

Spirit In His Genes

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“A Dominant Character- The Science & Politics of J. B. S. Haldane”, by Samanth Subramanian, Simon & Schuster, 2019. Price Not mentioned.

“I wish I had the voice of Homer

To sing of rectal carcinoma,

Which kills a lot more chaps, in fact,

Than were bumped off when Troy was sacked.

This was the opening stanza of a comic poem which appeared in 1964 in the New Statesman. The man who wrote this was dying of cancer and yet the deadly disease had failed to repress his indomitable irreverence and spirit. An exceptionally gifted man, John Burdon Sanderson Haldane, was not just a preeminent biologist who was one of the founders of population genetics, but also a brilliant orator, a prolific science popularizer and much else.

Born in 1892 to John Scott Haldane, a physiologist, Haldane’s intellect was evident at an early age when, all of four years old, he injured himself and asked the doctor whether the blood was oxyhaemoglobin or carboxyhaemoglobin! He went to Eton on a scholarship and was never comfortable with the snobbery and arrogance of his upper class schoolmates. He graduated in mathematics and Classics from Oxford and wrote his first scientific paper with his father at the young age of 19. The elder Haldane was a brilliant scientist who was routinely consulted by the British government. Haldane picked up many experimental skills from his father as also a penchant for experimenting on one’s own body.

The First World War was a life changing experience for Haldane. He was assigned to a regiment to train them in the use of explosives but was soon sent to the front.

Witnessing carnage at such close quarters, being among men from a very different social background than himself and frequently coming close to being dead were life

changing experiences for the young Haldane. His almost pathological irreverence was evident- he was adored by his mates who gave him the moniker, "The Rajah of the Bomb" because of his bravado. "Courage lies in taking a novel risk, which you are not ordered to take, and enjoying it" is how he summed it up later.

After the war he went back to science and in the interwar period did pioneering work in the newly emerging area of genetics as well as many other areas in biology. Population genetics was placed on a sound mathematical foundation by Haldane. Though the idea that life could have originated spontaneously from a primordial soup of inorganic chemicals was first proposed by the Soviet biochemist Alexander Oparin, Haldane independently propounded it later. Haldane hardly conformed to the stereotypical ivory tower scientist. He wrote and lectured extensively on various topics in science for the general public. He was, as Arthur C. Clarke said, "the most brilliant science populariser of his generation".

Haldane's political views were shaped by his experience at the front during the War. Subsequently, he visited the Soviet Union and was very impressed by the Soviet project of harnessing science and technology for development. He became a Marxist though he only formally joined the Communist Party much later. Despite being a staunch opponent of the establishment (he was constantly followed and reported on by MI5, the British intelligence agency), Haldane assisted the war effort by working on the effects of decompression on the human body. This work was essential for submarine warfare.

Samanth Subramanian's book on the life and work of Haldane is a comprehensive account of Haldane's life. Extensive use of archival material as well as private letters and diaries of Haldane and his sister (the siblings were very close) the book is very well researched. Given a subject like Haldane, with his astonishing brilliance and wit, the story of his life was bound to be interesting. Subramanian, with his lucid writing, makes it into a page-turner with some brilliant asides. Thus, commenting on Haldane's sticking a lit fuse into gun cotton, he writes- "Bravery and bravado felt just like isotopes of each other".

Writing about a person like Haldane, it would be easy to focus just on his achievements and brilliance. It is to Subramanian's credit that he does not shy from describing some of his human failings and one gets a vivid picture of Haldane the man, warts and all.

However, one would have liked a much more detailed discussion of his scientific work. The book does dwell on his work and does a decent job of explaining it in simple terms but it does leave one wanting more details of the fascinating work done by this astonishing polymath.

Haldane moved to India in 1956 and started working at ISI, Calcutta. His phenomenal impatience with the bureaucratic and hierarchical functioning soon got in the way of his passion for doing science- he once called CSIR the "Council for Suppression of Independent Research". He left ISI and at Biju Patanaik's request, moved to Bhubaneswar to establish an Institute of Genetics.

Haldane died of colorectal cancer in 1964. Ever the man of science and rationality, he willed that his body be used for medical research- organs to be preserved and studied and bones to be assembled into a skeleton to be displayed in an anatomy museum.

The comic poem he wrote from his deathbed ends with

A spot of laughter, I am sure,

Often accelerates one's cures;

So let us patients do our bit

To help the surgeons keep us fit.

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