

Book reviews

The Ethics of Life

Edited by Denis Noble and Jean Didier-Vincent, Paris, UNESCO, 1997, 238 pages, 135 FF.

The ethics of life is an inspiring title and, by the standards of bioethics volumes, the purple, gold and lime-green cover (with not a montage of press headlines in sight) is pretty good too. The book's essays were originally papers presented at a meeting on *Physiology and the Respect for Life*, held in 1995. Noble and Vincent's introduction expresses optimism about a renaissance in physiology, invigorated by developments in molecular biology and genetics, linked with the conviction that "the successful pursuit of physiological research necessarily requires an answer to the claim that it must undermine our respect for life to seek to understand its mechanisms and nature" (page 11).

Given this perspective it is not surprising that the book concentrates to a great extent on the ethics of the use of animals in research. Other essays are concerned with embryo research, research involving human participants, and issues at the end of life. The volume appears to be intended as a bioethics primer for physiologists but it would have been particularly useful if, in addition, it had indicated which aspects of physiological research touched these bioethical issues most closely or raised them in particular, or particularly acute, ways.

Engelhardt opens the book's introductory section with Potter's forward-looking definition from 1971 of bioethics as "a discipline combining biology and humanistic concerns in a science that would establish a system of medical and environmental priorities for global survival at acceptable levels of quality of life" (page 24). After highlighting the difficulty of reconciling different moral positions the chapter hastens to the conclusion that the "same

toleration that we expect from those who oppose abortion as immoral ... we should also require from those who oppose particular uses of animals, which they find to be immoral, but which those engaging in those uses judge to be benevolent" (page 36). Based on just one of the many relevant arguments, this conclusion pre-judges the subsequent chapters on the use of animals. Fagot-Largeault then provides very brief sketches of three styles of philosophical naturalism. It would have been helpful if these had been put into context and this is one example of how the book as a whole would have benefited from a firmer editorial touch. Although placed later in the book, Noelle Lenoir's chapter provides an ideal introduction, certainly to the legal aspects of the book's theme. Erudite and comprehensive, it provides a starting point for discussion of many of the issues and also the thought-provoking observation that, "in the Middle Ages, animals were often personified and could, for example, be brought to justice for committing harmful acts" (page 193) - a case of responsibilities without rights, perhaps?

The stance of the writing on animal use is summed up in the titles of the two sections addressing these issues: Animal versus man and The right to experiment. Quite apart from the non-inclusive language, and the sharp distinction drawn between human beings and other animals, the titles reflect the sense one gets that many of the authors feel beleaguered by demands for consideration of animal welfare and animal rights. Yamashita's review of Asian attitudes to animal experimentation opens with the concern that "it is becoming more and more difficult for scientists to experiment on animals in Japan, though it is not as serious as in Europe or the United States" (page 93). Prochiantz relies heavily on the straightforward plea that "we see no other way to make progress in our understanding of the living ... than to persist with the prac-

tice of animal experiments" (page 92). Ruh makes the extreme argument that those who adopt a radical position "are however no longer allowed to profit in any way in their own life from the instrumentalization of animals" (page 121). The arguments for animal welfare and animal rights are conscientiously reviewed but since there is not a single contribution from an author who finds these arguments compelling it is hardly surprising that they do not come across as such to the reader. The book could also have done more to reflect the concerns and contributions of more moderate advocates of animal welfare and animal rights. Little attention was given, for example, to the major improvements in the treatment of animals in many countries, to which advances in our understanding of animal physiology have contributed.

In contrast many of the contributions become lyrical and compelling when arguing for the benefits and beauty of physiological research. Engelhardt opens with sheer poetry: "Life provides a novel dimension of beauty. It brings to the universe a myriad of complex, self-maintaining, reproducing, self-directed organisations of matter" (page 21). It would have been far preferable to give these expert and accomplished contributors free rein to persuade us of the value and need for animal experiments. This could have been balanced by equally passionate contributions from experts in ethics, animal welfare and opponents of embryo research. True there would then have been a danger that the different arguments would have failed to engage with each other but this could have been remedied by a concluding chapter. Such a chapter would, in any case, have been very useful for pulling together the book's different contributions.

It is encouraging to see the bioethics debate widening to embrace disciplines beyond genetics and molecular biology. UNESCO's decision to create an ethics

series, of which this is the first volume, is also welcome. The book provides a beginning but it also demonstrates how far the field of bioethics has progressed in its expectations of rigorous and balanced debate.

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Access to the Genome: The Challenge to Equality

Maxwell J Mehlman and Jeffrey R Botkin, Washington DC, Georgetown University Press, 1998, 152 pages, £11-75, US\$14-95.

This engaging and accessible book focuses on some of the broader social and economic implications of the Human Genome Project. It begins with a solid description of basic genetics and the Genome Project itself, and follows up with chapters on the practical applications of genetic information (in brief, genetic tests, gene therapies and genetic enhancement) and the impact such technologies might have. But these are just the warm-up for the core of the book which looks at the way genetic technologies might impact upon health care systems, and on society as a whole.

In the chapter "Access to genetic technologies" the authors address issues such as supply shortages, insurance coverage and access to genetic technologies via ability to pay with the use of both historical and contemporary examples from health care. Using cases such as debates around access to dialysis in the 1960s and the attempt by the US state of Oregon to increase the numbers of people covered by state health care by reducing the range of treatments paid for, the authors conclude that the general availability of genetic technologies is likely to be extremely limited due to the prohibitive cost. An important point about this chapter (and much of the rest of the book as well) is that it is written from a US position, ie there is in-depth discussion of the ins and outs of US private health insurance legislation, but no mention of life insurance, which is of far more relevance to the UK (and other, non-US countries). This is not a criticism of the book (which makes potentially esoteric and obscure legal issues quite readable), but a warning for potential readers

perhaps looking for a broader discussion of the concept of insurance as a whole.

Chapter 6, "Genetic technologies and the challenge to equality", is far more broadly relevant in that the authors suggest that genetic technologies present a threat to the foundations of most Western democratic societies. Initially they work through classic political/ethical theories (such as Utilitarianism and Rawlsian Justice), and look at how these theories would address the inequality which would stem from expensive genetic technologies only being available to wealthy individuals. They point out that such wealth-based access to these technologies could ossify social differences in society, with those unable to pay for such technologies (including genetic enhancement) and their children suffering in terms of job security and income as an enhanced "genetic aristocracy" took control. Such a situation prevents what Mehlman and Botkin regard as one of the most important values in a democratic society; the chance to be upwardly mobile; "If the reduction in upward mobility were substantial enough, the lower classes, who could not afford to better themselves genetically, would remain locked into their genetic class" (page 102). The authors foresee various socially damaging consequences to this erosion of equality, but accept that they may be over-pessimistic, the "equivalent to Chicken Little alarming the barnyard due to a genetic acorn" (page 105). Personally I think that they argue persuasively for their worst case scenario, and propose an intriguing solution.

They consider total prohibition on genetic research and technologies, but having looked at the "war on drugs" and other examples, correctly conclude that such action does little in the long run. Their solution to the problem of genetic inequality is a genetic lottery "open to anyone, but everyone would have the same chance of winning" (page 125). Those who objected to the use of such technologies could opt out, but it would give those people who could never afford to buy genetic enhancements or gene therapy, the possibility of leapfrogging any genetic class barriers. Intriguing and original as this idea is, the difficulties do seem rather obvious. If genetic technologies, why not other medical treatments? The authors would argue that genetic information is special, and hence genetic technologies more powerful than other medical

treatments. Even allowing this, it would seem that the authors would have to defend the use of genetic enhancement technologies by a lottery winner to produce a son tall enough to play professional basketball, while denying gene therapy to a non-lottery winner's child. The lottery system (as presented, though perhaps not in all forms) fails to distinguish between those who need to win on medical grounds, and those who would like to win for more "cosmetic" reasons. The line between genetic therapy and enhancement is notoriously difficult to define, yet the authors do not seem to appreciate that such a lottery would at least have to make some distinction (however arbitrary, if it were to be, not just egalitarian (we're all equal before the dice) but also ethical.

A broader problem with the book is the underlying assumption that genetic information is all powerful. Although not as "triumphalist" as many others writing in this area, the authors' arguments and scenarios do depend on a rather deterministic view of human genetics, to the almost total exclusion of environmental influences. Despite this, the book is highly recommended to the interested reader and perhaps as a course book.

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Deciding Who Lives

Renee Anspach, California, University of California Press, 1997, 303 pages, £12.95 (sc).

Deciding Who Lives is an analysis of the practice of medical ethical decision making in the neonatal intensive care nursery. As stated, the book seeks to study not philosophical principles of bioethics, but rather the practicality and reality of implementing these principles. Both the strengths and the weaknesses of this study emanate from the author's basic lack of active participation in the field.

As an outside observer of the intensive care nursery environment, the author is able to make some refreshing observations, unencumbered by the professional biases to which those of us working in the field are subject. I found her comparative analysis of the differential observations of doctors v nurses, and the implications thereof particularly fascinating. There is much that we as practitioners can learn from