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Causative vs. Beneficial Complicity in the Embryonic Stem Cell Debate

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I. INTRODUCTION

A new avenue for treating disease opened in 1998 when scientists at the University of Wisconsin and Johns Hopkins University succeeded in culturing human embryonic stem ("ES") cells in the laboratory.[1] As precursors of all types of cells in the body, access to ES cells could lead to treatments for diseases affecting millions of persons, including diabetes, Parkinson's, Alzheimer's, cardiovascular disease, and many other illnesses.[2] Reaching that goal, however, will require a considerable amount of research with embryos or their components. It will also require resolving the ethical, legal, and policy issues which embryo research poses.

Embryonic stem cells are derived from the inner cell mass of the blastocyst prior to implantation in the uterus. Removal of the ES cells destroys the ability of that embryo to develop further as a individual. ES cells are pluripotent and capable of forming all tissues of the body. But they are not totipotent—they cannot themselves develop into new individuals—and they are not embryos.[3]

The main source currently for embryonic stem cells are embryos created by couples undergoing in vitro fertilization ("IVF") who donate un-

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[1] James A. Thomson et al., *Embryonic Stem Cell Lines Derived from Human Blastocysts*, 282 SCIENCE 1145, 1145 (1998); Michael J. Shamblott et al., *Derivation of Pluripotent Stem Cells from Cultured Human Primordial Germ Cells*, 95 PROC. NAT'L ACAD. SCI. 13726, 13726-13731 (1998), *available at* http://www.arc.ucla.edu/BiolChem/Tim_Lane/login/StemCell_pdf%20files/Shamblott.pdf (last visited Feb. 28, 2004) (on file with the Connecticut Law Review).

[2] *See* Gabriel S. Gross, *Federally Funding Human Embryonic Stem Cell Research: An Administrative Analysis*, 2000 WIS. L. REV. 855, 855-56 (2000).

[3] NAT'L INST. OF HEALTH, STEM CELLS: SCIENTIFIC PROGRESS AND FUTURE RESEARCH DIRECTIONS 1-2, F-10 (2001), *available at* http://stemcells.nih.gov/stemcell/pdfs/fullrptstem.pdf (last visited on Mar. 7, 2004) (on file with the Connecticut Law Review).

wanted embryos to research.[4] In the future it may be more desirable to create embryos specifically to obtain ES cells from them, for example, to study the impact of particular genetic defects on development or to obtain histocompatible tissue for cell replacement therapies.[5] Research with adult stem cells not derived from embryos may also prove fruitful.

Moral controversy over the use of ES cells arises from the contested moral status of preimplantation human embryos. Persons who believe that these embryos have inherent moral status oppose the destruction of leftover embryos to derive ES cells for research or therapy, even if those embryos will otherwise be discarded. In contrast, persons who view embryos as too rudimentary in development to have inherent moral status accept derivation and use of ES cells when they have been donated to research.[6]

Despite this standoff in the ES cell research debate, it is noteworthy that even persons and jurisdictions taking an inherent-moral status view of the embryo still allow some ES cell research to occur. The United States, Germany, and Victoria (Australia) all take a highly restrictive view of embryo research.[7] Yet all allow some federal support or acceptance of ES cell research if the ES cells have been derived and cultured before a specified cut-off date.[8]

How are we to understand this apparent contradiction? The lines drawn in the United States, Germany, Australia and elsewhere are explainable by the distinction between causing and benefiting from a moral wrong. In Part II this article first describes how the line between causative and beneficial complicity has functioned in the embryonic stem cell debate in the United States and Germany. Part III then analyzes whether the distinction is robust enough to carry the moral and policy weight that it does.

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[4] *See* Susan E. Lazendorf et al., *Use of Human Gametes Obtained from Anonymous Donors for the Production of Human Embryonic Stem Cell Lines*, 76 FERTILITY & STERILITY 132, 133 (2001); Nicholas Wade, *Government Proposes Regulation for Embryo Cell Research*, N.Y. TIMES, Dec. 2, 1999, at A24.

[5] Lazendorf et al., *supra* note 4, at 132. *See* Gina Kolata, *Cloning Creates Human Embryos*, N.Y. TIMES, Feb. 12, 2004, at A1 (reporting that South Korean scientists have cloned human cumulus cells and derived cultured ES cells from them).

[6] *See* John A. Robertson, *Human Embryonic Stem Cell Research: Ethical and Legal Issues*, 2 NATURE REVIEWS GENETICS 74, 75 (2001).

[7] For the United States' view, see discussion *infra* Part II.A and Remarks by the President on Stem Cell Research (Aug. 9, 2001) (transcript available at http://www.whitehouse.gov/news/releases/20010809-2.html) (last visited Mar. 2, 2004) (on file with the Connecticut Law Review) [hereinafter Bush Address]; for Germany's view see discussion *infra* Part II.B; for Victoria's position see Gene Technology Act 2001 (incorporating amendments as of Oct. 16, 2003) *available at* http://dms003.dpc.vic.gov.au/sb/2001_Act/A00964.html (last visited Mar. 7, 2003) (on file with the Connecticut Law Review).

[8] *See* discussion *infra* Part II.A-B; Gene Technology Act 2001 (Austl.). A similar line attends the use of tissue from induced abortions in the United States and elsewhere. It also exists in debates in over-funding by the European Union of ES cell research. *See European Union Proposes Stem Cell Rules*, N.Y. TIMES, July 10, 2003, at A6.

Finally, Part IV addresses what adherence to such a distinction entails for funding, or permitting research or therapy, with ES cell lines derived after the cut-off dates of current policy.

II. CAUSATIVE AND BENEFICIAL COMPLICITY IN THE ES CELL DEBATE IN THE U.S. AND GERMANY

A. *The U.S. Debate Over ES Cell Research*

With the 1998 announcement of human ES cell cultures, the United States government was faced with the question of whether to fund such research.[9] Because Congress had since 1996 prohibited federal spending on embryo research, the federal government could not fund the derivation of embryonic cells. It could, however, fund research with ES cells because those cells are not embryos and thus were eligible for federal research funding.[10] The Clinton administration announced that it would fund ES cell research, and authorized the National Institutes of Health to develop procedures for doing so.[11] The first grants were about to be made when the newly-elected Bush administration put such grants on hold.[12] After further review, President Bush announced on August 9, 2001 that his administration would fund ES cell research only with cell lines that had been derived before the date of the announcement.

The Bush announcement illustrates nicely the line between causative and beneficial complicity. Although a holder of staunch right-to-life views, President Bush could remain faithful to those beliefs and still support funding of research of ES cells derived by others if such funding had not nor would lead to the destruction of embryos. If ES cells derived before the date of the August 9 announcement were used, the government

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[9] The United States debate has centered on federal funding of research, thus leaving the private sector free to derive and use ES cells. State laws are relevant to private sector activity, with some states banning embryo research while others permit it. *See* CAL. HEALTH & SAFETY CODE § 123500 (West 2004) (permitting stem cell research); N.J. STAT. ANN. § 26:2Z-2 (West 2004) (same).

[10] *See* Memorandum from Harriet S. Rabb, Office of General Counsel of the U.S. Department of Health and Human Services, to Harold Varmus, M.D., Director, National Institute of Health 1 (Jan. 15, 1999) (stating that "statutory prohibition on the use of funds appropriated to HHS for human embryo research would not apply to research utilizing human pluripotent stem cells because such cells are not within the statutory definition") (on file with the Connecticut Law Review).

[11] *See* Nicholas Wade, *Advisory Panel Votes for Use of Embryonic Cells in Research*, N.Y TIMES, June 29, 1999, at A15. At President Clinton's request the National Bioethics Advisory Commission under the leadership of Chairman Harold Shapiro, then President of Princeton University, had examined the issue and found that federal funding of both derivation and use of ES cells in research was ethically acceptable. *See id.*; Nicholas Wade, *Government Proposes Regulations for Embryo Cell Research*, N.Y. TIMES, Dec. 2, 1999, at A24.

[12] *See* Frand Bruni, *Bush Gives His Backing for Limited Research on Existing Stem Cells: Of Principles and Politics*, N.Y. TIMES, Aug. 10, 2001, at A1; Katharyne Q. Seeyle, *Bush Gives His Backing for Limited Research on Existing Stem Cells: No Embryo Use*, N.Y. TIMES, Aug. 10, 2001, at A1; *see also* Bush Address, *supra* note 7.

decision to fund such research could not have caused those embryos to have been destroyed because the cell lines would already have been derived.[13] Just as the federal government could support the use of tissue from aborted fetuses in research if the tissue came from abortions occurring regardless of the research, it could also back support of ES cell research if the ES cells had already been derived in the private sector independent of the federal funding decision.

The Bush compromise on ES cell research initially gave a boost to the field. Although limiting federal funding to particular cell lines, it signaled that the topic was an acceptable one and offered limited federal support. It soon became clear that many fewer viable cell lines than the 64 lines trumpeted by the administration were available to federally funded researchers, perhaps only 5 or so.[14] If ES cell research were to occur expeditiously, expanded federal support and many new cell lines expressing different genes and mutations would be necessary.[15] In addition, all cell lines developed before August 9 had used mouse feeder layers for the cell culture. Because of the risk of viral infection from the mouse cells, new lines would have to be derived for any safe ES-cell based treatment to be developed.[16]

B. *Embryonic Stem Cell Research in Germany*

Germany is one of the few developed countries that prohibits all use of embryos in research.[17] Until recently, this prohibition affected a small group of researchers seeking ways to improve IVF and contraception and to understand the origin of genetic disease. The development of human embryonic stem cell cultures has greatly raised the scientific and social cost of such a highly restrictive policy.[18]

The German absence from ES cell science is the result of the 1990 German Embryo Protection Act.[19] The 1990 law banned the creation of

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[13] Whether this policy would encourage future destruction of embryos is discussed *infra* Part IV.

[14] STEPHEN HALL, MERCHANTS OF IMMORTALITY: CHASING THE DREAM OF HUMAN LIFE EXTENSION 303-05 (2003) (providing an in-depth account of the bureaucratic and intellectual property hurdles in obtaining pre-August 9 ES cell lines for research).

[15] There were also intellectual property rights limits on access to those lines. For example, would those holding patents on the technique or owning a cell line demand reach-through rights to eventual products that might lessen incentives to develop marketable products.

[16] Liza Dawson et al., *Safety Issues in Cell-Based Intervention Trials*, 80 FERTILITY & STERILITY 1077, 1078 (2003).

[17] Peter Gruss, *Human ES Cells in Europe*, 301 SCIENCE 1017 (2003). Italy, Ireland, and Austria also prohibit all embryo research. *Id.; see* Gretchen Vogel, *E.U. Stem Cell Debate Ends in a Draw*, 302 SCIENCE 1872 (2003) [hereinafter Vogel, *E.U. Stem Cell Debate*].

[18] Vogel, *E.U. Stem Cell Debate, supra* note 17. Although Germany has played a major role in the development of modern biology and medicine, its embryo protection policies are causing it to be a minor player in the rapidly developing and important area of ES cell research at a time when Britain, the United States, and several other countries are forging ahead with ES cell research.

[19] Gesetz zum Schutz von Embryonen (Embryonenschutzgesetz), v. 13.12.90 (BGB1. I S.2746).

embryos that would not be transferred to the uterus, and by implication made criminal the destructive derivation of ES cells from blastocysts prior to implantation.[20] As a result, no ES cell lines may be derived from embryos in Germany.[21] Like the Bush administration, however, Germany has relied on the moral distinction between causing and benefiting from a moral evil to support ES cell research. Not surprisingly, it faces the same tensions and contradictions over extending such a policy as the United States.

The German policy was the result of an interplay between a conservative Parliament and a more liberal Chancellor. Because no embryos could be destroyed to obtain ES cells in Germany, the debate focused on whether German law could permit German scientists to import ES cells from jurisdictions where embryo destruction and derivation of ES was legal. The German Parliament's own Parliamentary Ethics Committee voted against allowing the importation of ES cells. Unhappy with the effects of such a policy on German science, Chancellor Gerhardt Schroeder appointed a National Ethics Committee that recommended in favor of importation. After an intense national debate, the federal parliament did authorize research with ES cells imported from countries where derivation is legal but only if the cell lines had been derived prior to January 1, 2002.[22]

It is interesting to compare the highly restrictive German position, which applies to both private and publicly funded research, with the somewhat less restrictive American position, which applies only to federally funded research. Normatively, both the Bush and German position assumes that the embryo is a person or moral subject and should not be destroyed for ES cells or any other purpose. However, if persons in the private sector or outside the country have destroyed embryos to obtain em-

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[20] *Id.*; Gretchen Vogel, *Visiting German Profs Could Face Jail*, 301 SCIENCE 577, 577 (2003) (stating that the 1990 law prohibits deriving new cell lines, because it bans research that harms embryos) [hereinafter Vogel, *Visiting German Professors*]; Maria J. Colbert, *Legal Uncertainty Over Status of Foetus Needs Urgent Clarification*, IRISH TIMES, Dec. 5, 2003, at 16, *available at* LEXIS, News Library, Itimes File (describing the 1990 Act).

[21] Vogel, *Visiting German Professors*, *supra* note 20, at 577.

[22] Gesetz zur Sicherstellung des Embryonenschutzes im Zusammenhang mit Einfuhr und Verwendung menschlicher embryonaler Stammzellen (Stammzellgesetz), v. 28.6.2002 (BGBl. I S.2277); *Germany Backs Import of Stem Cells*, MILWAUKEE J. SENTINEL, Dec. 24, 2002, LEXIS, News Library, Miljnl File (stating that the Act allows importation of ES cells produced before Jan. 1, 2002 if the project is of "overwhelming significance" and no other research method can be used). The new law has been interpreted to allow German researchers to derive and use ES cells in other countries if they were not governmental employees and were paid by a non-German employer. Vogel, *Visiting German Professors*, *supra* note 20, at 577. However, they could not import to Germany ES cells derived after the cut-off date. *Id.* Academic researchers and governmental employees were required by law to adhere to German regulations anywhere in the world. *Id.* Thus they are prohibited from working in a foreign lab with ES cells derived after the cut-off date. *Id.* To avoid prosecution, professors would need to take an official leave of absence during any period of foreign work that used more recently derived ES cells. *Id.*

bryonic cell lines, both accept that there is no moral objection to using those lines when there is no reasonable basis for thinking that doing so could have led to the destruction of those embryos. Thus both the U.S. restriction on using only cell lines derived before President Bush's August 9, 2001 speech, and Germany's restriction on use of ES cells derived after January 1, 2002, accept a moral distinction between causing and benefiting from another person's moral wrong in deriving ES cells from embryos. In both cases the acceptable cell lines could not have been derived in reliance on the government's policy, for that policy did not exist at the time of derivation nor could have reasonably been anticipated.[23]

C. *Evaluation of the Causative vs. Beneficial Distinction*

Opponents of ES cell research assert that the distinction between *causing* a wrong and *profiting* from one is specious or disingenuous in this context.[24] But the distinction is real and has moral weight. Moral responsibility for a wrong requires both causation and complicity. One is not morally responsible for an event unless one has caused that event with the intention, knowledge, recklessness, or negligence necessary for moral culpability.[25]

In many instances benefiting from a past wrong will not have caused the prior wrong to occur and thus does not support causative complicity for that wrong. A good example is the current practice of using organs from murder victims in organ transplantation. Causing the death of another person is ordinarily a moral wrong, and if done with sufficient culpability is

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[23] European Union debates over ES cell funding have also proposed cut-off dates for when the embryos from which ES cells are derived have been created or when the derivation has occurred. Vogel, *E.U. Stem Cell Debate*, *supra* note 17, at 1872. One proposed set of guidelines would have allowed funding for both derivation and use of ES cell lines from embryos, as long as the embryos from which the cell lines were derived were created before the 27 June 2002 date of EU adoption of its science funding program. *Id.* Germany, Italy, Austria, Spain, and Portugal blocked that move because their domestic laws prohibit destructive embryo research. *Id.*

[24] Such was the prevalent reaction to the Harriet Rabb memo, *supra* note 10, drawing that distinction. *See, e.g.*, Nicholas Wade, *Ruling in Favor of Stem Cell Research Draws Fire of 70 Lawmakers*, N.Y. TIMES, Feb. 17, 1999, at A12 (describing a letter of protest written in reaction to the Rabb memo by members of Congress and sent to Health and Human Services Secretary Donna Shalala).

[25] Much of the literature of complicity concerns the conditions under which one is morally responsible for an event brought about by others. *See, e.g.*, JOSHUA DRESSLER, CASES AND MATERIALS ON CRIMINAL LAW 846-47 (2d ed. 1999). Criminal responsibility for complicity in a crime, either as a principal or accessory, generally requires the intention to aid or bring about the crime. *See id.* at 851 (discussing the law of complicity's general requirement that the secondary actor "act with the intention of influencing or assisting the primary actor to engage in the . . . crime"). Actions or omissions performed with knowledge of the likelihood that a crime will occur ordinarily would not make a person whose actions are but for causes of the crime criminally responsible or complicit in those crimes. *See id.* at 851-53 (discussing under what circumstances knowledge would make an individual complicit in a crime). Merely benefiting from past wrongs and thus implicitly encouraging future wrongs would not ordinarily make one complicit or responsible for the future wrong because it will be difficult to show the requisite action, causation, or culpability necessary for such a judgment.

murder or some form of homicide. But benefiting from that death, e.g., receiving an inheritance or a new job, does not make one causatively complicit in the death because receipt of those benefits after the death has occurred will ordinarily have had no causal connection with it. Similar reasoning underlies federal acceptance of the use of fetal tissue in research and therapy when the circumstances show that the abortion had not been undertaken to procure that tissue.

This distinction makes transplant of organs from murder victims morally acceptable even though murder is immoral and criminal.[26] It also makes the use of tissue from abortions morally acceptable when the prospect of that use has not caused the abortion to occur. Federal law now recognizes that distinction, and allows federal funding of research with fetal tissue when those conditions are met.[27]

1. *Deterring Future Wrong*

A different issue might arise if profiting from a past wrong encourages a future wrong, as might arguably occur in purchasing stolen goods, child pornography, or the skins or horns of endangered species. Whether that effect exists is an empirical question to be decided in the facts and context of particular practices.[28] Although any single individual's use of child pornography or purchase of stolen goods will not in itself cause those future wrongs, purchasers are part of a larger market that creates the demand for it. Banning purchases thus is a rational and defensible way to stop future instances of the wrongful action, even if an individual purchaser is not criminally responsible for a future instance of that wrong.[29]

But the claim that benefiting from a past wrong is likely to encourage future instances of that wrong is more difficult to sustain if, as in the case of ES cell derivation, what is perceived as a "wrong" is legally permitted and will occur on a widespread basis whatever the decision of a particular jurisdiction. Because there is or will be sufficient demand from researchers

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[26] Ordinarily the next of kin of the victim have to consent to donation of the victim's organs for transplant. *See, e.g.*, MASS. GEN. LAWS ANN. ch. 113, § 8 (West 2003) (describing the procedure to obtain consent for organ transplantation).

[27] 45 C.F.R. § 46.204 (2003). In fact, until recently most vaccines that people received in childhood were grown in virus-free tissue obtained from fetuses aborted for reasons unrelated to production of vaccines. *See, e.g.*, HALL, *supra* note 14, at 22-23 (describing Leonard Hayflick's work in developing virus-free vaccine media from fetal tissue obtained from Sweden).

[28] For an interesting analysis of the absence of causative complicity in abortion in China as a result of United States' contributions to the United Nations Fund for Population Activities, see Ronald M. Green, *U.S. Defunding of UNFPA: A Moral Analysis*, 13 KENNEDY INST. OF ETHICS J. 393, 398-401 (2003).

[29] A purchaser is not causatively complicit in future instances of the wrong because he may not have acted with the intention of having others commit the wrong in the future, and there might be no showing that his one purchase facilitated the future wrong. *See* DRESSLER, *supra* note 25, at 851, 871-72.

or clinicians to derive new ES cell lines, that derivation is very likely to occur regardless of United States or German policy against derivation. A strong case for banning any support of research or therapy because of its likelihood of encouraging future destruction of embryos cannot easily be made. Causative complicity for past or future derivations is thus lacking.[30]

It is true that a federal research presence would contribute to ES cell science and thus indirectly encourage future derivations of ES cells from embryos.[31] The key question, however, is whether government funding of research will lead to a significant increase in the destruction of embryos, beyond the number that would have been destroyed in the absence of funding. Depending on the amount and kind of research in the private sector or in other jurisdictions, any increase could be too slight to dissolve the distinction between beneficial and causative complicity.[32] In any event, the boost to future embryo destruction that might indirectly occur would not reach the degree of culpability or causation that the criminal law would demand for accomplice liability if future derivations were deemed wrongful.[33]

2. *Tainting the Beneficiary*

If causative complicity in past or future wrong is lacking, the ground for objection to benefiting from past wrong must then rest on perceptions of taint from an association with a past or future evil, or on respect for the

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[30] The United States Catholic Conference, however, objected to the Bush administration's policy precisely on this ground—that it would encourage future ES cell derivations. For them, the distinction between causative and beneficial complicity is disingenuous because they think that any government funding will increase the speed of research and the pace of translation into clinical practice and thus inevitably increase the number of embryos destroyed to obtain ES cells. *See* United States Catholic Bishops, Bishops' Conference Comments on NIH Guidelines for Embryonic Stem Cell Research (Jan. 31, 2000) (letter addressed to Stem Cell Guidelines, NIH Office of Science Policy), *at* http://www.nccbuscc.org/prolife/issues/bioethic/comments.htm (last visited Mar. 3, 2004) (on file with the Connecticut Law Review).

[31] The government's funding role is especially important because private investment cannot cover the full range of research that needs to be done, particularly the earlier, upstream research that is less focused on particular therapeutic products. *See, e.g.*, Arti K. Rai, *Stem Cell Research: An NPR Special Report, A "Virtual Roundtable" on Federal Funding*, *at* http://www.npr.org/programs/specials/stemcells/viewpoints.rai.html (last visited Mar. 3, 2004) (on file with the Connecticut Law Review) (asserting that uses for stem cells that will only be profitable in the long term, and not commercially profitable in the short term, may be ignored if only private funding is available). Also, the flow of private investment is dependent on the vagaries of the market. After investor interest in the biotech sector slumped in 2001, ES cell research was starved for private funds. Private investment by itself is unlikely ever to provide sufficient support for the full range of research that must occur to bring ES cell therapies to the clinic. *See, e.g.*, HALL, *supra* note 14, at 307; Dawson et al., *supra* note 16, at 1079.

[32] By the same token, however, it could lead to more destruction of embryos. If so, the distinction between causing and benefiting from a wrong will not satisfy opponents of ES research.

[33] *See* DRESSLER, *supra* note 25, at 851, 864, 871-72 (discussing the elements necessary for accomplice liability). One could question, however, whether the more demanding strictures of criminal law should set the standard.

victims of that evil.[34] But perceptions of taint from association do not claim a causal connection with the past (or future) wrong, and thus do not in themselves violate a moral duty not to destroy or disrespect those entities. Rather, such notions sound in personal conscience and aspirational morality. Individuals are free as they choose to make such judgments in constituting their identity and personal character. But when there is wide disagreement about the strength or importance of such symbolic association, they are not a persuasive basis for public policy.

Additionally, the principle of "never touch" evil proves too much. Traces of moral evils are scattered widely throughout the world. People benefit from past evil in a variety of ways, e.g., the doctors who earn fees from repairing the physical damage of criminal assaults, the lawyers and officials who reap comfortable salaries operating the criminal justice system. Countless other examples can similarly demonstrate that we all have some association with a past evil. Judgments about the degree of closeness needed for a disqualifying taint are notoriously difficult to tame into usable principles once one leaves the most obvious cases. Indeed, The Talmud has many discussions of how close or pervasive the touch of evil must be to render something impure. One of its most famous passages—the oven of Akhnai—arises from a bitter dispute over the degree of physical contact with an impurity that will render a utensil ritually impure.[35] But once one leaves the realm of religious beliefs, perceptions of taint from benefiting are too subjective to justify their imposition as public policy.

Nor is shifting the discussion to a question of character any more helpful to drawing those lines.[36] One's assessments about character also depend on judgments about degrees of closeness. Once one moves away

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[34] Thinking along these lines explains the Catholic Church's reliance on the concept of "scandal" to object to benefiting from a past wrong even when causal complicity is not established. *See* United States Conference of Catholic Bishops, President Bush's Stem Cell Decision (Aug. 13, 2001), *at* http://www.usccb.org/prolife/issues/bioethic/fact801.htm (last visited Mar. 8, 2004) (on file with the Connecticut Law Review) (emphasizing the risk of complicity in deliberate abortions and the risk of "scandal should be avoided"). For the Catholic Church's official position on stem cell research, see Pontifical Academy of Life, *Declaration on the Production and the Scientific and Therapeutic Use of Human Embryonic Stem Cells* (Aug. 25, 2000), *at* http://www.vatican.va/roman_curia/pontifical_academies/acdlife/index.htm (last visited Mar. 3, 2004) (on file with the Connecticut Law Review).

[35] 3 THE TALMUD, TRACTATE BAVA METZIA 59A-59B, at 234-36 (Steinsaltz ed., Random House 1990). Rabbi Eliezer took the position that a clay oven whose parts had been cut horizontally and reattached with sand between the layers would lose whatever impurity it had gotten from physical contact with a recognized impurity, e.g., a dead animal. *Id.* The Sages disagreed with him, and ultimately excommunicated him for thinking that "the Torah was in the Heavens" and not in the collective wisdom of the Sages. *Id.*

[36] I disagree with Christopher Kutz's discussion of character in his otherwise invaluable book on complicity. *See* CHRISTOPHER KUTZ, COMPLICITY: ETHICS AND LAW FOR A COLLECTIVE AGE 42-46 (2000) (defending accountability on the basis of character alone and arguing that reasons of character function primarily subjectively or counterfactually).

from the most obvious cases of closeness, calling the question one of character rather than taint does not tell us what degree of closeness reflects negatively on one's character. As with taint, such judgments necessarily require a weighing of closeness, reason for contact or use, perception by others, and other factors that are not easily translated into guidelines or criteria for judging character. Such judgments are best left to individuals in their personal life rather than to policy-makers.

3. *Respect for the Victim*

A similar analysis applies to the claim that one is morally complicit in a past wrong if one benefits from it in a way that disrespects the victims of that wrong. Here the argument is based on the principle of respect, not a perception of taint. But while one can think of cases in which benefiting from a past wrong might show disrespect for the victims of that wrong, the fact of benefiting alone would no more necessarily show disrespect than perceptions of taint or character. One can even cogently argue that using the products of past wrong to provide good for others extends rather than denies respect for those victims.

The problem of a respect-based approach to complicity is that there are no ready sub-principles or criteria to sort out when later benefiting shows disrespect and when it does not. Going to a party that has been funded by the proceeds of a bank robbery or sale of nude photos of a woman taken without her consent may be an easy case for finding disrespect for the person whose wrongful injury made the party possible.[37] So too—in the opposite direction—is the judgment that using the organs of murder victims does not disrespect them. But those examples provide no clear guide to what to do with the results of the cruel experiments conducted by Nazi doctors on concentration camp inmates. One does not want in any way to condone those horrific studies, but if they had yielded knowledge about hypothermia that could save lives, should that knowledge be rejected because its use would disrespect the pain of the victims?[38] Because there is no easy answer to such questions, respect for victims will not easily lend itself to formulating policies or defining duties for when benefiting from a past wrong is unacceptable because of complicity in that wrong.

Persons morally opposed to embryo destruction thus face a dilemma over whether to accept the use of ES cells that have been or would be derived by others. Although they may fervently think that any intentional destruction of embryos is wrong, they might also find that use of those ES

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[37] I am indebted to John Deigh for this example.

[38] Leonard Tushnet reports that some Jewish doctors in the Warsaw ghetto made systematic observations of the effects of starvation on physical function in order to eke some good out of the horrendous situation in which they found themselves. *See* LEONARD TUSHNET, THE USES OF ADVERSITY 50-51 (1966).

cells, once they have been derived, neither taints them nor shows disrespect for the embryos that were their source. But others who share their view about the wrongfulness of embryo destruction might view the matter differently, just as they might differ over whether use of the results of immoral experiments that benefit others disrespects the victims. In such circumstances the claim that benefiting from past wrong makes one complicit in its occurrence ceases to be a viable ground for individual moral obligation or for public policies that could impede access to potential life-saving medical treatment for thousands of persons.

III. THE FUTURE OF THE DISTINCTION

As the field of ES cell research moves forward, political pressure will mount to expand the number of ES cells lines available for funded research in the United States and domestic research in Germany. New cells lines will be necessary to ensure safety and to facilitate progress in ES cell research and therapeutics.[39] An important policy question is whether the distinction between causing and benefiting from a past wrong is robust enough to support use of ES cells derived after initial cut-off dates.

The most pressing need is for ES cell lines that are free from the risk of viral infection from the mouse feeder layers that were used to culture ES cell lines derived before cut-off dates.[40] Indeed, the risk of viral transmission to subjects and patients from those cell lines is great enough that under standard principles of research ethics it would be unethical to use ES cells cultured with mouse feeder layers in clinical research or therapy.[41] Using ES cells developed without mouse material would minimize the risk.[42]

Under current federal policy, however, there "are no cell lines approved for federally funded research that avoided mouse contamination during the process of derivation."[43] As a result, no clinical trials of the safety or efficacy of ES cell-derived therapies could be done with federal funding because such trials could only ethically occur with ES cell products derived after applicable cut-off dates, thus relegating to the private sector the source of funding and the pace of research in this area.[44] But, as

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[39] *See* Dawson et al., *supra* note 16, at 1079.

[40] *Id.* at 1078.

[41] *Id.* at 1079.

[42] *Id.* at 1078. By contrast, this risk is justified when xenotransplantation provides the only effective therapy because no animal-free transplant material would be as effective. *Id.* at 1078-79. Other reasons for deriving new human cell lines are to study the process of differentiation and the effects of certain genes or mutations on development. Thomson et al., *supra* note 1, at 1146. In the future cell lines that reflect a wide array of human antigens may be needed to ensure histocompatibility between patients and ES cell-derived replacement therapy. *See id.* at 1147 (noting the need for strategies to prevent immune rejection).

[43] Dawson et al., *supra* note 16, at 1078.

[44] *Id.* at 1078-79.

the recent downturn in the biotechnology showed, the private sector itself cannot sustain the entire burden of the earlier stage research for developing ES cell technology or for all the clinical trials that are necessary to bring this technology to the clinic.[45]

One strategy in this situation is to cease to allow respect for embryos to play the dominant role that it has played in federal funding policy. Under this approach the duty to minimize risks to human subjects and treat existing disease would be given a higher priority than avoiding federal support for the destruction of embryos. In a recent review of the ethics of human subjects research with ES cell-derived products, Dr. Liza Dawson and colleagues adopt this approach.[46] Although split among themselves about the moral status of embryos, they nevertheless recommend that only human trials that use cell lines from mouse-free stem cell sources should be permitted in human testing:

> Although we are not all of one mind with regard to the moral status of human embryos, we all agree that in this instance the imperative to protect human subjects and ultimately to produce safe human therapies justifies the destruction of human embryos that will be necessary to produce new mouse-free stem cell lines. Put more strongly, we believe that it would be unethical to expose human subjects to stem cell lines that have been derived with mouse feeder layers.[47]

But Dawson et al. also note that "those who place a high value on protecting embryonic human life are not likely to view a theoretical risk of cross-species infection as sufficient to justify the creation of new embryonic stem cell lines."[48] Some persons committed to the inherent moral status of the embryo might cross that line, but Dawson et al. are probably correct that most will not be willing to do so.

An approach that might appeal to some persons who object to destruction of embryos is to turn again to the distinction between causing and benefiting from a harm that supports the cut-off dates in current United States and German policy.[49] Policymakers who have accepted the validity

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[45] This is true even when private institutions, such as Harvard University, invest in developing new ES cell lines that are available to all researchers. *See* Associated Press, *Harvard gives free access to new stem cell lines*, Mar. 4, 2003, *available at* http://www.cnn.com/2004/HEALTH/03/03/harvard.stemcells.ap/ (last visited Apr. 28, 2004) (on file with the Connecticut Law Review); Chad A. Cowan et al., *Derivation of Embryonic Stem-Cell Lines from Human Blastocysts*, 350 N. ENG. J. MED. 1353 (2004).

[46] Dawson et al., *supra* note 16, at 1078-79.

[47] *Id.* at 1079.

[48] *Id.*

[49] I have in mind pro-life politicians such as Senators Orin Hatch (R-Utah) and Connie Mack (R-Fla.), who broke with right-to-life colleagues and opposed a ban on all therapeutic cloning because of the need to develop effective therapies for a wide range of illnesses. *See* Richard Brookhiser, *President*

of the distinction between causative and beneficial complicity in setting those cut-off dates should—if consistent—be open to making the same distinction regarding the use of ES cell lines derived after those dates when similar arguments apply.

The validity of such an approach would rest on how concerns about causation, taint, and respect would play out in applying that distinction to post-cut-off date derivations. Resolution of the causation issue would depend on the speed with which researchers in the private sector or in jurisdictions where derivation is legal have already developed new ES cell lines or are almost certain to do so regardless of any change in United States or German policy.[50] The need for mouse-free ES cell lines is now so widely accepted among ES cell researchers that it is very likely that such lines have or will soon be developed regardless of United States or German policies.[51] If that judgment is correct, then mouse-free lines could be used without compromising a position against destroying or causing the destruction of embryos.[52] Whether the point will hold for only one change in cut-off dates, or for others that become necessary as the field progresses, will depend upon the circumstances of those decisions and future developments in ES cell research and therapy.[53] Similarly, if mouse-free ES cell lines are developed, opponents of embryo destruction could find that using them neither taints the user nor disrespects the embryos that yielded them, just as use of pre-cut-off date ES cells, or transplanting organs and tissue from murder victims or aborted fetuses does not taint users or recipients or constitute disrespect for the sources of those materials.

The same issues will arise in the future if ES cell derived therapies be-

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Bush Finds His Voice, N.Y. TIMES, Aug. 11, 2001, at A15; Bruni, *supra* note 12; *The Pro-Life Case for Cloning*, N.Y. TIMES, May 2, 2002, at A26.

[50] The leading ES cell producing countries are the United States, Belgium, the United Kingdom, India, Singapore, and Israel. *See* HALL, *supra* note 14, at 304-05. Other countries are also becoming active. The Medical Research Council in the U.K. is spearheading an effort to develop a worldwide repository of human ES cell lines for research and eventual therapy. Gruss, *supra* note 17, at 1017. The Czech Republic has also announced the creation of ES cell lines that will be available to researchers throughout the world. *See, e.g.*, Press Release, Czechinvest, Czech Scientists Establishing Human Cellular Embryonic Line (July 29, 2003), *at* www.czechinvest.org/.../0a530af2174386ba4125690c0055ca05/7427dba7281ba8154125690c00559f53/$FILE/CR_embryo.pdf (last visited Mar. 6, 2004) (on file with the Connecticut Law Review).

[51] *See* Lazendorf et al., *supra* note 4, at 132.

[52] Nor is the whiff or taint of "scandal" any stronger here than in drawing the first cut-off dates, because those mouse-free lines will have been developed long before governmental opposition to their use changes. People who differ on this question may choose not to participate in research or therapy with mouse-free lines, but they have a weak case for preventing others who have a different view of the degree of taint from doing so.

[53] If the United States or Germany accepts a new cut-off date, the future certainty of such time limits may be called into question, perhaps encouraging some persons to derive new lines in part on the expectation that whatever time limit is set will eventually be withdrawn. The question, however, will still remain whether the prospect of eventual governmental acceptance will have caused derivation of ES cells that would not otherwise have occurred.

come available. Denial of government support may slow research, but, if the science is strong, there will be ample private sector incentive in the United States and in other countries that permit ES cell derivation to bring to market safe and effective treatments. The question for persons who oppose the destruction of embryos is whether their use of those therapies, or their government's funding of them, is sufficiently removed to break the chain of causative complicity and to dilute the taint from or avoid disrespect for their source.

While purists may never yield on this question, enough persons with right-to-life views are conflicted about the issue to lead the government to rely once again on the causative vs. beneficial distinction in finding that therapeutic uses of ES cell derived therapies are both legal and worthy of governmental funding. If one finds that the distinction does not hold or it does not provide sufficient moral cover for those who decry the destruction of embryos, then policymakers and politicians will have to decide whether respect for embryos demands that promising avenues of research and therapy be foreclosed. In the end, they may simply have to forthrightly acknowledge that the health of persons is more important than indirect complicity to some extent in the derivation of embryos.[54] Such a judgment would be unavoidable if the creation of embryos through nuclear transfer therapeutic cloning is the only way to ensure safe and effective histocompatible ES cell-derived therapies.[55]

IV. CONCLUSION: MORAL DISTINCTIONS AND PUBLIC POLICY

The distinction between causative and beneficial complicity identifies the nub of ethical and policy differences over the use of ES cells in research and therapy. If an actor has not culpably caused a wrongful event, then he or she can use the product or effects of that event except in cases where that use will be a substantial factor in causing future instances of that wrong, or clearly disrespect the victims of the wrong. When past or future causation and clear grounds for finding disrespect for victims is lacking, the question of benefiting from a past evil becomes a matter of symbolic association and personal conscience, not morality and public policy. Perceptions of symbolic taint, especially when they vary so widely and the health and well-being of so many persons is affected, are quintessentially reserved for individual conscience and are not well-suited for public policy.

There are strong reasons for finding that use of already derived ES

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[54] Several Catholic bishops grappling with this issue told me that they would not regard the use of a therapy derived from ES cells to be a sin. (Personal Communication with author.)

[55] *See generally* Gina Kolata, *Cloning Creates Human Embryos: South Koreans Say Stem Cells Were Extracted*, N.Y. TIMES, Feb. 12, 2004, at A1 (reporting that Korean scientists have cloned human cumulus cells and derived cultured ES cells from them).

cells in research or therapy can occur without significant causative complicity in past or future derivations. The Bush administration and the German government are on firm moral ground in drawing the distinctions which they have drawn. But the same reasoning that supports past cut-off dates also supports the choice of new cut-off dates once new cell lines have been derived in the United States or other countries.

That reasoning is also likely to play a role if ES cell science leads to safe and effective therapies for millions of patients. In the most optimistic scenario ES cell science may provide a safe and effective source of replacement cells for a wide range of diseases. To ensure histocompatibility, libraries of ES cell-compatible banks, with representative samples of subgroups of the population, may also be developed.[56] Once such libraries exist, there should be no objection to governments funding or authorizing use of those cells for other patients because the cell lines would have already been derived for those subgroups and should not require further destruction of embryos.

Purists who object to these conclusions are free to refuse ES cell-derived therapies for their own illnesses.[57] But they must make stronger arguments about causative complicity, respect for victims, and symbolic taint if they are to justify denying funding or use of those therapies by others. If they do succeed in undercutting the distinction, there will then be no way to avoid a direct judgment about whether respect for early embryos justifies curtailing ES cell-based research and therapy that could benefit so many persons.

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[56] *See* Ruth R. Faden et al., *Public Stem Cell Banks: Considerations of Justice in Stem Cell Research and Therapy*, 33 HASTINGS CTR. REP. 13, 13-23 (2003) (discussing a variety of strategies for maximizing the coverage that public stem cell banks may provide).

[57] The expression "there are no atheists in foxholes" comes to mind when one contemplates whether current opponents of embryonic stem cell research will also deny themselves or their family members ES cell-derived replacement therapies if they are shown to be safe and effective. Stephen Hall agrees with this assessment. HALL, *supra* note 14, at 358.