

Journalistic lore

A Life In Science is a book to be read rapidly, enjoyed and put aside, says Jayant Narlikar, who was Stephen Hawking's locum advisor at Cambridge, in this review

BIOGRAPHIES of famous scientists broadly fall in two categories: those that are scholarly and well researched which you read slowly and keep in your shelf for future references, and those which are in journalistic style to be read rapidly, enjoyed and put aside. *Subtle is the Lord* (Einstein) by Abraham Pais or *Chandra* (Chandrasekhar) by Kameshwar Wali are biographies of the former kind. The present book on Hawking is very much of the other kind. It kept me fully absorbed in the Pune-Delhi-Pune flights.

Stephen Hawking is a phenomenon the likes of which has not happened before and the odds against its happening again are pretty long. Not surprisingly a lot has been written about him even during his life time. There have been other biographies too apart from this one, all of which fall in my second category.

Stephen was born exactly three hundred years after Galileo died. For the first two decades he led a normal life first as a bright English schoolboy and then as a promising but lazy undergraduate who scraped through to a first at Oxford. Then he joined 'the other place' (Cambridge) for a Ph.D. course.

From here the story takes the turn for the bizarre. Shortly after joining Cambridge, Stephen discovered that he was losing control over his limbs. The diagnosis was ALS — a motor neuron disease — with no cure: the prognosis in 1963 was that Stephen would live for at the most two years. The remarkable fact is that he is alive today and is perhaps the best known living scientist. His rise to that claim was in three stages. In the sixties he rose from an average Ph.D. to a very bright post-doctoral career. In the seventies he became well established as an outstanding theoretical physicist with numerous awards and honours. In the eighties the media moved in on him with books and articles by him and on him, TV and radio programmes, culminating in his writing a best seller and moving into Hollywood spotlights.

The book by White and Gribbin is one amongst the many literary attempts to describe this unique person who regardless of his progressively debilitating disease went from one landmark achievement to another, his brain doing all the mathematical computations while his body failed. Today a faint movement of his fingers activates a computer which 'literally' speaks for him. But for this link with the outside world Stephen's brain would find itself in a black hole with no way of communicating with it. Ironically, it was for his work on black holes (in astrophysics) that Stephen became a world celebrity.

I had a decade's overlap with Stephen in Cambridge and can even claim to have been his locum supervisor when Dennis Sciama (his regular supervisor for Ph.D.) was away for a term. That was in the early 1960s and the best anyone could say of him then was that he had great promise.

The authors have described graphically all the above stages in Stephen's life, interspersing personal events with details from physics and astrophysics relevant to his work. Careers in science and experience of popular science writing have helped to make their account a readable one.

However, readability creates



an impression in the reader's mind that everything he has read is accurate, both in terms of historical facts and character judgements. This may not always hold and this book may well be open to such criticism. I cite one incident from the book that does not square up with my personal recollections of what took place.

On page 67-68 it is stated that Hoyle committed an unethical act by reading a paper that had not been refereed. This is untrue: the paper was refereed and I still retain a copy of the referee's report should the authors wish to verify my statement. The authors also (incorrectly) mention that Hoyle told Hawking that his action (of asking a question at the end of Hoyle's talk) was unethical. Hoyle did not object to Hawking's action: anyone is entitled to ask a question at the end of a talk. In fact the question of ethics arose in an altogether different context a year later when the referee of another paper by Hoyle and me broke the confidentiality and discussed the paper's conclusions with Hawking. On that occasion Hoyle had rightly been upset at the unethical act of the referee.

Such mixing up of events and placing different slants on them are the pitfalls that are not always avoided in the most carefully compiled biographies but they can be minimised.

To do the authors' justice I may mention that while glorifying Hawking for his science and his brave battles with the ALS, they have also brought out the ungenerous traits in his character. Thus they have discussed (I think fairly accurately) the Steinhart controversy. They have also been frank in discussing the break-up of the Hawking marriage which came as a shock to many (including this reviewer) who had come to look upon it as an ideal of devotion and understanding.

Where does Hawking stand vis-a-vis other scientists of the twentieth century? Is he the greatest scientist since Einstein as has been claimed in the media (some even rate him higher)? To what extent are we rating his contributions because they were made under very adverse conditions? Where does he stand in relation to Werner Heisenberg, Paul Dirac and Richard Feynman in advancing our perception of fundamental physics? These questions can be more objectively answered only by posterity and not by the media or even by Hawking's contemporary scientists. In fact, the principle of 'survival of the fittest' applies to scientific ideas and only time eventually picks the lasting contributions.

A LIFE IN SCIENCE

By Michael White and John Gribbin

Viking, pp 304, £ 16.99