

Genetics and society

Harvey L. Levy

Genetics, Law, Social Policy. By Philip Reilly. Pp. 275. (Harvard University Press: Cambridge, Massachusetts and London, 1978). \$15; £10.50.

It is doubtful that Robert Guthrie could have anticipated the Pandora's box of legal and social issues that would be opened by genetics when he introduced the newborn screening test for phenylketonuria (PKU) in 1962. But the box did open and from it has poured some of the most difficult questions faced by society. Should testing for genetic disease be mandatory? What information should be transmitted by genetic counselling and how should such transmission occur? What are the relative responsibilities of parents and society in determining procreation and birth in certain genetic circumstances? Is genetic information to be held in absolute confidentiality or does the public welfare require numerous exceptions to this?

Within recent years several books that examine at least some of these subjects have been published. Among them are *Ethical, Social and Legal Dimensions of Screening for Human Genetic Disease* (edited by D. Bergsma), *Genetic Screening: Programs, Principles and Research* (by the Committee for the Study of Inborn Errors of Metabolism, National Academy of Sciences), and *Genetics and the Law* (edited by A. Milunsky and G. J. Annas). Only the latter attempted to include legal and social issues of genetics in a somewhat comprehensive manner rather than relating them specifically to screening. Although it was a valuable contribution, *Genetics and the Law* inevitably suffers from lack of focus and redundancy, those twin banes of all edited books.

I therefore read the publication announcement of Philip Reilly's *Genetics, Law, Social Policy* with a good deal of excitement. Mr Reilly is certainly highly qualified to write on this subject—being a lawyer, having studied genetics under Dr Margery Shaw at the University of Texas and having served a fellowship in the Program in Law, Science and Medicine at Yale Law School. For the past several years he has devoted virtually all of his professional time to obtaining information about genetic programmes and to examining these programmes.

In *Genetics, Law, Social Policy* Mr Reilly has produced a valuable and

interesting book. Although not truly comprehensive in the many genetic issues that confront law and society, the book does include in-depth discussions of some of the major issues, including genetic screening laws, the role of society and the individual in eugenic decisions, legal issues concerning genetic counselling and unconventional reproductive techniques, and the increasing storage and potential public availability of individual genetic data. In each of these areas Mr Reilly summarises the past and present states, isolates those elements that pertain to the law, and raises those unanswered questions that seem most pertinent to present and future practice.

The strength of the book lies in the chapters on laws that mandate screening. Here Mr Reilly reviews not only the laws themselves but the legal basis for such laws and the potential bases for their legal challenge. He clearly points out the tension that exists in such laws between the desire of society to protect the individual and the right of the individual (or his parental protector) to freely choose his or her destiny. The screening laws covering the newborn fare much better in this regard than do those that mandated sickle cell detection, the latter being soundly criticised. On balance, Mr Reilly has given a fair and comprehensive treatment of this subject.

Genetic scaremongering

David Baltimore

Playing God: Genetic Engineering and the Manipulation of Life. By June Goodfield. Pp. 218. (Random House: New York; Hutchinson: London, 1977.) \$8.95; £5.95. *Improving on Nature: The Brave New World of Genetic Engineering.* By Robert Cooke. (Quadrangle/New York Times Books: New York, 1977.) \$12.50.

THE techniques of recombinant DNA have produced an unpredicted bonanza: a new field of research employing people who write about it, think about it, and collect its artifacts. The politics and sociology of the not yet existent enterprise of genetic engineering, and the moral and ethical aspects of its vaguely conceivable possibilities are the basis for books, articles, lectures, symposia, courses, journalism, philosophy and all manner of academic practice.

Is it all worthwhile? One thing is sure, the impact of modern biology on society will have been thoroughly considered long before it is a reality. But will this

There is particular value in the chapter on the future of genetic screening legislation, which Mr Reilly sees as on the increase and which needs to be carefully controlled and constructed. The chapter on eugenic policies as they confront personal freedoms contains less substantial matter than those on genetic screening laws but is nevertheless very interesting and establishes a basis of information for future such considerations. The same can be said for the last section which contains the chapters on genetic counselling, new reproduction technologies, and genetic data. Most of the discussion in this section concerns somewhat brief descriptions of the current situation and considerations of probable future problems.

The book is weakest in the first chapter which attempts to summarise current concepts of human genetic disease. The geneticist will certainly not need to read this and the non-geneticist would be advised to look elsewhere for a more accurate introduction.

Despite this deficiency the book is highly recommended as an introductory reference work for geneticists and all others interested in current and future relationships between genetics and society. □

Harvey L. Levy is Associate Professor of Neurology at Harvard Medical School, Cambridge, Massachusetts.

consideration reduce the ill-effects of new technologies and improve the chances that we will integrate future methodologies into our scheme of life with less trauma than in the past? It seems doubtful, because one of the facts of scientific life is unpredictability. What you think will be easy is often hard or impossible; what you never conceived of falls into your lap. So it is hard to prepare society for the impact of science when the form of that impact is so difficult to prophesy.

June Goodfield and Robert Cooke in their recent books do a service even if their detailed worries may be wide of the mark. They prepare their readers for thinking about the future. They introduce the language of modern biology; they describe advances to date; they raise questions to think about; and they tell some interesting stories. But their books suffer from being too superficial, not always accurate and not very surprising.

Cooke's book—in the breezy style you might expect from a journalist (he is science editor for the *Boston Globe*)—introduces us to the many areas in which genetic manipulation is being used or may be used in the future. After describing recent scientific advances in cell biology, genetics and molecular biology, he then catalogues the many areas of modern life that could be affected by new abilities of