Is it permissible to use a human embryo in stem cell research, or in general as a means for benefit of others? Acknowledging each embryo as an object of moral concern, Louis M. Guenin argues that it is morally permissible to decline intrauterine transfer of an embryo formed outside the body, and that from this permission and the duty of beneficence, there follows a consensus justification for using donated embryos in service of humanitarian ends. He then proceeds to show how this justification commands assent even within moral and religious views commonly thought to oppose embryo use. Beneath his moral reasoning lies a carefully constructed metaphysical foundation incorporating accounts of the ontology of development, embryos, and species. He also incisively discusses nonreprocloning, reprocloning, ectogenesis, and related scientific frontiers. This compelling philosophical study will interest all concerned to understand virtue and obligation in the relief of suffering.

*Louis M. Guenin* is Lecturer on Ethics in Science, Department of Microbiology and Molecular Genetics, Harvard Medical School.
THE MORALITY OF EMBRYO USE

LOUIS M. GUENIN
© Louis M. Guenin 2008

This publication is in copyright. Subject to statutory exception and to the provisions of relevant collective licensing agreements, no reproduction of any part may take place without the written permission of Cambridge University Press.

First published 2008

Printed in the United Kingdom at the University Press, Cambridge

A catalogue record for this publication is available from the British Library

Library of Congress Cataloguing in Publication Data
Guenin, Louis M., 1950–
The morality of embryo use / Louis M. Guenin.
p. ; cm.
Includes bibliographical references and index.

Cambridge University Press has no responsibility for the persistence or accuracy of URLs for external or third-party internet websites referred to in this publication, and does not guarantee that any content on such websites is, or will remain, accurate or appropriate.
# Contents

**Preface** ix

1 **Preliminaries** 1
   1.1 Embryo use 2
   1.2 The biological context 4
   1.3 Affected beings and utilitarianism 10
   1.4 A computational Waterloo 17

2 **Epidosembryos** 21
   2.1 The universe of concern 21
   2.2 The set of eligible subjects 27
   2.3 The argument from nonenablement 29
      (a) Developmental potential and discretionary action 29
      (b) Permissibility of declining intrauterine transfer 31
      (c) Collective redistribution indefensible 43
      (d) No possible person corresponds to an epidosembryo 44
      (e) Epidosembryo personhood untenable 45
      (f) Fulfilling the collective duty of beneficence 47
   2.4 Other defenses of embryo use distinguished 50
   2.5 Two subsets, one justification 53
   2.6 Replies to objections relating to potential 54
   2.7 In service of humanitarian ends 57

3 **Individuation** 59
   3.1 The ontological challenge 59
   3.2 Identity 62
   3.3 Understanding individuation 63
   3.4 Arguments against early embryonic individuality 68
      (a) Demanding indivisibility 68
      (b) Embryo splitting and personal identity 73
      (c) Totipotency of blastomere components 76
   3.5 Divisibility and personhood 77
   3.6 Individuality further considered 81
(a) Individuality within alternative ontologies 81
(b) Categories and kinds of creatures 86
(c) The embryo as organism 92
(d) Other resources 96
3.7 Where matters remain 97

4 Respect for specific life 99
4.1 The species problem 100
4.2 Species as universals 102
4.3 Species as structures 104
4.4 Properties 113
(a) Kripke’s causal theory of reference 113
(b) Putnam’s theory of reference 118
(c) Homeostatic property cluster natural kinds 120
(d) Essentialism for species-corresponding kinds 122
4.5 Taxa 123
4.6 Bearers of morally crucial properties 126
4.7 Species partiality 130
4.8 Inferences within theistic ethics 136

5 Consensus 140
5.1 Public reason 141
5.2 Kantian morality 149
5.3 The Catholic magisterium 153
(a) Two doctrines 153
(b) The first nineteen centuries 155
(c) Assertion of immediate animation 158
(d) Prescinding from the timing of animation 159
5.4 Arguments concerning personhood 159
(a) From genome to person 162
(b) Lack of a nonarbitrary beginning 165
(c) Possibility of a soul 167
5.5 Support for epidosembryo use 170
(a) The social duties 170
(b) Inferring divine will 172
(c) Charity and assisted reproduction 173
(d) Escape from a dilemma 176
(e) Protecting a related stance 177
5.6 Recognizing common ground 179

6 Clones 181
6.1 Nonreprocloning 181
6.2 The teleological objection 184
6.3 Reprocloning 187
(a) Hazards 188
## Contents

(b) Nonsafety objections 191  
(c) Considering probable incidence 195  
(d) Assessing the objections 205  
(e) Prohibition and privacy 209  
6.4 Strategic prohibition of nonreprocloning 211  

### 7 Analyzing alternatives  
7.1 Putative noncomplicity 214  
7.2 Studying the developed human 217  
7.3 Procuring pluripotent cells 221  
7.4 Parthenotes 228  

### 8 Shaping norms  
8.1 Gifts and consents 231  
8.2 Public support 234  
8.3 Oocyte contributions 235  
8.4 Ectogenesis 244  
8.5 Hybrids and chimeras 248  
8.6 Pleonexia and patents 252  

**Bibliography** 259  
**Index** 269
I am concerned in this study with a moral controversy precipitated by recent scientific advances. Human ingenuity has envisioned procedures in which scientists and physicians would use human embryos in the course of attempts to overcome human disease and disability. Embryo use is the general practice of which embryonic stem cell research is a special case. As we think about the propriety of this practice, it soon appears that we must adapt our moral machinery to deal with fundamental questions about what constitutes one of us. I began this project when I glimpsed what seemed to me the grounds of a stable moral consensus. I therefore set to work on the assumption that it is feasible to construct an account that compels assent across the gamut of pertinent moral views, and in particular within views usually thought to oppose all embryo use. Mindful of those many who suffer from maladies that might yield to treatments consequent on embryo use, the motivation for this inquiry could not be more compelling.

I have been aided by the work of many philosophers to whom my debts will be apparent from the text. For their generosity in discussions over the course of the research, I am grateful to Stephen L. Darwall, E. J. Lowe, and Allen W. Wood. For illuminating conversations, comments on portions of the manuscript, and correspondence, I also thank Dagfinn Follesdal, Jorge J. E. Gracia, David L. Hull, Joshua Hoffman, Christine M. Korsgaard, Brian F. Loar, Trenton Merricks, Alvin Plantinga, Melinda A. Roberts, Michael Ruse, Israel Scheffler, Barry Smith, and James Van Cleve. My understanding of pertinent scientific and medical matters has been aided by the guidance of Jonathan R. Beckwith, Merle J. Berger, Jonathan H. Blum, George Q. Daley, Ralph E. Dittman, John D. Gearhart, Stanley R. Glasser, Ann A. Kiessling, M. William Lensch, Paul H. Lerou, Stephanie Mel de Fontenay, R. Douglas Powers, Catherine Racowksy, Jayaraj Rajagopal, Eric J. Rubin, Gerald P. Schatten, Evan Y. Snyder, Ayalew Tefferi, and Thomas Zwaka. In envisioning probability density functions as representative of the extent of developmental potential of embryos in various situations,
Preface

I have learned much from Kevin A. Rader and Michal R. Zochowski, as well as from George DeMuth, Steven R. Finch, Oliver Knill, A. David Wunsch, and Jens C. Zorn. I thank the audiences before whom I have given talks at Schepens Eye Research Institute (whose invitation from Kenneth J. Trevett stimulated my interest), Harvard University, The Mayo Clinic, International Society for Cellular Therapy, International Society for Stem Cell Research, The George Washington University, The Burnham Institute, The Salk Institute, Brandeis University, Los Angeles Biomedical Research Institute, Genetics Policy Institute, Baylor College of Medicine, Stanford University, Children’s Hospital Boston, and the University of Miami. I have benefited as well from discussions with my seminar students at Harvard Medical School. I am grateful to two anonymous reviewers for Cambridge University Press for their insightful comments. For both her thoughts and encouragement, I thank Erin V. Lehman.

I mention the following about the plan of the book, this especially for general readers interested in the controversy over embryonic stem cell research. The argument in chief, the argument from nonenablement, is set forth in Chapter 2. The analyses in Chapter 3 of individuality of the twinnable, and in Chapter 4 of respect for life forms sorted by taxa, enter into topics in metaphysics and the philosophy of science wherein arise some of the most philosophically interesting issues that I discuss. The general reader who prefers to take their moral controversy without metaphysics may pass lightly over Chapters 3 and 4 at no detriment to comprehension of what follows. Chapter 5 describes how the argument from nonenablement takes hold within influential views assumed or declared to be opponents of embryo use. Chapters 6–8 delve further into the scope of embryo use and related practices, this in respect of avenues of research and therapy, putative alternatives to embryo use, and the construction of norms.


By means of this work, I hope to contribute to the formation of a moral consensus that will foster efficacious means for the relief of suffering.