of K in the solar spectrum, on photoconductivity, on the use of spectroscopy in varied areas of veterinary sciences and in printing industry. Through this book, buttressed by extensive references, we learn about the range of high quality science of Dr. Datta in these areas through publications in Nature and other prestigious journals. I learnt that It was Dr. Datta who introduced Dr Meghnad Saha to Prof. Fowler. He also chronicles the impact of politically disturbed conditions on the career of a bright sci-entists like Dr. Datta, that he had to move from scientific re-search to scientific administration. This monograph helps visu-alize the conditions then and the motivation of people.

I was also curious to read about Premchand Roychand fellow-ship that did not permit the awardees, to marry, till they com-pleted their studies, and the news report in Calcutta Review applauding bright Bengalee students such as Meghnad Saha, S.K. Mitra, Snehmoy Datta and few others traveling overseas for further studies. Truly these young minds, later on became the movers and shakers of Indian Science. Many of them pro-vided a telescopic vision on the future of Indian Science, in-cluding the need and eventual formation of Indian Academies. Dr. Singh has discussed these in another article.

Interestingly, Dr. Singh touches and important issue of citation and impact factor and leaves us thinking on their possible im-plication. I shall not preempt him by discussing this further, but I strongly recommend that this part is also carefully read, deeply mulled over and discussed extensively.

This lucidity and fluency of text in the book has been remarkable and it has such an engaging style that, once begun, one would find it difficult to leave the book. The documentation of literature indicates the diligence that has gone into preparing it and will now serve as a source material for future researchers.

I compliment Dr. Singh on this book and I shall look forward to learning more about Indian Science and Scientists through his writings. And, for this, I wish Prof. Singh continuous success.

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Dr. Rajinder Singh is: Member of Editorial Team: *Sci. & Cult.*, Kolkata (Indian Science News Association), and *Scientific Voyage*, Kolkata.

Dr. Rajinder Singh has written more than 140 articles and the following books:

- 1) Nobel Laureate C.V. Raman's Work on Light Scattering, Logos Publisher, Berlin 2004.
- 2) Nobel Laureate C.V. Raman's Science, Philosophy and Religion, Dharmaram Publications, Bangalore 2005.
- 3) Characteristics of Solar Radiation Photovoltaic Pyranometers - Licor 200SZ and Matrix 1G, Shaker Publisher, Aachen 2012.
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Dedicated to



Prof. Arun K. Grover



Prof. H.S. Virk

&

My family

