

## Book Reviews

*The psychopharmacologists II*, interviews by Dr David Healy, London and New York, Altman, 1998, pp. xxx, 640, \$78.50 (1-86036-010-6).

In 1996 David Healy published a volume of transcribed interviews with twenty-five individuals who have contributed to the development of psychopharmacology in the latter half of the twentieth century (*The psychopharmacologists*, Altman, 1996). He now presents a further twenty-seven interviews and, as in the earlier volume, the subjects include a wide variety of those who might consider themselves to be “psychopharmacologists”—psychiatrists, psychologists, pharmacologists, and chemists, representing the USA, the UK, Denmark, Spain, Switzerland, Belgium, France and the Netherlands. As in volume one, there is a severe under-representation of women—only two are included here, and the interview with one, Myrna Weissman, is principally about her late husband Gerry Klerman. Conversely, although Joel Elkes mentioned his late, former wife, and collaborator, Charmain, he was not asked more closely about her career and contributions. Why was Leslie Iversen interviewed but not his wife Susan, herself a noted psychologist and the editor, with her husband and Sol Snyder, of the influential multi-volume *Handbook of psychopharmacology* in the mid-1970s? Why not include Susan Greenfield, Professor of Synaptic Pharmacology at the University of Oxford, who works on basic cellular mechanisms of drug actions in the nervous system? And why not seek out the controversial and colourful Candace Pert for an interview?

As Healy readily admits in his introduction, this book is “much more psychopharmacology friendly than historian friendly”. That is perfectly true—there is little concession to anyone not in the field, little editing appears to have been done, there are no explanatory footnotes, no consistent cross-references are given to

other interviews in either volume, the glossary is extremely limited, and brief biographical details are given of the main interviewees only, not of names mentioned in the interviews. The index will not help the interested medical historian much—it is, incidentally, curious to find a mention of the rise of the Nazi party in Germany indexed as “Hitler, A” as an author—for example, only three references are given to “receptors” and one to “receptors and behaviour”—yet the book is riddled with interviewees’ views on what is probably *the* unifying theory of twentieth-century medical science. Similarly, all references to dopamine, and to the dopamine theory of schizophrenia are restricted to one chapter, that by Leslie Iversen, yet again, the volume is awash with dopamine.

Several fascinating vignettes are presented here. Perhaps one of the most intriguing accounts is that by Joel Elkes of the way his scientific imagination works, as he describes the subatomic and molecular dance he visualizes, the channels opening and closing, molecules folding and bending, as “the good Lord appeared to be . . . an Origami Artist of sorts”. Recurrent themes, which also appeared in volume one, include the significance of Bradford Hill and the coming of the randomized control trial (e.g. Lasagna, Rees); the importance of industry-led innovation (e.g. Janssen, Kuhn, Pedersen and Bogeso); scientific disputes (Marks and Weissman, Shepherd and Schou); and the creation and role of national and international learned societies (e.g. Pinder, Ray, Wheatley). Patients surface in several interviews—it is suggested that some eminent psychiatrists, whose names are deified in the canon of psychopharmacology, actually saw very little of their patients, leaving their care and the administration of novel therapies to others. Paul Janssen for example describes Jean Delay as “really more interested in literature”, a psychiatrist who thought that seeing patients was far below his dignity, who “not only did not like psychiatry, he

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actually disliked it", an opinion that raises several questions about the motivation of the man credited with the introduction of chlorpromazine.

By way of apology for the impenetrability of the text, Healy points the non-psychopharmacologist reader to his *The antidepressant era* (Harvard University Press, 1997), but even so, much that would be of genuine interest to the medical historian will, sadly, be lost. And that is a great shame—Healy himself is deeply knowledgeable about the field and its recent history, and on the whole the interviewees respond well to his questions and challenges, and there is much of value here.

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**Nicolas Rasmussen**, *Picture control: the electron microscope and the transformation of biology in America, 1940–1960*, Writing Science, Stanford University Press, 1997, pp. xv, 338, illus., £37.50, \$55.00 (0-8047-2837-2).

It is clear to scientists that conceptual advances are almost invariably connected with advances in techniques. A field of research reaches some limit as the available tools and techniques come to be fully exploited. The development of new tools and new techniques provides new ways to tackle old problems—they enable scientists to formulate new questions through expanding the range of soluble problems. Furthermore, I have always taken it as self-evident that scientists welcome new techniques because they always want to extend the limits of what they can do, and because they are afraid of being left behind. In molecular biology, for example, it was clear that anyone who did not take up the suite of tools and techniques that made up recombinant DNA was going to be at a severe disadvantage. However, Nicolas

Rasmussen's book demonstrates that this is a simplistic view, and that the introduction of new technology is an interesting and much more complex process.

In his introduction, Rasmussen claims that examples can be found showing that technical innovation leads to "conflict between the advocates of new questions, based in new concepts or new techniques, and advocates of the traditional ways" and that "conservative forces govern the acceptance of novel technique in scientific practice". Successful introduction of the electron microscope in biology required making the results of the new machine consonant with current knowledge while at the same time those results were moving beyond the limits of the current knowledge and instrumentation. In addition, the operation of the machine and the interpretation of its raw data had to be convenient so that the machine could move out of the few elite laboratories that had first access.

Rasmussen chooses five episodes in the early use of the electron microscope to illuminate—more or less successfully—how these problems were surmounted: 'RCA and the war years'; 'Stuart Mudd and his school of bacteriological electron microscopy'; 'The Rockefeller School and the rise of cell biology'; 'Muscle, nerve and the iron men of MIT', and 'Wendell Stanley, Robley Williams and the land of the virus'. It is a pity that Rasmussen does not include the applications of the electron microscope in studies of DNA and RNA molecules. In the 1960s, the electron microscope provided striking information on bacteriophage and bacterial chromosomes, and the replication of the latter, while the methods to visualize DNA-RNA hybrids were used to map viral genes and presented incontrovertible evidence for gene splicing.

The introduction and these five essays are by-and-large refreshingly free of jargon. It is unfortunate, then, that in his final chapter, Rasmussen lapses into a grandiloquent style characteristic, it seems, of much scholarly