

rather than graduate students, generally; men rather than women, generally; qualified scientists rather than the technicians on whom their work depends, always.

The Prize typifies the myth of 'science' and obscures its reality. It emphasises the hierarchical and authoritarian shape which science in the late twentieth century has come to take. Its social functions inside science and in terms of the relationships between science and society, are both symbolic and substantive, and proper

matters, one would have thought, for a critical sociologist to discuss; yet in all of Zuckerman's pages scarcely a mention is made of such questions. Indeed, it has so far been left largely to scientists themselves to voice such doubts. It would be nice if, now she has done such a thorough piece of internalist empiricism, she would move on to these richer and more complex questions. □

Steven Rose is Professor of Biology at the Open University, Milton Keynes, UK.

## Dazzling firmament

Rainer Goldsmith

*The Pursuit of Nature.* By A. L. Hodgkin, A. F. Huxley, W. Feldberg, W. A. H. Rushton, R. A. Gregory and R. A. McCance. Pp. 180. (Cambridge University: London, New York and Cambridge, 1977.) £7.50.

PITY the poor reviewer, a mere mortal, confronted with a book of essays the authors of which are the living immortals of his discipline. Praise will be interpreted as sycophancy; criticism is tantamount to lèse-majesté. Yet the task must be done, and this fool will step in where wiser angels fear to tread.

The six essays, collectively entitled "Informal Essays on the History of Physiology" are mixed bags containing reminiscences, anecdotes, historical analyses, futuristic speculation, straightforward review, and personal prejudice. They make for varied reading; hardly ever boring, in part thought-provoking and often leaving the reader gasping with admiration at past achievements.

Outstanding among the six is the contribution of Feldberg, "Reminiscences of an Eye-Witness", being an account of the discovery and confirmation of the nature of synaptic and neuromuscular transmission. The lively and very personal style of the essay graphically reflects the enthusiasm and excitement of two or three highly creative years, interspersed by lobster dinners to celebrate successful new findings. One may wonder, however, if Feldberg really contributed only the key of eserine and the eserinated leech muscle to this remarkable period in physiology. Twenty-five years after the event, your reviewer began his scientific career in the very room in which these momentous advances were made: the ceiling was crumbling, the teak benches were uncommunicative witnesses of their past glory—just in one cupboard did the ghosts still linger, the shelves were marked Dale, Feldberg, Brown and McIntosh.

Hodgkin at Plymouth Marine Biological Establishment, 1963

In general, the other essays are also best when the authors write about their own experiences or their immediate interests. The last quarter of Rushton's essay, the piece on colour vision, the *femme fatale* by whom he is so willingly seduced, is entertaining, informative and provocative, indicating that discoveries still await the lucky or the hardworking. The rest, though not up to the same standard, can hardly fail to please. Gregory's vivid account of a single afternoon's work which led to the discovery of secretin and the frustrating tale of the discovery, rejection and rediscovery of gastrin, are clearly very near to his heart.

McCance's contribution is a staccato, somewhat disjointed, review of perinatal physiology interspersed with acid comments on political matters, climaxed by an attack on ethical committees "which shackle the human physiologist to a politically-minded and usually uncooperative public". A

clearer explanation of what the physiologist is about would bring about greater cooperation.

What of the two brightest stars in this dazzling firmament?, the Nobel laureates: your reviewer is now skating on very thin ice. Sir Alan Hodgkin gives a dry, low-key, understated account of his own and other experiments which led to the explanation of the nature of the action potential. His picture of Cambridge in the 1930s is that of another world. But, with decreasing funds, we too may have "to think hard to decide what is right" and then "start in a bare room and build most of our equipment". The writing lacks Feldberg's sense of immediacy and involvement; it seems that life was an orderly procession from Cambridge to New York and the grand tour of the United States with just time for a less-than-one-dollar-a-day holiday in Mexico and then back to Cambridge and Plymouth. Great events are curiously muted: the tribulations of war are recalled by the fact that he did not bother to keep his copies of the *Journal of Physiology*, their alleviation by marriage to Peyton Rous' daughter, and his ability to think about nerves again; the 1947 fuel crisis during which all Cambridge and indeed the rest of the country froze, is marked only by the chance to do experiments at  $-4^{\circ}\text{C}$ . It is an account of a dedicated scientist hard at work undisturbed by counter-attractions—how unlike the more frivolous attitudes of a younger generation of Cambridge laureates (see J. D. Watson, *Double Helix*, Weidenfeld and Nicolson).

"Looking Back on Muscle" by A. F. Huxley is a masterly account of the changing views down the microscope over the past hundred years, which lead eventually to the sliding filament theory of the contraction of muscle. It is a stern warning that what is true today may be forgotten tomorrow and that yesterday's discoveries may be nearer the truth than today's dogma.

All in all, a stimulating book requiring a good physiological background to obtain full value. It is a pity that these eminent men allude to so much endowing us with their own immense understanding but in fact leaving most stranded on the shores of ignorance. It is as if the secrets must remain hidden from all save those who have been fully initiated into the circle. It is an enjoyable book for the student, opening the door into living history and introducing him to all the greats, not only these six but also their colleagues and their teachers who constitute the very backbone of physiology. □

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Rainer Goldsmith is Professor of Physiology at Chelsea College, University of London, UK.