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EMBRYONIC STEM CELL RESEARCH AS AN ETHICAL ISSUE: ON THE EMPTINESS OF SYMBOLIC VALUE

KEVIN P. QUINN, S.J., J.D.*

I

The debate over *human* embryonic stem cell research—scientific and clinical prospects as well as ethical implications—became front-page news only after two teams of university researchers reported in November 1998 that they had isolated and cultured human pluripotent stem cells.¹ The discovery caused a flurry of excitement among patients and researchers and drew attention from President Clinton, who instructed the National Bioethics Advisory Commission (NBAC) to “conduct a thorough review of the issues associated with . . . human stem cell research, balancing all medical and ethical issues.”²

The allure of stem cells is undeniable. Just listen to the journal *Science* on the promise of “regenerative medicine:”³

Heals all manner of ailments, unlimited quantities, tailor-made for you . . . No, it’s not an advertisement for snake oil but may represent the promise of stem cells - cells that have the potential to produce various replacements for tissues damaged by age, trauma, or disease.⁴

Twenty years’ research on embryonic stem (ES) cells, particularly in mice, suggests that, as a renewable source of replacement cells and tissue, human stem cells could be useful in treating a variety of conditions, including Parkinson’s and Alzheimer’s diseases, diabetes, and spinal cord injuries. These cells hold such great promise for advances in health care

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1. See 1 NAT’L BIOETHICS ADVISORY COMM’N, ETHICAL ISSUES IN HUMAN STEM CELL RESEARCH, REPORT AND RECOMMENDATIONS 1 (September 1999) [hereinafter NBAC REPORT, VOL. I].

2. See Letter to President Clinton from the Nat’l Bioethics Advisory Comm’n (Sept. 7, 1999) [hereinafter Letter to President Clinton], quoting Letter to the Nat’l Bioethics Advisory Comm’n from President Clinton (Nov. 14, 1998), in NBAC REPORT, VOL. I, *supra* note 1.

3. Nicholas Wade, *Teaching the Body to Heal Itself*, N.Y. TIMES, Nov. 7, 2000, at D1, quoting Dr. William Haseltine, Chief Executive of Human Genome Sciences.

4. Pamela J. Hines et al., *Stem Cells Branch Out*, 287 SCIENCE 1417 (2000).

because they have the potential to grow into any cell in the body and can proliferate indefinitely.⁵ But research on human ES cells did not become possible until researchers, using technology developed by specialists at *in vitro* fertilization clinics, managed to isolate them from the blastocyst of an early human embryo and keep them growing in a petri dish.⁶ Scientists have also isolated and cultured human embryonic germ (EG) cells, which are derived from primordial gonadal tissue obtained from cadaveric fetal tissue.⁷

The ability to generate a wide variety of stem cell lines (in relatively renewable tissue cultures) opens up a whole new world of breathtaking possibilities for science and medicine. The possibilities include: “*in vitro* studies of normal embryo-genesis, human gene discovery, and drug and teratogen testing and as a renewable source of cells for tissue transplantation, cell replacement, and gene therapies.”⁸ But it also opens up a world of complications.

Human EG and ES cells must be recovered from aborted fetuses or live embryos. Because primordial gonadal tissue is removed from fetuses after their death, the derivation of EG cells from aborted fetuses does not cause their death. There are ethical concerns of complicity in the abortion itself, but these are not discussed here.⁹ More important and more relevant for our purposes, obtaining stem cells from human embryos inescapably kills them. As the *New York Times* put it: “Where some see destruction of life, others see lives being saved.”¹⁰

5. On the science and potential applications of pluripotent stem cells, see I NBAC REPORT, *supra* note 1, at 7; Nat'l Inst. Health, *Stem Cells: A Primer*, May 2000, at <http://www.nih.gov/news/stemcell/primer.htm> (last visited Feb. 13, 2001); see also Nat'l Inst. Health, Institutes and Centers, *Answers to the Question: "What would you hope to achieve from human pluripotent stem cell research?"* at <http://www.nih.gov/news/stemcell/achievec.htm> (last visited Feb. 13, 2001).

6. See James A. Thomson et al., *Embryonic Stem Cells Derived from Human Blastocysts*, 282 *SCIENCE* 1145 (1998).

7. See Michael J. Shamblo et al., *Derivation of Pluripotent Stem Cells from Cultured Human Primordial Germ Cells*, 95 *PROC. NAT'L ACAD. SCI. USA* 13726 (1998), at <http://www.pnas.org/cgi/content/full/95/23/13726>.

8. NBAC REPORT, VOL. I, *supra* note 1, at 23.

9. On the issue of moral complicity in fetal tissue research, see NBAC REPORT, VOL. I, *supra* note 1, at 45. See also NAT'L INST. HEALTH, *REPORT OF THE HUMAN FETAL TISSUE TRANSPLANTATION RESEARCH PANEL 1-5* (December 1988). On cooperation and complicity with evil in Catholic moral theology, see Daniel C. Maguire, *Cooperation with Evil*, in *WESTMINSTER DICTIONARY OF CHRISTIAN ETHICS* 129 (James F. Childress & John Macquarrie eds., 1986); see also M. Cathleen Kaveny, *Appropriation of Evil: Cooperation's Mirror Image*, 61 *THEOLOGICAL STUD.* 280 (2000).

10. Sheryl Gay Stolberg, *Stem Cell Research Advocates in Limbo*, *N.Y. TIMES*, Jan. 20, 2001, at A11 (editors' box summary).

Jumping into a now public controversy, the NBAC held stem cell meetings around the country and compiled testimony from clerics and philosophers, scientists and doctors, lawyers and sociologists. Focusing “particular attention on the ethical questions relevant to federal sponsorship of research involving [ES] cells and [EG] cells,”¹¹ the NBAC report, *Ethical Issues in Human Stem Cell Research* (submitted in September 1999), recommended that federally funded stem cell work should go forward, with important restrictions.¹² Only research involving the derivation and use of (1) human ES cells from embryos remaining after infertility treatments (“spare” embryos) and (2) human EG cells from cadaveric fetal tissue should be eligible for federal funding.¹³ Judged unacceptable for funding is research involving the derivation and use of human ES cells from embryos made (1) solely for research purposes using IVF (research embryos)¹⁴ or (2) using somatic cell nuclear transfer into oocytes.¹⁵

To permit some federal funding of ES cell research would have required a change in current federal law but for a technical legal distinction endorsed by the Department of Health and Human Services (DHHS). Current law prohibits the National Institutes of Health (NIH) from funding the creation of research embryos and research in which embryos are destroyed.¹⁶ In January 1999, however, DHHS legal counsel issued a controversial opinion to the NIH Director ruling that federal funding for research with ES cells derived from embryo destruction in the private sector (i.e., without federal funds) would be permissible.¹⁷ Last August, NIH issued guidelines to govern this research. These guidelines describe in detail the scientific and ethical criteria that research proposals must meet to receive government funds.¹⁸ In brief, publicly funded research on ES cells

11. Letter to President Clinton, *supra* note 2.

12. See NBAC REPORT, VOL. I, *supra* note 1, at 68.

13. *Id.*

14. *Id.* at 71.

15. *Id.* at 72.

16. See Consolidated Appropriations Act of 2000, Pub. L. No. 106-554, § 510(a), 114 Stat. 2763, 2764 (2000). A similar prohibition has been included in appropriation bills for DHHS activities since 1996. See Ellen J. Flannery & Gail H. Javitt, *Analysis of Federal Laws Pertaining to Funding of Human Pluripotent Stem Cell Research*, in 2 NAT'L BIOETHICS ADVISORY COMM'N, ETHICAL ISSUES IN HUMAN STEM CELL RESEARCH, COMMISSIONED PAPERS D-1, D-6 (January 2000) (citing to official session laws) [hereinafter NBAC REPORT, VOL. II]

17. See Memorandum from Harriet S. Rabb, General Counsel, DHHS, to Harold Varmus, M.D., Director, NIH (Jan. 15, 1999), *construed in* Flannery & Javitt, *supra* note 17, at D-6 to D-9. DHHS also concluded that federal funding was not prohibited for research using stem cells derived from nonliving fetuses. See *id.* at D-3.

18. See generally Nat'l Inst. of Health Guidelines for Research Using Human Pluripotent Stem Cells, 65 Fed. Reg. 51,976 (Aug. 25, 2000) (corrected by 65 Fed. Reg. 69,951 (Nov. 21,

will be allowed so long as researchers obtain the stem cells from privately funded sources, and those cells are derived only from “extra” frozen embryos left over after infertility treatments.¹⁹ The health institutes are soliciting grant applications, with the first submissions due in March 2001.²⁰

II

To permit federally funded research on already established stem cell lines derived from spare embryos by privately funded investigators is a political and pragmatic solution to “embryo research gridlock.”²¹ That policy, however, may render the serious moral considerations attributed to early human embryos—a view taken by several important official bodies²²—morally meaningless. Embryos will be treated merely as replenishable resources and, in this context, talk of “respect” invoked to constrain research is deeply misleading. Bonnie Steinbock is right: “Unless we can give a convincing account of ‘special respect’ [for embryos as a form of human life], the suspicion will remain in many minds that this phrase merely allows us to kill embryos and not feel so bad about it.”²³ Is that the case here?

One clear starting point in the debate about the ethics and policy of stem cell research is the moral status of the early human embryo. There are basically three views of this question. One view locates the beginning of human personhood, and thus the claim of full moral status, at conception—the point where one’s individual genome is set. Indisputably human, early

2000)), at <http://www.nih.gov/news/stemcell/stemcellguidelines.htm> (last visited Feb. 13, 2001) [hereinafter Guidelines]; see also Approval Process for the Documentation of Compliance with NIH Guidelines on the Use of Human Pluripotent Stem Cells in NIH Intramural Research, at http://www.nih.gov/news/stemcell/irpnotice_011601.htm (Jan. 16, 2001) (last visited Feb. 13, 2001) [hereinafter Approval Process].

19. See Guidelines, *supra* note 18, at 51,979.

20. See Approval Process, *supra* note 18. The Bush administration, however, has postponed NIH’s review of these grant applications until DHHS completes a review of its earlier ruling that federal funds could be used to do research on ES cells, but not to derive them. See Nicholas Wade, *Grants for Stem Cell Work are Delayed*, N.Y. Times, April 24, 2001, at <http://www.nytimes.com/2001/04/24/health/24STEM.html?searchpv=site01>.

21. George J. Annas, *How to Utilize Embryos*, NAT’L L.J., Sept. 25, 2000, at A21.

22. See e.g., ETHICS ADVISORY BD, DEP’T OF HEALTH, EDUC. AND WELFARE [HEW], REPORT AND CONCLUSIONS: HEW SUPPORT OF RESEARCH INVOLVING HUMAN IN VITRO FERTILIZATION AND EMBRYO TRANSFER (May 4, 1979); MARY WARNOCK, A QUESTION OF LIFE: THE WARNOCK REPORT ON HUMAN FERTILIZATION AND EMBRYOLOGY (1985); NAT’L INST. HEALTH, REPORT OF THE HUMAN EMBRYO RESEARCH PANEL (September 1994) [hereinafter HERP REPORT].

23. Bonnie Steinbock, *Respect for Human Embryos*, in CLONING AND THE FUTURE OF HUMAN EMBRYO RESEARCH 21, 28 (Paul Lauritzen ed., 2001).

embryos “have all the rights of any human being, including the right to life and the general Kantian right not to be used as a ‘mere means’ to others’ ends.”²⁴ Those who affirm such a position characteristically oppose research on early human embryos as violating the dignity of the embryo. A second view holds that as the embryo develops (from blastocyst to fetus and beyond) so too does moral status grow (although proponents differ on when exactly full moral status is reached). On this understanding, the early embryo is vested with negligible moral value and, “[a]s a cluster of developing cellular materials, the embryo is an ‘object’ for medical research and manipulation.”²⁵

Were we to grant the unremarkable assertion that we cannot determine what the human embryo is, or that “personhood” is a matter of definition rather than biological fact, based on socially constricted norms, we would still need to capture in some interpretive overlay our intuitive sense that a human embryo is, after all, different. To this end, an intermediate view on our understanding of the embryo’s moral status has emerged,²⁶ and the 1994 NIH Human Embryo Research Panel (HERP) Report²⁷ is an obvious point of departure.

The HERP Report identified certain areas of research, including ES cell research, as acceptable for federal funding with spare embryos,²⁸ and also approved the creation of research embryos when essential to carry out research “that is potentially of outstanding scientific and therapeutic value.”²⁹ These recommendations were never implemented.³⁰

In concluding that certain areas of research are permissible, the panel assessed the moral status of the early embryo from various viewpoints and fashioned an intermediate view. According to this view, despite not having “the same moral status as an infant or child,” the embryo warrants “moral respect” or “serious moral consideration as a developing form of human life.”³¹ The NBAC Report on stem cell research likewise agrees that “human embryos deserve respect as a form of human life.”³²

24. *Id.* at 21.

25. Courtney S. Campbell, *Source or Resource? Human Embryo Research as an Ethical Issue*, in *CLONING AND THE FUTURE OF HUMAN EMBRYO RESEARCH* 34 (Paul Lauritzen ed., 2001).

26. *See id.*

27. *See* HERP REPORT, *supra* note 22.

28. *See id.* at xvii.

29. *Id.* at xviii.

30. Since 1996, Congress had blocked use of federal funds for all embryo research. *See supra* note 16 and accompanying text.

31. HERP REPORT, *supra* note 22, at x.

32. NBAC REPORT, VOL. I, *supra* note 1, at ii.

Thus, the intermediate view “claims that research on the human embryo is an ethical issue.”³³ To affirm that the early embryo is worthy of moral respect, as Courtney Campbell writes;

makes research on the embryo an ethical and policy question and not only a scientific or technical concern The moral claim provides a framework for both justification and limitation of embryo research. Such research can be justified because of the possible human benefits, but it also must be justified and limited in recognition of the embryo’s status of deserving serious moral consideration.³⁴

Still, giving meaning to the concept of “serious moral consideration” remains problematic.

“Controversies over embryo research . . . are primarily fights over symbolic issues,”³⁵ argues John Robertson. In his view, embryos are a “potent symbol of human life”³⁶ and for that reason have moral value and respect, even though they lack interests, rights, and therefore moral status. The distinction here between moral status and moral value—between intrinsic and symbolic valuation of the embryo—is important. It shapes much of the debate over embryo research and is assumed in the HERP Report.³⁷ “[T]o have moral status is to possess interests that exert claims on the behavior of others. To accord moral status is to recognize the interests of a being as morally obligating.”³⁸ But to acknowledge the moral value of an entity is simply “to talk about its moral significance, which stems from its connection with a value that is clearly moral.”³⁹ In the case of an embryo that value is respect for the *intrinsic* value of life. That is, the value of life is “something in and of itself, independent of its results for or relations to ourselves or other persons.”⁴⁰

Ronald Dworkin makes a similar distinction. In his effort to redefine the national abortion debate and to show what is truly at stake, Dworkin distinguishes between “derivative” and “detached” grounds for protecting human life.⁴¹ The derivative objection to abortion “presupposes and is

33. Campbell, *supra* note 25, at 35.

34. *Id.* at 44-45.

35. John A. Robertson, *Symbolic Issues in Embryo Research*, HASTINGS CENTER REP., Jan.-Feb. 1995, at 37.

36. *Id.*

37. HERP REPORT, *supra* note 22, at 35.

38. Maura A. Ryan, *Creating Embryos for Research: On Weighing Symbolic Costs*, in CLONING AND THE FUTURE OF HUMAN EMBRYO RESEARCH 50, 53 (Paul Lauritzen ed., 2001).

39. Steinbock, *supra* note 23, at 29.

40. John C. Fletcher, *Deliberating Incrementally on Human Pluripotential Stem Cell Research*, in NBAC REPORT, VOL. II, *supra* note 17, at E-29.

41. RONALD DWORIN, LIFE’S DOMINION: AN ARGUMENT ABOUT ABORTION, EUTHANASIA, AND INDIVIDUAL FREEDOM 11 (1993).

derived from rights and interests that it assumes all human beings, including fetuses, have.”⁴² These rights begin with a right not to be killed. On this basis, “government has a derivative responsibility to protect a fetus.”⁴³ The detached objection “does not depend on or presuppose any particular rights or interests.”⁴⁴ Rather, “abortion is wrong in principle because it disregards and insults the intrinsic value, the sacred character, of any stage or form of human life because it disregards and insults the intrinsic value, the sacred character, of any stage or form of human life.”⁴⁵ On that basis, “government has a detached responsibility for protecting the intrinsic value of life.”⁴⁶

The implications of Dworkin’s distinction for embryos and stem cell research should be clear: the serious moral consideration due embryos is detached (as respecting the intrinsic value of human life) and not derivative (as based on their status as rights-holders). Both Robertson and the NBAC would concur in this formulation. It does legitimize ethical scrutiny of the treatment of the embryo, but the objection may be made: If the vital interests of real persons trump over all other moral considerations—the benefits of destructive research with embryos always outweigh whatever symbolic (or detached) costs arise, is the metric of respect owed embryos set too low? Have we fallen into the blunder of achieving medical wonders and progress at the expense of humanity?

III

The mantra of “respect” invoked to constrain embryo research serves to camouflage a distressingly narrow view of things. As my earlier comments indicate, I would judge the success of this effort as slight. It is important at least to note two major deficiencies that require genuine responses rather than enthusiastic apologies from official bodies and commentators supporting embryo research.

One major issue is whether the language of “respect” used by both the HERP and the NBAC is “merely a political facade used to disguise and make publicly palatable scientific interests in having access to embryos for research.”⁴⁷ For if any research purposes can justify the destruction of embryos, in what sense are they being shown “serious moral

42. *Id.*

43. *Id.*

44. *Id.*

45. *Id.*

46. See DWORKIN, *supra* note 41.

47. Campbell, *supra* note 25, at 40.

consideration?" The very idea appears empty.

Supporters of embryo research counter that "respect is shown . . . by allowing such research only when good reasons exist for engaging in it and an institutional, or even national, review process to assess those reasons has been implemented."⁴⁸ As Steinbock explains: Only "research likely to result in significant benefit to people . . . demonstrates respect."⁴⁹ This approach, in fact, appears as nothing less than an effort to ground public research policy in conditional possibilities without providing a moral calculus for mediating the claims of research against the "moral weight" of the embryo.⁵⁰ Daniel Callahan is right: "Simply projecting possible good consequences of research hardly constitutes . . . a defense."⁵¹

The proper "weighing of the symbolic"⁵² is a second issue. For Robertson and others, what is at stake with the rhetoric of "respect" is "about what cost in foregone knowledge should be tolerated to demonstrate the respect for human life that limiting embryo research symbolizes."⁵³ He also concedes that marking embryos with "symbolic importance" is an effort "to show some deference to those who oppose any embryo research."⁵⁴ Note that the symbolic nature of respect functions negatively,⁵⁵ and in the end "marginaliz[es] 'symbolic issues' in the development of [embryo research] policy."⁵⁶ Is this something that should concern us? I remain unsettled.

A worry Maura Ryan advances is important here. She reminds us: "Symbols express and shape the deepest levels of human experience, the most crucial matters of human society. To overlook or dismiss the symbolic is to 'cut ourselves off from what is most important in the life of human beings who are, after all, symbol-making animals.'"⁵⁷ In the case of embryo research, marginalizing "the symbolic evades what is really at

48. John A. Robertson, *Ethics and Policy in Embryonic Stem Cell Research*, 9 KENNEDY INST. ETHICS J. 109, 131 (1999).

49. Steinbock, *supra* note 23, at 30.

50. See Daniel Callahan, *The Puzzle of Profound Respect*, HASTINGS CENTER REP., Jan. - Feb. 1995, at 39.

51. Daniel Callahan, *Letter to the Editor*, HASTINGS CENTER REP., May - June 1995, at 5. (replying to Hogan and Green's criticism of Callahan's *The Puzzle of Profound Respect*, *supra* note 50).

52. Ryan, *supra* note 38, at 55.

53. Robertson, *Symbolic Issues in Embryo Research*, *supra* note 35, at 37.

54. Robertson, *Ethics and Policy in Embryonic Stem Cell Research*, *supra* note 48, at 120.

55. See James Keenan, S.J., *Casuistry, Virtue, and the Slippery Slope: Major Problems with Producing Human Embryonic Life for Research Purposes*, in CLONING AND THE FUTURE OF HUMAN EMBRYO RESEARCH 67, 76 (Paul Lauritzen ed., 2001).

56. See Ryan, *supra* note 38, at 51.

57. *Id.* at 55, quoting GILBERT C. MEILAENDER, *BODY, SOUL AND BIOETHICS* 87 (1995).

stake in conflicts over where to draw the line.”⁵⁸ As Ryan suggests, this is a serious mistake.

In sum, the sincerity of the commitment to respect human embryos is inauthentic and the adequacy of the criteria used in weighing competing values is suspect. Research needs inevitably take precedence over the respect due embryos. Must this always be the case? To answer, we must first resuscitate the question of what it means to respect human embryos.

IV

Even when there is agreement that the early embryo, though not morally comparable to a person with rights, has moral value and respect, to approximate a true metric of this respect remains a vexing issue. Yet, as we engage the human embryo—deriving and using stem cells from spare, research, or cloned⁵⁹ early embryos—the matter of its status is unavoidable. For now, what is important is how to open up public discussion, to expand the range of what is taken to be morally important, and to ask what is the early embryo’s proper station in the moral universe.

There is a necessary place in public debate for perspectives that challenge the dominant view on our understanding of the embryo’s moral status. The limits of this essay permit me to frame only one. To “reverence” rather than to “value” early embryos is a more intuitively appealing paradigm.⁶⁰ The attitude of reverence is one not of evaluation but of deference. For the human embryo itself matters, not what goes into it.⁶¹ A better way of measuring the intrinsic worth of the early embryo is to

58. Ryan, *supra* note 38, at 55.

59. In January 2001, the British House of Lords approved new legislation permitting “therapeutic cloning”—the cloning of human embryos for research, but not for reproductive purposes. The measures will allow researchers to derive and use embryonic stem cells from cloned embryos up to fourteen days old. See *Lords Support Embryo Cloning Research*, at <http://www.bbc.co.uk/hi/english/sci/tech/newsid> (last visited Feb. 13, 2001). The NBAC had earlier judged this option unacceptable for federal funding. See NBAC REPORT, VOL. I, *supra* note 1, at 72.

60. The notion of “reverence” is from Richard Stith, *On Death and Dworkin: A Critique of His Theory of Inviolability*, 56 MD. L. REV. 289 (1997). Stith’s article focuses on Dworkin’s pivotal idea in *Life’s Dominion*, DWORKIN, *supra* note 41: “the inviolability of human life is a function of the value of the creative efforts invested in it. Arguing that this notion is both unfortunate and erroneous, [Stith] proposes an alternative understanding of life’s inviolability, one founded on respect for the human image or form.” Stith, at 292-93. To respect or reverence life “is an entirely separate stance, unrelated to value,” *id.* at 297, and a better way, both descriptively and normatively, of measuring the sanctity of prenatal life. See *id.* at 347-58.

61. In saying that human life is not something added to, I mean to reject Dworkin’s investment-based theory of inviolability—“The life of a single human organism commands respect and protection, then, no matter in what form or shape, because of the complex creative investment [both natural and human] it represents . . .” DWORKIN, *supra* note 41, at 84. On this

look at the wonder it elicits. Where value-language invites inegalitarian judgments of comparative value—to evaluate and so to devalue those embryos we might destroy, reverence—language ensures that embryos are seen as quasi-subjects that lay a claim on us rather than objects for manipulation. Put within a perspective of reverence, “the embryo is a life source before it is a research resource Thus, ethical justification is required of scientific proposals to transform the embryo’s status to that of resource.”⁶² Affording the embryo’s symbolic worth real bite, this view meets the challenge⁶³ of more properly weighing the symbolic in embryo research. Reverence does not require (embryonic) preservation at all costs, but it does raise the bar.

At a minimum, an ethic that demands reverence for human embryonic life will require that other, less morally controversial alternatives, such as the use of adult stem cells,⁶⁴ be explored first. Courtney Campbell labels this “a criterion of ‘last resort’ with respect to human embryos. [Embryos] should not be a first or intermediate resort simply because they can be easily obtained, are more scientifically interesting, or are a means to winning a research race within the scientific community.”⁶⁵ Reverence for embryos as a form of human life does not rule out using embryos in important research, yet creating research embryos is different, in a moral sense, than the experimental use of spare embryos and is deeply troubling under this ethic. It insults our communal sense of reverence. In terms of how embryos may ethically be used, “[a]we, wonder, and experience of mystery need to stand behind and permeate ongoing research”⁶⁶ With an attitude of reverence is a better way, I submit, to proceed with embryo research.

V

Always eloquent Ronald Dworkin reminds us: “The greatest insult to

see Stith, *supra* note 60, at 328-47 (critiquing Dworkin’s theory).

62. Campbell, *supra* note 25, at 47.

63. On the nature of the challenge, see Ryan, *supra* note 38, 53-4 and accompanying text.

64. Research with stem cells obtained from children and adults, e.g., blood stem cells, would not require the destruction of human embryos. While a consensus in the scientific community insists “because important biological differences exist between embryonic and adult stem cells, this source of stem cells should not be considered an alternative to ES and EG cell research,” 1 NBAC REPORT, *supra* note 1, at ii, some researchers dissent. See, e.g., Do No Harm: The Coalition of Americans for Research Ethics (reporting advances in adult stem cell research and arguing for the moral significance of that research alternative), at <http://www.stemcellresearch.org/index.html> (last visited Feb. 13, 2001). On the current science of adult stem cells, see Nat’l Inst. Health, Stem Cells: A Primer, *supra* note 6, at 4-5.

65. Campbell, *supra* note 25, at 48.

66. *Id.* at 46.

the sanctity of life is indifference or laziness in the face of its complexity.”⁶⁷ The rhetoric of therapeutic medicine on the prospects of stem cell research is strong and unequivocal. Rather than paying lip service to the idea of respect for embryos, we need to accommodate a fuller and thicker picture of the embryo, to respond to the deep moral reservations about embryo research held by many Americans, and to shift the paradigm for public discussion on such research. In short, we need to give serious “recognition to the fundamental wonder of [human] life itself,”⁶⁸ and so to escape the charge of moral indifference.

67. DWORKIN, *supra* note 41, at 240.

68. Campbell, *supra* note 25, at 46.

