

Users and producers

Philip Gummert

The Second Culture: British Science in Crisis — The Scientists Speak Out. By Clive Cavendish Rassam. *Aurum*: 1993. Pp. 242. £16.95.

WHILE claiming the idea for this book as his own, the author thanks Professor Denis Noble and Dr John Mulvey for suggesting lines of enquiry and “correcting one or two mistaken impressions that I may have had”. It is appropriate to mention this acknowledgement because, although it does not so claim, the book could be read as a contribution to the Save British Science campaign which has been so ably led by Noble and Mulvey. It is a cry from the heart about the state of British science, supported by copious quotations from leading scientists. Whether it will help is a more open question.

Rassam’s point of departure is C. P. Snow’s Rede lectures in 1959 on the “Two Cultures”. Hence, he follows a line of argument that attributes the alleged undervaluing of science in Britain, and the malaise in the British economy, to the lowly esteem in which scientists are said to be held. He then acts as lawyer for the prosecution, seeking supporting evidence primarily from interviews with more than 70 scientists from a wide range of specialisms. Among their number are heads of universities or Oxbridge colleges, senior industrialists, the head of a research council, Nobel laureates and fellows of the Royal Society. This leads him into the most novel part of the book, in which he draws pen pictures of “lives in science”, ranging across seven disciplinary areas. His fascination with his subjects, and how they made their crucial breakthroughs (often in ways that run against naive arguments about planning science), is evident, as is his sympathy with their tales of woe about today’s funding of science.

The pen pictures might be fine as individual journalistic pieces. Some contain fascinating nuggets. But it is not clear whom the author expects to read diligently through dozens of them. Indeed, what is the target readership? A main aim of the book, we are told, is to make science and scientists much less remote. But those wanting to persuade a nonscientist of the adventure and uncertainty of science could find more accessible material by, say, Peter Medawar, James Watson or Arthur Koestler.

Perhaps, then, the real aim is to persuade policymakers of the need for change? In that case, I fear that the book would not pass muster in Whitehall. This is not because of any anti-science bias, but

because the case has to be argued better than it is here.

A hypothetical Whitehall reader might first remark on a failure to assess critically the evidence presented. We are told that one in three Britons believes that the Sun moves around the Earth without being told that in the United States the position is at least as bad. We are also told that whereas American economists have at least tried to understand the determinants of technological change, there is “scarcely a book by a British economist which mentions science in a significant way”. This will surprise those British economists who are widely regarded as world leaders in this field. It is also indicative of a general lack of awareness in the book of the substantial British and international literature on science and technology policy that could have added substance to many of the arguments.

There are many factual errors. To mention a few: Sir Ieuan Maddock was not “the government’s chief scientist”; the Centre for the Exploitation of Science and Technology was not set up as a result of the Alvey initiative (there is no mention of the Advisory Council for Applied Research and Development report that was more directly instrumental); and it was not “during the 1970s that the costs of science began to grow significantly faster than inflation” — the Advisory Council on Scientific Policy (which did not comprise largely representatives of the research councils) had identified this problem more than a decade earlier. Nor do such remarks as “it was therefore to be expected that many scientists would vote Conservative in 1979” or “it is said that in the Leeds

university chemistry department the average age is 58” necessarily convey a sense of solid research. The logic of a position that on one page presents it as a “problem” that academics seeking funding under the Alvey programme had to have an industrial partner, and on the next page cites it as a benefit of the programme that it stimulated university–industry collaboration, is also puzzling.

Rassam’s principal recommendation is that a statutory Science Directorate should be set up outside politics (like, he suggests, the British Broadcasting Corporation and the Arts Council), with the power to fund on a 3–5-year timescale the research councils, universities and a range of strategic and applied research areas. He does not show how this would deal with what I take him to regard as one of the key economic issues: namely, the stimulation of industrial demand for the research at which, as he shows, Britain is still so adept. In any case, with the publication in May of the White Paper on the future of British science and technology policy, the debate has moved on. But the issues remain, and in what can only be regarded as a long haul to strengthen the research council system through the new arrangements in the Office of Science and Technology, and to seek fruitful harmonization of users and producers of research through the proposed exercises in technology foresight, the themes addressed in this book will continue to resonate. □

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Taking different sides

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Hemispheric Asymmetry: What’s Right and What’s Left. By Joseph B. Hellige. *Harvard University Press*: 1993. Pp. 396. \$41.95, £27.95.

THERE are two kinds of book about the two sides of the brain. One kind, a product perhaps of the right brain itself, promotes the now familiar view that the right brain is artistic, intuitive and creative, while the dull old left brain is logical, rational and symbol-bound. These days, this message is more likely to be directed at art teachers or marketing executives than at experimental psychologists or neuroscientists. *Hemispheric Asymmetry* represents the other kind, a careful marshalling of the evidence, intended “to sort the facts from the fantasy of hemispheric specialization”. Its stance is deliberately ahistorical; what Joseph Hellige hopes to achieve is “a freeze-frame view of our current

state of understanding”.

There may, however, be perils in ignoring history. Interest in cerebral asymmetry was first awakened in the 1860s when Broca reported evidence for the left-cerebral dominance for speech, and a flurry of research and speculation ensued. Fantasy quickly overwhelmed fact, and the topic fell largely into oblivion around the turn of the century. In the 1960s, history repeated itself when R. W. Sperry carried out his Nobel-prizewinning studies of the so-called ‘split-brain’ patients, leading to the left brain/right brain cult that is now ingrained in our folklore. Part of Hellige’s mission is to “anticipate what the next frame might look like”, but with another century about to turn, history warns us that the next frame might well be empty.

The book is nevertheless a clearly written, modern account of functional and anatomical asymmetries in humans and