

reviews

Exciting endocrinology

J. A. Parsons

Pioneers in Neuroendocrinology, Vol. II. Edited by J. Meites, B. T. Donovan and S. M. McCann. (Plenum: New York and London, 1978.) £20.48.

THIS fascinating collection of micro-autobiographies will delight those who already know that scientists as a group are neither more nor less often inspired, neither more perfect nor more perverse than others who make a living by their wits. It will also be received with joy by those who doubt the second of both these pairs of propositions. There is enough in it to reinforce almost any prejudice and material for many an after-dinner story.

Two quotations may whet the appetite and show the potential of the book in arguments for or against the 'Two Culture' hypothesis.

"Harmony in science respects the same type of stringent rules that can be found in Bach's polyphony . . . It really does not matter, for the progress of science, whether you are personally exploiting one of your previous findings and working on the next discovery, or whether the next step is taken by others who have picked up your idea. Some people feel this is stealing from you. In my opinion, it is the best compliment one scientist can pay another".

"My one application to Jefferson Medical College was rejected, to my parents' chagrin but to my delight, and for the next two years I worked as a professional musician in the Philadelphia area".

Inevitably in a book of this type, the contrast of personal philosophies is as remarkable as the difference in literary styles, but most contributions are penetratingly self-critical and many are full of humour.

"Du Vigneaud once told me that in the isolation of oxytocin, the most efficient purification step had been that of separating the pituitary from the cow".

Also, at a time when the number of young people of exceptional ability who choose scientific research as a career seems to be falling, one value of such a collection of honest attempts 'to tell it like it is' may be to provide an insight into the challenges and rewards of this way of life, far more vivid than any description from a careers officer.

Contributions to this volume were of course only invited from those whose work has succeeded, in the sense of making important contributions to a

relatively new branch of endocrinology. Another way in which its publication can be of general value is therefore by allowing some comparison of research careers and of the contributions made by different types of funding.

As one would expect in our era, the overwhelming majority of the work has received state support. The total of 24 contributors is not a large statistical sample, but it is noteworthy that 20 worked with grants in a university environment. Of the remainder, two were on the staffs of privately endowed research institutes (though they, too, received much state funding), two carried out some of their work in government research institutes, and one was supported principally by the US Veterans Administration.

As it can be predicted with some confidence that during the next decade neuroendocrinology will make major contributions to drug treatment of disease, it is again of some interest that 14 of the contributors had their formal training in physiology and/or anatomy, four in zoology, two in psychology and only two in pharmacology. Only five mention industrial support for some of their work. No less than 12 of the authors were trained as physicians before specialising in a basic science, a career pattern which has now become very rare in the UK.

The editors evidently had no distaste for controversy and several spectacular old battles receive an airing, with much detail of intellectual arguments and strategy and at least one allegation of foul play. The history of science in the making is clearly fraught with the same problems as those encountered in histories of the more distant past. As usual, the details of such accounts are of greatest interest to the participants and those responsible for funding them, but it seems worth drawing attention to one issue of general significance.

Major scientific journals exercise great power, and the forces of competition tend to ensure that their editors exercise this responsibly in maintaining the quality of work accepted. However, an incident which is discussed at some length raises the question whether editors are equally conscious of the responsibility incurred in rejecting a paper. Many will agree that the regret-

table practice of anonymous rejection by the use of a supply of forms is too common; justice and the public interest seem to require that dismissal of any carefully presented paper should be based on equally serious scientific assessment. Not only may ill-considered rejection delay general awareness of work later recognised as important, perhaps by several years if authors are diffident; as illustrated by the incident discussed, still worse may ensue if the rejection is based on comments of a single carelessly-chosen reviewer, who has thus received privileged communication of the results (most dangerous of all if he is a competitor). Justice is usually done in the end—but at what cost?

Quite apart from the human interest, the book is worth reading for its excellent science. For example, there are some of the clearest discussions one could wish of the (unfinished) list of frustrations encountered in trying to isolate the Corticotrophin Releasing Factor. There are also valuable insights into the role of the hypophysial portal circulation, presented notably by Bogdanove and Halász. Incidentally, although its relevance is not directly discussed, this evidence for highly directional transfer rather than simple diffusion of hypothalamic factors should surely lead to an armistice in the old battle over functional significance of the portal vessels. (The argument is here pursued unremittingly by Lord Zuckerman himself, while Harris' perceptions are ably defended by Dr Donovan.)

In short, the editors are much to be congratulated for their enterprise and for showing clearly how much further excitement neuroendocrinology is likely to provide in the coming years. Perhaps we can look forward to another volume when such important issues are resolved as the structures of CRF, GRF and MIF, the role of prolactin in the origin and development of mammary tumours (interestingly discussed by Meites), and the probable physiological role of centrally acting peptides affecting memory and behaviour (excellently reviewed by de Wied). □

J. A. Parsons is Head of the Laboratory for Endocrine Physiology and Pharmacology at the National Institute for Medical Research, London, UK.