

Book Review

BIOFUTURE—Confronting the Genetic Era. Burke K. Zimmerman. Plenum Publishing Corporation, New York. 1984 Pp. xi+305. \$16.95

During the late summer of 1977, I spent a short time at the University of Massachusetts at Amherst. Although I was aware of the "DNA debate" which was raging throughout the U.S.A., the news pages of *Nature* and *Science* had not prepared me for its full reality. Walls were covered with spray-can graffiti—"No Way DNA" etc, and the local council was debating a proposal which would have forbidden any experiments which "would produce novel genetic combinations between distant organisms which have not been demonstrated to exchange genes in nature"; they had obviously not thought of the impact that such a regulation might have on any local mule breeders. With the benefit of eight years' hindsight, it all seems so bizarre and, yet, it really happened. It seems hard to believe that undergraduates now routinely carry out experiments using techniques that not all that long ago would have brought out the campus radicals in their droves and sent local politicians scurrying for their P.R. kits. What has always intrigued me was how an essentially scientific debate became such a political football.

Now, at last, I have learnt at least part of the story from Zimmerman's book. During the latter half of the 1970s, Dr Zimmerman was an advisor to the House Committee on Health and the Environment of the U.S. Congress, and in this capacity was at the eye of the storm for so long as it lasted in Washington. For me, the most interesting part of this book is Zimmerman's wry account of how and why the "DNA debate" developed as it did from the call for a moratorium on certain types of experiment at the 1973 Gordon Conference, to its final demise when its full political mileage had been exhausted. This is a Washington insider's story in a classical mould. Chapter 3, "The Fear and the Loathing", almost gives the game away. Dr Burke K. Zimmerman's writing may not have quite the style of Dr Hunter S. Thompson ("Fear and Loathing in Washington", etc) but his heart is certainly in the right place. As the story unfolds, the element of farce becomes greater and greater, climaxing with the absurdity of the Kennedy Bill to regulate experiments using recombinant DNA techniques. Senator Edward Kennedy merely took down the 1947 Atomic Energy Act, dusted it down and replaced every mention of "atomic energy" with "recombinant DNA". The general level of political double-dealing and bureaucratic expansionism which forms the background to the story almost, but not quite, defies the imagination.

As well as covering the rise and fall of the "DNA debate", Zimmerman describes in his own sardonic way the rise and rise of the biotechnology industry. From an insider's view, it is very entertaining. It seems that an important component of influence-peddling in Washington depends not only on taking politicians out to lunch but also on where they are taken: "Ely Lilly took me to the Capitol Hill Club, strictly a Republican organisation; Ron Cape of Cetus treated me to dinner once at the Bethesda Holiday Inn; and Genentech didn't take me to lunch at all."

The long last chapter of the book is devoted to a discussion of the moral and ethical implications of molecular biology. Although the publisher's blurb on the dust-jacket implies that this is an extensive treatment of the topic, the author discusses these problems only in the context of U.S. social institutions and conventions. Indeed, the only occasion when countries outside the U.S.A. are mentioned at all is in an earlier chapter and then only in so far as biotechnology is involved in U.S. foreign policy. But, given this very narrow perspective, Zimmerman writes well on this topic as one might expect from a teacher of ethics in science.

What lets this book down is the beginning; it seems that most authors writing on the social aspects of modern biology seem to feel compelled to preface their work with a potted version of the present state of molecular biology. Zimmerman is no exception and the result is rather poor. I found the introductory chapters thoroughly confusing. A large proportion of the diagrams are from other sources, bear little relationship to the text and seem to have been added as an afterthought. Although this introduction is less than adequate as background for the rest of the book, a good technical appendix has been provided so it is hard to understand why Zimmerman bothered with the introductory outline.

Overall, this is an odd but entertaining and thoroughly American book. Zimmerman provides a ripping good read on the origins and development of the "DNA debate" and its commercial ramifications but I am afraid that the philosophical isolationism of the rest of the book will tend to irritate rather than enlighten a non-American reader.

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REFERENCE

HUNTER S THOMPSON. 1974. "Fear and Loathing in Washington: It was a Nice Place. They Were Principled People, Generally". *Rolling Stone* No. 164. 42-47.