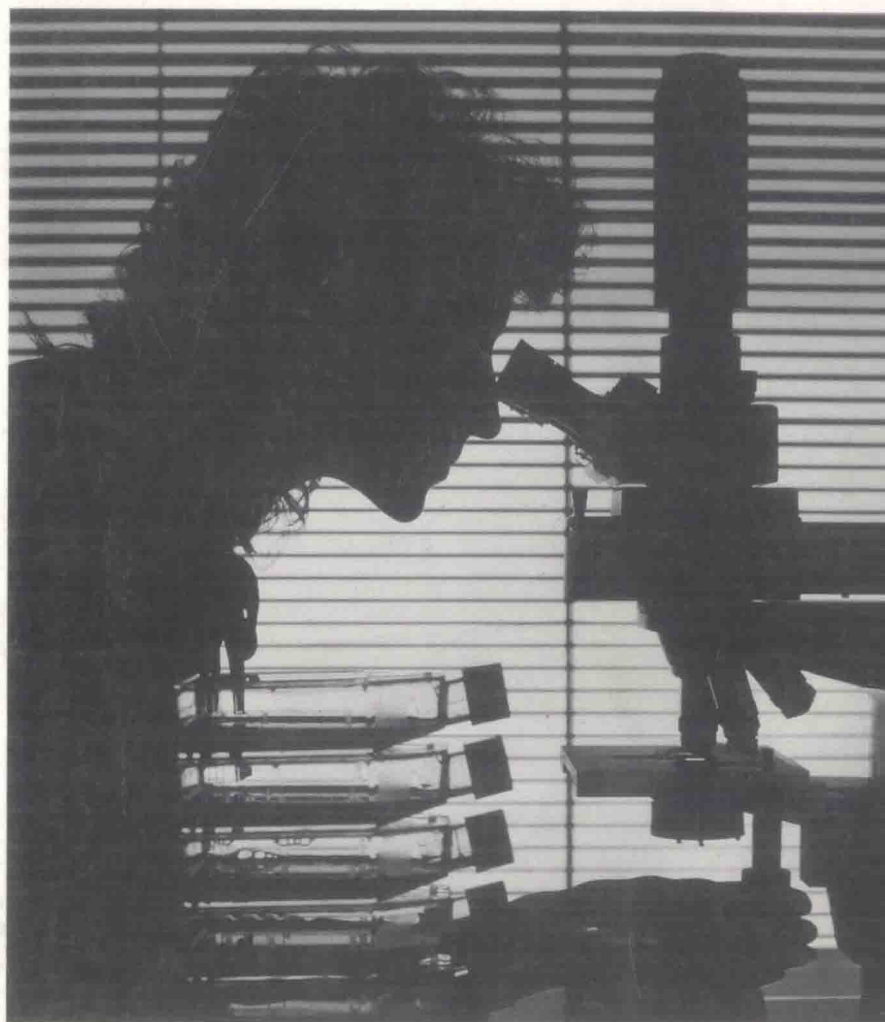


Ethical Issues in Scientific Research

AN ANTHOLOGY



Edited by

Edward Erwin, Sidney Gendin, and Lowell Kleiman

Ethical Issues in Scientific Research

AN ANTHOLOGY

Edited by

Edward Erwin

Sidney Gendin

Lowell Kleiman

Garland Publishing, Inc.
New York & London / 1994

Copyright © 1994 by Edward Erwin, Sidney
Gendin, and Lowell Kleiman
All rights reserved

Library of Congress Cataloging-in-Publication Data

Ethical issues in scientific research : an anthology / by
Edward Erwin, Sidney Gendin, and Lowell Kleiman.
p. cm. — (Garland studies in applied ethics ;
vol. 2) (Garland reference library of social science ;
vol. 814)

ISBN 0-8153-0641-5 (alk. paper)

ISBN 0-8153-1790-5 (pbk.)

1. Research—Moral and ethical aspects. 2. Fraud in
science. I. Erwin, Edward, 1937–. II. Gendin,
Sidney. III. Kleiman, Lowell, 1942–. IV. Series:
Garland studies in applied ethics ; v. 2. V. Series:
Garland reference library of social science ; v. 814.

Q180.55.M67E83 1994

174'.95072—dc20

93-37482

CIP

Cover design by Patti Hefner
Cover photo: FPG/Mason Morfit

Printed on acid-free, 250-year-life paper
Manufactured in the United States of America

GARLAND STUDIES IN APPLIED ETHICS
VOL. 2

ETHICAL ISSUES IN SCIENTIFIC RESEARCH

An Anthology

GARLAND REFERENCE LIBRARY
OF SOCIAL SCIENCE
VOL. 814

For Benjamin and Johanna
E. Erwin

In memory of my beloved Natalie (1936–1990)
S. Gendin

To Sheila
L. Kleiman

Preface

Since the National Institutes of Health have mandated a course on ethics in research training for all applicants for research funds, *Ethical Issues in Scientific Research* fills an obvious need. The requirement for such courses expresses the recognition that the ethical dimensions of various types of scientific research greatly affect the general population and therefore require serious study and debate. This collection of essays addresses the major areas of moral debate regarding research: fraud and deception, controlled experiments on humans, animal and genetic research, IQ and military research.

These issues present both conceptual problems (for example, how to define fraud in reports of experimental results) and fundamental moral questions (for example, how to weigh the interests of future medical patients against those of present patients). The issues arising from new kinds of research such as gene therapy challenge basic philosophical concepts (for example, those of personal identity and individual rights) as well as the viability of traditional moral theories for answering new questions (for example, regarding the rights of future generations).

The essays collected here represent the best efforts to date of philosophers and scientists to grapple with these interesting and difficult issues.

Alan Goldman
University of Miami

Contents

SCIENCE AND VALUES

Science and Human Values	
<i>Carl G. Hempel</i>	7
The Exact Role of Value Judgments in Science	
<i>Michael Scriven</i>	29
The Structure of the Argument	
<i>Richard Nicholson, Richard Hare, et al.</i>	51

FRAUD AND DECEPTION IN SCIENTIFIC RESEARCH

Fraud and the Structure of Science	
<i>William Broad and Nicholas Wade</i>	69
The Murky Borderland between Scientific Intuition and Fraud	
<i>Ulrica Segerstrale</i>	91
On the Supposed Indispensability of Deception in Social Psychology	
<i>Steven C. Patten</i>	111
Keeping Deception Honest: Justifying Conditions for Social Scientific Research Strategies	
<i>Alan C. Elms</i>	121
The Case for Deception in Medical Experimentation	
<i>J. David Newell</i>	141

EXPERIMENTATION ON HUMANS	155
An Argument That All Prerandomized Clinical Trials Are Unethical	
<i>Don Marquis</i>	159
The Conflict between Randomized Clinical Trials and the Therapeutic Obligation	
<i>Fred Gifford</i>	179
Sins of Omission? The Non-Treatment of Controls in Clinical Trials—I	
<i>Michael Lockwood</i>	201
Sins of Omission? The Non-Treatment of Controls in Clinical Trials—II	
<i>G.E.M. Anscombe</i>	219
ANIMAL RESEARCH	225
The Significance of Animal Suffering	
<i>Peter Singer</i>	233
Singer's Intermediate Conclusion	
<i>Frank Jackson</i>	245
On Singer: More Argument, Less Prescriptivism	
<i>David DeGrazia</i>	249
The Case for the Use of Animals in Biomedical Research	
<i>Carl Cohen</i>	253
On the Ethics of the Use of Animals in Science	
<i>Dale Jamieson and Tom Regan</i>	267
GENETIC RESEARCH	303
Genetic Engineering	
<i>Peter Singer and Deane Wells</i>	307
The Genetic Adventure	
<i>Stephen P. Stich</i>	321

What Is Wrong with Eugenics? <i>Robert Wachbroit</i>	329
Human Gene Therapy: Scientific and Ethical Considerations <i>W. French Anderson</i>	337
CONTROVERSIAL RESEARCH TOPICS	351
Forbidden Research: Limits to Inquiry in the Social Sciences <i>Dorothy Nelkin</i>	355
The Intelligence Controversy: The Ethical Problem <i>H.J. Eysenck</i>	371
The Fallacy of Richard Herrnstein's IQ <i>Noam Chomsky</i>	377
Conducting Scientific Research for the Military as a Civic Duty <i>Kenneth W. Kemp</i>	387
Military Funds, Moral Demands: Personal Responsibilities of the Individual Scientist <i>Douglas P. Lackey</i>	397
INDEX	411
ACKNOWLEDGMENTS	415

Ethical Issues in Scientific Research

Science and Values

Is ethics a science? Are any of its hypotheses true? Do we know which ones are true? Skeptics say no, moralists yes, while others, call them “cognitivists,” try to have it both ways. For example, some cognitivists distinguish between moral and other value judgments and hold that only the latter can be known to be true. We can determine, for example, that a certain athlete is a *good* track runner or that one university has a *better* chemistry department, but not be able to prove that athletic discipline itself is a moral virtue or that manipulating experimental data a moral vice. So one need not be skeptical of all values to be skeptical of morality.

Skepticism of moral belief, judgment, and theory is a dominant motif in Western philosophy, at least since David Hume in the eighteenth century. Hume admitted that moralists argue for their moral beliefs just as theists argue for their religious beliefs. But just as religious premises have no support outside of other religious assumptions, so moral premises have no support outside of other moral assumptions. The field of ethics might suitably be compared not to a science but to eighteenth-century metaphysics as described by Immanuel Kant:

We do not find men confident of their ability to shine in other sciences venturing their reputations here, where everybody however ignorant in other matters may deliver a final verdict, as in this domain there is as yet no standard weight and measure to distinguish sound knowledge from shallow talk. (*Prolegomena to Any Future Metaphysics*)

But Kant was not a skeptic; rather, he argued that moral principles could be known through pure reason. Other cognitivists appeal to intuition, arguing that in logic and

mathematics we also rely on intuitions. Others argue that even without special intuitions, we can observe when something is wrong. For example, we can see that torturing a human being is immoral.

Carl Hempel, in his paper "Science and Human Values," criticizes the cognitive approach. Hempel agrees that a hypothetical judgment of value, such as "If our children are to become happy, then it is better to raise them in a permissive manner," can be confirmed by scientific evidence. He denies, however, that this is possible for a categorical judgment, such as "Killing is evil." He claims that such a sentence fails to express an assertion that is either true or false. Despite his moral skepticism, Hempel agrees that the acceptance of scientific judgments presupposes certain value judgments, and that science can play a role in clarifying and resolving problems of moral valuation.

Michael Scriven, in "The Exact Role for Value Judgments in Science," argues that even categorical value judgments can be confirmed. He claims that science itself is essentially evaluative, that the practice of good science requires the evaluation of experimental designs, theories, observations, explanations, and estimates. Science, according to Scriven, is neither value-free nor morally neutral.

Within the broader issue of the relation between science and values is the conflict between consequentialists, those who believe that the morality of an action is determined solely by its effects and deontologists, theorists who believe otherwise. For example, a deontologist would condemn the use of placebos in human experimentation if experimenters have an obligation not to deceive their subjects. By contrast, the utilitarian (a consequentialist who emphasizes social well-being) would overlook the deception if the use of placebos did more good than harm.

Although traditional utilitarian and deontologist approaches seem to conflict, Nicholson, Hare et al. suggest a way for bringing both sides together. At the practical level, the deontologist can appeal to moral principles about people's rights and duties. Thus, an ethics committee can reject a proposal for research that ignores the patient's right to give informed consent. However, at the theoretical level, principles of obligation that

otherwise appear intuitive can conflict. For example, in AIDS research we have a duty to try to help current patients, as well as an obligation to help future victims. But we cannot always do both, especially if helping current patients compromises the interests of future victims, for example, by relaxing experimental standards in order to bring a drug more quickly to market. Here Nicholson, Hare et al. suggest a utilitarian resolution: relax the standards if that would save more lives and relieve more suffering. The problem, however, is, if we are willing to rely on utilitarian standards at the theoretical level, why turn away from those same standards at the so-called practical level? More must be said about the "theoretical/practical" distinction before a genuine resolution can be achieved.

Science and Human Values

Carl G. Hempel

1. The Problem

Our age is often called an age of science and of scientific technology, and with good reason: the advances made during the past few centuries by the natural sciences, and more recently by the psychological and sociological disciplines, have enormously broadened our knowledge and deepened our understanding of the world we live in and of our fellow men; and the practical application of scientific insights is giving us an ever increasing measure of control over the forces of nature and the minds of men. As a result, we have grown quite accustomed not only to the idea of a physico-chemical and biological technology based on the results of the natural sciences, but also to the concept, and indeed the practice, of a psychological and sociological technology that utilizes the theories and methods developed by behavioral research.

This growth of scientific knowledge and its applications has vastly reduced the threat of some of man's oldest and most formidable scourges, among them famine and pestilence; it has raised man's material level of living, and it has put within his reach the realization of visions which even a few decades ago would have appeared utterly fantastic, such as the active exploration of interplanetary space.

But in achieving these results, scientific technology has given rise to a host of new and profoundly disturbing problems:

The control of nuclear fission has brought us not only the comforting prospect of a vast new reservoir of energy, but also the constant threat of the atom bomb and of grave damage, to the present and to future generations, from the radioactive by-products of the fission process, even in its peaceful uses. And the very progress in biological and medical knowledge and technology which has so strikingly reduced infant mortality and increased man's life expectancy in large areas of our globe has significantly contributed to the threat of the "population explosion," the rapid growth of the earth's population which we are facing today, and which, again, is a matter of grave concern to all those who have the welfare of future generations at heart.

Clearly, the advances of scientific technology on which we pride ourselves, and which have left their characteristic imprint on every aspect of this "age of science," have brought in their train many new and grave problems which urgently demand a solution. It is only natural that, in his desire to cope with these new issues, man should turn to science and scientific technology for further help. But a moment's reflection shows that the problems that need to be dealt with are not straightforward technological questions but intricate complexes of technological and moral issues. Take the case of the population explosion, for example. To be sure, it does pose specific technological problems. One of these is the task of satisfying at least the basic material needs of a rapidly growing population by means of limited resources; another is the question of means by which population growth itself may be kept under control. Yet these technical questions do not exhaust the problem. For after all, even now we have at our disposal various ways of counteracting population growth; but some of these, notably contraceptive methods, have been and continued to be the subject of intense controversy on moral and religious grounds, which shows that an adequate solution of the problem at hand requires not only knowledge of technical means of control, but also standards for evaluating the alternative means at our disposal; and this second requirement clearly raises moral issues.

There is no need to extend the list of illustrations: any means of technical control that science makes available to us may be employed in many different ways, and a decision as to what