

## BOOK REVIEW

### A Clone of your Own. The Science and Ethics of Cloning

Edited by A Klotzko. Oxford University Press, 2004, £12.99, pp 162. ISBN 0 19 280309 3

*A Clone of your Own* provides a short, lucid, and very readable introduction to the science of human cloning and some of the central ethical issues surrounding it.

The attractive 162 page pocket sized book is interspersed with original and often quirky drawings by David Mann. These drawings, as well as a good number of well chosen and sometimes equally quirky contemporary and archival photographs, provide context and texture and even a sense of wonder to the scientific and ethical discussion. In addition, the author—US lawyer and bioethicist Arlene Klotzko—draws on a rich background of literary, cinematic, and cultural sources. She shows that certain fears associated with reproductive human cloning—such as the loss of personal identity (or the soul) and predictions about the disastrous consequences of hubristic attempts by humans to “play God” by forming humans in their image—have a long history and have given rise to a contemporary genre captured by terms, such as “Frankenscience”.

Klotzko has an easy writing style and the ability to convey both complex scientific information, as well as the gist of ethical debates, to the lay reader. Serious discussion is interspersed with personal anecdotes, and the reader soon finds out that Klotzko seems to have a knack for being where the action is: in China, in the laboratory of Huizen Sheng, three weeks before the results of his attempts to use rabbit eggs instead of human eggs in therapeutic human cloning were published; in London, in the House of Lords when, on 22 January 2001, the United Kingdom became the first country in the world to pass laws that would regulate therapeutic human cloning; and at the Rosslyn Institute in Scotland, where the sheep Dolly—the world’s first mammalian clone—had just given birth to a lamb named Bonnie. “I was the first person outside the institute to see her since her

confinement...She stood still while I petted her, and when I bent down to play with Bonnie, Dolly licked my face” (p 40).

All this makes for an entertaining book. *A Clone of your Own* offers more, however, than entertainment. It is also, by and large, a very good introduction to the science and ethics of cloning. Divided into six chapters, with an extensive introduction, and a short conclusion, the book deals with both therapeutic and reproductive cloning. Chapter one provides some background—both fictional and scientific—on the creation of life in the laboratory, and makes clear that there is an important link between now widely accepted modes of assisted reproductive technologies, such as in vitro fertilisation and cloning. Chapter two explains the science of cloning, and chapter three focuses on its actual and future applications in non-human animals. There is no doubt that the cloning of animals offers many potential benefits to humans: cows that give more milk, pigs that provide more and leaner meat, horses that run faster, and so on. Then there is “pharming”—the creation of transgenic animals to produce—for example, valuable proteins in their milk or blood, and to provide organs and tissues suitable for human transplant.

In the next two chapters, the author turns to human cloning—“therapeutic cloning”, or cloning for cell therapies, in Chapter four, and cloning for reproductive purposes in chapter five. Finally, in chapter six, there is a discussion of a range of issues surrounding questions of personal identity, and of the kind of psychological and social impact that the deliberate creation of “doubles” might have.

It hardly needs stating that cloning raises a rich array of highly complex philosophical and ethical issues, ranging all the way from the moral status of human embryos (in therapeutic cloning, embryos are deliberately destroyed to harvest stem cells), to the social responsibility of scientists and the ethics of reproductive decisions, questions of public policy, and questions of regulation and legislation.

In general, Klotzko provides a good introductory critical examination of many of the most important of these questions. In part, her comments are incisive and to the point, cutting quickly and radically (in the best sense of that term) through a whole

swathe of bad science and ethics. Of course, the discussion generally remains somewhat cursory. Given the relative brevity of the book and the complexity of the issues raised, this is unavoidable and not a serious shortcoming. After all, once readers have been alerted, even if only cursorily, to an important issue, they are given the opportunity to pursue it further. (Regrettably, there are no footnotes or endnotes to help the reader in this task, but there is a useful list of further reading.)

It is, however, much more problematical if an introductory text is seemingly blind to the existence of important ethical issues. Klotzko’s discussion of non-human cloning is a case in point. While the reader learns that cloned animals of every species have so far exhibited severe abnormalities, the main conclusion Klotzko draws from this is that we should not, for now, attempt to clone humans. There is seemingly no concern for the consequences of such attempts for animals at all, and the conventional assumption that animals fall outside the moral sphere remains unchallenged. This applies to the use of primates as well. Although Klotzko states that the use of primates raises special ethical issues, she does not tell readers what these might be. Indeed, the whole problem of the moral status of non-human animals and their use in research, and as organ donors, is dealt with in two short sentences: “Primates...are still required for research purposes and it is important that they be treated well and killed in a humane manner. Pigs should, of course, also be treated humanely and [if used as organ donors] their organs should not be removed serially” (p 64). No mention is made of the substantive challenges raised by philosophers, theologians, scientists, and others about our blatant disregard of the interests and rights of non-human animals.

Setting the last criticism to one side, I can highly recommend *A Clone of your Own* to the general and undergraduate student reader. The book will not only ensure that astute readers will have a good first understanding of the science and ethics of human cloning, but also that they are kept interested and even entertained along the way.

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