THE ETHICS OF SCIENCE An Introduction

David B.Resnik



Contents

	Acknowledgments	ix
Chapter 1	Science and Ethics	1
	The Baltimore Affair	5
	Cloning Research	7
	The Debate over Cold Fusion	9
Chapter 2	Ethical Theory and Applications	13
	Ethics, Law, Politics, and Religion	13
	Moral Theory	16
	Moral Choices	21
	Relativism	25
Chapter 3	Science as a Profession	31
	Science: From Avocation to Profession	31
	The Goals of Science	34
	The Contemporary Research Environment	37
	Communication and Science's Peer Review System	40
	The Scientific Method	44
Chapter 4	Standards of Ethical Conduct in Science	48
	Honesty	48
	Carefulness	51
	Openness	52
	Freedom	54
	Credit	55
	Education	56

		vii
	Social Responsibility	57
	Legality	58
	Opportunity	59
	Mutual Respect	60
	Efficiency	60
	Respect for Subjects	61
	Concluding Remarks	61
Chapter 5	Objectivity in Research	66
	Honesty in Research	66
	Misconduct in Science	71
	Error and Self-deception	72
	Bias in Research	75
	Conflicts of Interest	76
	Openness	52
	Data Management	83
Chapter 6	Ethical Issues in Scientific Publication	85
	Objectivity in Publication	85
	Other Publication Issues	89
	Credit Where Credit is Due	91
	Intellectual Property	96
	Science, the Media, and the Public	101
Chapter 7	Ethical Issues in the Laboratory	108
	The Ethics of the Mentor—Mentee Relationship	108
	Harassment	109
	Reporting Misconduct in Science	110
	Teaching vs. Research	111
	Ethical Issues in Hiring and Recruitment	112
	Sharing and Preserving Resources	115
	Research on Human Subjects	117

	Research on Animal Subjects	123
Chapter 8	The Scientist in Society	130
	Social Responsibility	57
	Expert Testimony in Court	134
	Industrial Science	137
	Military Science	143
	The Public Funding of Research	148
	Other Social, Political, and Moral Issues	151
	Postscript: Toward a More Ethical Science	153
	Appendix: Case Studies	158
	Notes	175
	Bibliography	181
	Index	193

Acknowledgments

I would like to thank the following people for comments on drafts of this book: David Hull, Scott O'Brien, W.H.Newton-Smith, Marshall Thomsen, and several anonymous reviewers. I would also like to thank the following people for comments and criticism: Stephanie Bird, Ron Canterna, Michael Davis, Clark Glymour, Alvin Goldman, Susanna Goodin, Fred Grinnell, Michael Harkin, A.C.Higgins, Dale Jamieson, Audrey Kleinsasser, Helen Longino, Claudia Mills, Kenneth Pimple, Michael Resnik, Geoffrey Sayre McCord, Ed Sherline, Linda Sweeting, Robert Switzer, and my class on ethical issues in scientific research which I taught at the University of Wyoming in the Spring of 1996. I also would like to mention that the National Science Foundation helped to provide partial through grants SBR-960297, SBR-9511817, for this work SBR-9223819, and AST-9100602.