



What I Require from Life: Writings on Science and Life from J. B. S. Haldane. Krishna Dronamraju (ed.). Oxford University Press, Great Clarendon Street, Oxford OX2 6DP, England, UK. 2009. 231 pp. Price: £14.99/\$29.95.

This book, which is a collection of essays by J. B. S. Haldane, has a fascinating beginning. The Foreword by Arthur Clarke, Preface by James Crow, Introduction by Krishna Dronamraju and the brief autobiography by Haldane are so persuasive that even an uninterested reader will be tempted to continue reading. The observation by Crow that Haldane could explain complex ideas with clarity and wit is evident in many of the essays. Haldane's colourful manner of popular writing also extended to his technical writings, which present-day reviewers may not approve! The use of *cis* and *trans* in genetics from coupling and repulsion, mentioned by Crow, exemplifies this. Crow also highlights Haldane's fascination with human genetics and the implication of pedigree analysis of Queen Victoria and her descendents. Dronamraju's introduction provides insights into Haldane's concern for ethics in genetic applications. Clarke's Foreword provides excellent insights into Haldane as a scientist and his commitment to the popularization of science. Clarke's observation that Haldane's interests included biology, astronomy, physiology, mathematics, theology and philosophy is a prelude to the essays included in the book.

The essays have been divided into two parts. Part 1 has been titled 'Essays from the Marxist period' spanning the years 1937–1950. Part 2 is titled 'Essays from

the Indian period' covering a short time-span of seven years from 1957 to 1964. The initial few essays in the Marxist period, have Marxism in the foreground. In the essay on 'I am a materialist', Haldane has attempted to demystify materialism from an abstract formalism and as perceived by Marx, Engels and Lenin. The other essays cover a wide range of topics such as 'Biology and town planning', 'Astronomy', and 'Is there life on planets?' Relativity invariably leads to philosophy. Haldane tries to simplify relativity in 1200 words in his essay. However, here too, he cannot help commenting on its philosophical implications as viewed by Marx and Engels!

The Preface to essays from the Indian period indicates why Haldane chose to come to India. The essays in this section, which cover diverse topics such as his reflection on non-violence and drug-resistant bacteria, have India in the foreground. His observations on how science was done in India in the past and practised during his stay, make interesting reading. His essay on 'Some statistical adventures' begins with the statement that statisticians are not usually very adventurous people, because they are more interested in means than extremes. Haldane reveals his fascination for extremes with intriguing examples on physiology.

Haldane makes an interesting observation in his essay 'Darwin in Indian perspective'. Haldane emphasizes that notwithstanding the beliefs by Christian theologians, Darwin convinced the West about biological evolution. According to him, Darwin's theory of evolution is not in conflict with the Eastern culture, where it is believed that animals have rights and duties. Haldane then argues why he partially agrees with his wife's statement that Darwin converted Europe to Hinduism!

His continued fascination with the scientific achievements of the Soviet Union, particularly space travel, is evident in several essays during the 'Indian period' too. In his essay on 'The dog in the Sputnik', Haldane observes that while English dog-lovers protested in front of the Soviet Embassy, the English bird-lovers did not protest against exploding thermonuclear bombs over the sea, which would undoubtedly have killed thousands of sea birds! Several such black-and-white incidents which really have shades of grey are present in several essays. His sugges-

tion in the 1950s that India's education system, modelled on the unsatisfactory British system, should consider copying many features of the educational system of the Soviet Union may seem out of place today. His observation in the 1950s, however, may not be entirely irrelevant. One essay is on the relation between biology and other sciences, which is an excerpt from a lecture delivered at the 39th Session of the Indian Science Congress Association. Here, Haldane highlights links between biology, mathematics, physics, chemistry and geology. In this essay, he also identifies problems of scientific value that can be solved only in India. Haldane's appreciation of India's then foreign policy is evident in his hope that India would carry on the great traditions of 'Western' biology, rather than imitate the West in self-destruction with weapons provided by physicists.

An important aspect in almost all the essays is the emphasis on quantitation, especially in genetics and biology. This should be of interest to those who work in the area of bioinformatics and particularly biologists who dislike quantitation! The book is a must read for those interested in the history of science and believers of Marxist philosophy, as it portrays an eminent scientist's view on science and society as well as how Marxism and socialism ought to be practised.

On a personal note in his essay 'What I require from life', Haldane mentions that as a socialist he would die happy if he lived to see the overthrow of capitalism and workers in power through most of Europe. If there was some way one could predict his view in an essay written now, I think it would read 'This would not have happened if Marxism and socialism were practised in a scientific manner. It is not necessarily a victory of capitalism over Marxism or socialism'.

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