

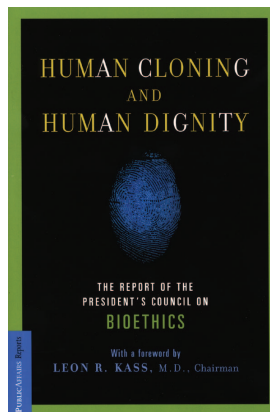
Human Cloning and Human Dignity: The Report of the President's Council on Bioethics

by Leon R. Kass
Public Affairs Books, \$14.00,
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Let me begin by saying that I do not support human cloning. It does not feel right to me and, more important, there is a significant likelihood based on animal studies that it would result in high rates of abortion and developmental abnormalities. I remain undecided on the issue of therapeutic cloning for biomedical research, however. This book did little, if anything, to influence my thinking or position on either of these matters, and I am skeptical that it will do so for anyone else. The book is little more than a compilation of rhetoric derived primarily from the popular press, public discussions and personal opinions. It pays only minor attention to the science of cloning and other assisted reproductive techniques and to the role science (and scientists) should play in forming public policy.

The cover of the book depicts a human fingerprint; the 'foreword' adds that fingerprints represent our unique personal identity and suggests that cloning humans would take away this individuality. But the book fails to mention that even genetically identical twins produced by natural means do not share the same fingerprints. Given what we now know about variations in mitochondrial DNA and epigenetic effects on the phenotype of cloned animals, there is good reason to believe that clones would be less identical than genetically identical twins. It is this type of misinformation, evident throughout the book, that calls into question its value.



Contributors to the book include bioethicists, social scientists, lawyers, physicians, political scientists, humanists, theologians and scientists. Only 3 of the 18 authors appear to be biologists. What's more, none of the contributors has any experience with cloning animals or with assisted reproductive techniques. One has to wonder whether anyone involved with writing this book has ever looked into a microscope and observed the beauty of a pre-implantation embryo—human or otherwise. The council sought out viewpoints of others through reading, invited testimony and public comment, but the book provides few details as to where (or from whom) this information was obtained and how much, if any, was included. Why was no one involved with stem-cell research, animal cloning or assisted reproduction in humans asked to participate?

The book describes panelists as "not experts but simply thoughtful human beings." That implies cloning experts are not thoughtful, but go about their business with little regard for the potential consequences of their research. On the contrary, I would venture to say that most scientists ponder ethical questions much more than do others. Including such experts would have brought to the table information critical to forming educated opinions and recommendations.

One can produce genetically identical twins, for example, by splitting an embryo rather than by nuclear transfer. Half of the embryo could be frozen for transfer later, to produce twins of different ages—is this unethical? Would it be acceptable to harvest and store a few embryonic cells for potential use as stem cells? In theory it may also someday be possible to collect a single cell from a blonde-haired, blue-eyed male and, using advanced techniques of *in vitro* gamatogenesis (which will surely be available) and nuclear transfer, produce a brown-haired, brown-eyed, girl. The result would obviously not be a clone, or at all genetically identical, but derived from a single cell of a single person. Would that be ethical?

Excluding expert researchers has resulted in a book that, in my opinion,

provides very little information that has not already been discussed in other bioethical dilemmas. The authors mention assisted reproductive techniques (*in vitro* fertilization, embryo cryopreservation and pre-implantation genetic diagnosis) but do not point out the ethical and moral issues that also apply to contraception, abortion, adoption, divorce, single parenthood (through artificial insemination or otherwise), genetic testing, euthanasia, suicide, child abuse, capital punishment and homosexuality, to name a few. I could not find anything in this book unique to the issue of human cloning, other than concerns about inefficiency, high abortion rates and the potential for developmental abnormalities, all of which are well-documented elsewhere.

While I found this book ineffectual, I would like to emphasize that I have the utmost respect for the panelists and do not question their qualifications, motives or contributions. Nor do I take lightly their arguments, opinions and suggestions for a public policy on human cloning. The book's most significant contribution is its mention of a need for discussion, review and evaluation of the ethical and moral issues surrounding assisted reproduction in humans. But I do not understand why cloning has been singled out for so much attention. Why, for example, would one suggest banning the production of human embryos by nuclear transfer to create stem cells, yet leave intact the ability to legally produce human embryos by *in vitro* fertilization and use those for stem cell production? This seems rather hypocritical. There are, perhaps, some other ethical and moral concerns that are unique to human cloning, but I could not find them in this book.

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