

Heroes of the revolution

Peter Goodfellow

Genome. By Jeremy E. Bishop and Michael Waldholz. *Simon and Schuster*. 1990. Pp. 352. \$22.95, £16.95.

IN 1959 a vicious murder took place in Holcomb, a small town in Kansas. The novelist Truman Capote became obsessed with this murder; he became so obsessed that he went to live in Holcomb and interviewed everyone he could find who was prepared to comment on the murderers or their victims. Eventually he reported the results of his research and cogitations in the book *In Cold Blood*; this book is a blend of fact and opinion, journalism and history. Using this model, investigative journalists and inquisitive novelists have sought to turn today's news into tomorrow's books. Molecular genetics and molecular biology are newsworthy: genetic engineering and test-tube babies are part of the normal lexicon of the headline writer. The book-of-the-news has followed the headlines. My bookshelf is burdened with *Natural Obsessions*, *Hidden Frontiers* and many other books describing the endeavours, disappointments and breakthroughs of scientists. *Genome* is in this tradition: a blend of anecdote, biography and scientific explanation. The anecdotes are endearing, the biography is inspiring and the science is accurate. It is easy to read and only suffers in comparison to my usual bed-time reading because it lacks sex and violence.

In 1986, the journalist B. Bryson went to Kansas and attempted to investigate the investigation that Capote had completed 20 years previously (*The Lost Continent*; Secker and Warburg, 1989). The good people of Holcomb did not want to know; they had been offended by the picture of their world created by a novelist and refused to collaborate with a journalist. Herein lies a problem, Capote in search of a higher truth was presumably unconcerned about offending his erstwhile hosts. Bishop and Waldorf, the authors of *Genome*, are science journalists working for the *Wall Street Journal*. If they offend their interviewees, will they be welcome back? Does this colour their descriptions?

Another problem with the faction approach is that it depends critically on who is interviewed. There are those who are called but refuse to answer and there are those who are never called. I would deduce that the budget of the *Wall Street Journal* is insufficient to allow their science journalists to visit Europe and that explains the insular view presented in this book.

Genome bills itself as "The most astonishing scientific adventure of our time —

the attempt to map all the genes in the human body". This hype is misplaced. The book is not concerned with gargantuan struggles between the NIH and the American Department of Energy, nor is it concerned with the relative merits of YACs, cosmids and P1 vectors. In short it has little to do with the Genome Project, instead it describes the impact of molecular biology on medical genetics. The authors rightly identify the restriction fragment-length polymorphisms (RFLPs) as the point of revolution. Armed with an unlimited supply of genetic markers it is possible to locate the chromosomal position of disease loci and this is the first step in the dance that leads to gene isolation, definition and, we hope, better patient care.

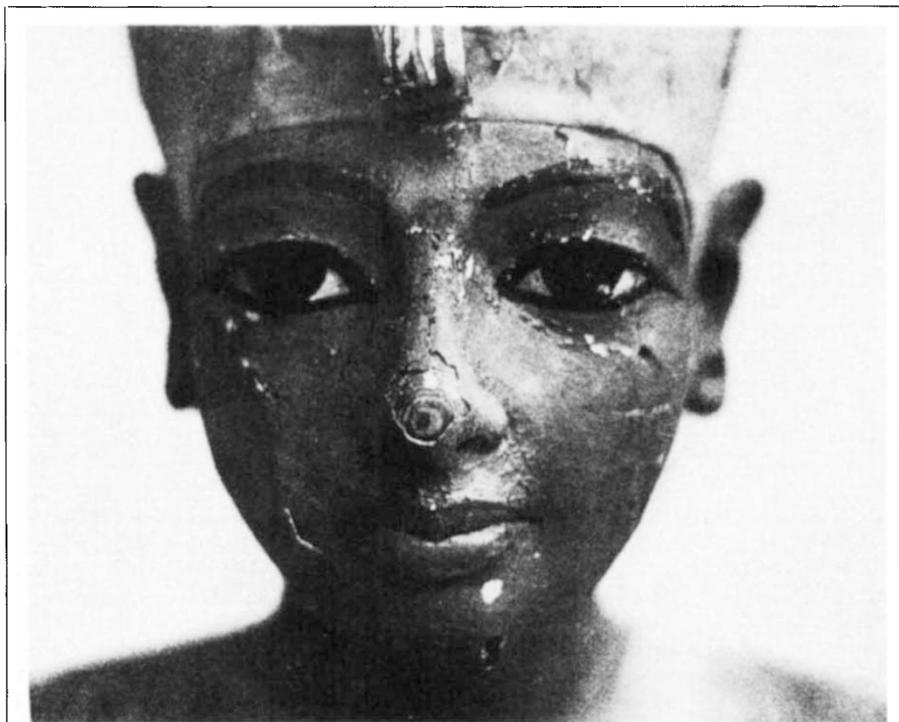
The central figure in the book is David Botstein and the central revelation occurred in the Wasatch mountains of Utah. In the idyllic surroundings of a ski resort, Botstein realized that RFLPs could be used as markers in human genetics. Back in the more prosaic environment of MIT he recruited brilliant young investigators to exploit this revelation. *Genome*

conjures the image of people in-the-know spreading the word RiFLiP, which is apparently how geneticists recognize each other. Of course, Botstein was a major catalyst, but, from my biased view point, this analysis ignores the contributions made by A. Jeffreys, E. Solomon, W. F. Bodmer and many others. It also ignores our cultural heritage as geneticists: RFLP analysis is based on the techniques developed by R. A. Fisher, J. B. S. Haldane, S. Wright, J. H. Renwick, N. Morton, and again, many others. The only chapter in the book that attempts scholarly appraisal of the past derives from interviews with V. McKusick.

After setting the stage with Botstein, the authors follow his disciples as they apply the new methods to different diseases. Again, I do not always agree with the chosen emphasis, but the stories are inspiring. Great progress has been made in the study of muscular dystrophy, cystic fibrosis and several forms of cancer. I am less convinced that progress has been made in studying alcoholism and psychiatric disease.

The strengths of this book should be balanced against its deficiencies. It is very clearly written, easy to follow and does not duck explaining the scientific issues to a lay audience. I shall lend my copy to my parents. □

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The head of a painted wooden mannequin of Tutankhamun, thought to have been used to hang the king's robes or jewellery. *The Complete Tutankhamun: The King, The Tomb, The Royal Treasure* by Nicholas Reeves describes the region of the boy king and the story of Howard Carter and Lord Caernarvon's quest for his tomb in the Valley of the Kings. Published by Thames and Hudson, price is £15.95. □