

ARTICLES

CUSTOM KIDS AND THE MORAL DUTY TO GENETICALLY ENGINEER OUR CHILDREN

BY E. JOSHUA ROSENKRANZ

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ARTICLES

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BY E. JOSHUA ROSENKRANZ[†]

There could come a day when we will have the tools to genetically engineer¹ every detail of our children.² Imagine it. Little custom kids will abound. They will have little custom button noses and custom rosy cheeks. Intellects and personalities will be made to order, with a variety of optional accessories: artistic proclivity, benevolence, quick wits³. . .

With this promise of custom-made happiness, one wonders why anyone would object to the prospect of genetic engineering. But opponents to genetic engineering have articulated grave concerns as to its impact on society's future.⁴

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1. "Genetic engineering" has been stretched to cover "everything from *in vitro* fertilization and cloning to the creation of human/machine cyborgs or genetically 'perfect' individuals." Lappé, *Realities of "Genetic Engineering,"* 12 MED. RES. ENGINEERING 25, 26 (Aug. 1976) (footnote omitted). This Article will focus on the implications of processes by which stable, inheritable changes are introduced in the genetic material of germ cells. See Sinsheimer, *Troubled Dawn for Genetic Engineering*, in CONTEMPORARY ISSUES IN BIOETHICS 607 (T. Beauchamp & L. Walters eds. 1978) [hereinafter CONTEMPORARY ISSUES] ("The essence of engineering is design and, thus, the essence of genetic engineering . . . is the introduction of human design into the formulation of new genes and new genetic combinations."). For brief overviews of projected trends in genetic engineering, see generally G. KIEFFER, *BIOETHICS: A TEXTBOOK OF ISSUES* 98, 99 (1979); Davis, *Prospects for Genetic Intervention in Man*, in CONTEMPORARY ISSUES, *supra*, at 592; Friedman & Roblin, *Genetic Therapy for Human Disease?*, 175 SCIENCE 949 (1972); PRESIDENT'S COMMISSION FOR THE STUDY OF ETHICAL PROBLEMS IN MEDICINE AND BIOMEDICAL AND BEHAVIORAL RESEARCH, *SPLICING LIFE* 42-48 (1982) [hereinafter PRESIDENT'S COMMISSION, *SPLICING LIFE*].

2. See FOUNDATION ON ECONOMIC TRENDS, *THE THEOLOGICAL LETTER CONCERNING THE MORAL ARGUMENTS AGAINST GENETIC ENGINEERING OF THE HUMAN GERMLINE CELLS* 1 (1983) [hereinafter *THEOLOGICAL LETTER*] ("With the arrival of human genetic engineering . . . [i]t will soon be possible to engineer and produce human beings by the same technological design principles as we now employ in our industrial processes."); Tribe, *Technology Assessment and the Fourth Discontinuity: The Limits of Instrumental Rationality*, 46 S. CAL. L. REV. 617, 649 (1973) (quoting Nobel laureate Joshua Lederberg as predicting that we will some day be able to "do essentially anything we can imagine in the area of biological engineering") (footnote omitted).

3. Scientists agree that much of human personality is genetically determined. See *THEOLOGICAL LETTER*, *supra* note 2, at 3 ("Many scientists are already contending that schizophrenia and other 'abnormal' psychological states result from genetic disorders or defects. . . . One prominent neuro-physiologist has gone so far as to say 'there can be no twisted thought without a twisted molecule.'"); Davis, *supra* note 1, at 593 (intelligence and temperament controlled by many genes, making prospect of engineering unlikely); Wash. Post, Feb. 26, 1987, at A1, col. 5 (reporting discovery of gene for manic depression).

4. Christian, and particularly Roman Catholic, theologians are among the most fervent opponents. See, e.g., R. MCCORMICK, *HOW BRAVE A NEW WORLD?* 282 n.5 (1981) (espousing moderate

While the ultimate detriment perceived by the opponents spans across all of society, their focus tends to be intensely personal. Genetic engineering for any purpose, they maintain, will lead inevitably to the dissolution of traditional notions of marriage,⁵ parenthood,⁶ and family.⁷ Ultimately, they fear, genetic engineering will devalue human life.⁸ The horrors that are paraded before us march unswervingly toward a "Brave New World" in which the state mass produces human life, designing each citizen for the task that she will happily and efficiently perform.⁹ The nightmare is one of social utility gone wild;¹⁰ the greatest good for all is achieved at the expense of individuality, personal freedom, and special family relationships.¹¹

position that is "far from a condemnation of all 'genetic engineering'"); May, "Begotten Not Made": Reflections on the Laboratory Production of Human Life, in 1 POPE JOHN PAUL II LECTURE SERIES IN BIOETHICS 31, 46-55 (F. Lescoe & D. Liptak eds. 1983) (extreme position prohibiting any tampering that interferes with inviolable chain of events between marital lovemaking and birth); Ratzinger & Bovone, *Instruction on Respect for Human Life in Its Origin and on the Dignity of Procreation: Replies to Certain Questions of the Day*, 16 ORIGINS 697, 703 [hereinafter *Vatican Letter*] ("genetic manipulation of human embryos . . . [is] contrary to the human dignity") (emphasis omitted), reprinted in N.Y. Times, Mar. 11, 1987, at A14, col. 1.

5. See *Vatican Letter*, *supra* note 4, at 703 (genetic engineering is "contrary to the right of every person to be conceived and to be born within marriage and from marriage") (footnote and emphasis omitted). May argued in the context of artificial insemination and cloning: "[T]he choice to generate human life in the laboratory, insofar as it is a choice to reproduce human life nonmaritally, is irresponsible because it is a choice that threatens the good of marriage itself and by doing so endangers human life in its generation." May, *supra* note 4, at 54.

6. See P. RAMSEY, *FABRICATED MAN* 71-72, 124 (1970) (human parenthood, "as it came to us from the Creator," is a fusion of spheres of procreation and marital love).

7. "The family . . . embodies the ordinary conditions wherein we (parents, children, and others) learn to become persons." R. MCCORMICK, *supra* note 4, at 304. According to one commentator:

[T]he family is rapidly becoming the only institution in an increasingly impersonal world where each person is loved not for what he does or makes, but simply because he is. The family is also the institution where most of us, both as children and as parents, acquire a sense of continuity with the past and a sense of commitment to the future.

Kass, *Making Babies—The New Biology and the "Old" Morality*, 26 THE PUB. INTEREST 18, 51 (1972) [hereinafter *Making Babies*]. Thus, the argument goes, when the laboratory is introduced into the scene, the family, and therefore identity, is threatened. See *infra* notes 123-129 and accompanying text (discussing how "debiologization" of family is thought to undermine traditional relationships).

8. See May, *supra* note 4, at 54-55 (laboratory generation of human life "violates the reverence to human life . . . insofar as it transforms the act of generating human life from one of procreative marital love to one of artistic production, thereby treating human life not as a good of incomparable and priceless value but rather as a product subordinate to its producers"); see also *infra* notes 130-143 and accompanying text (critiquing Catholic position).

9. See THEOLOGICAL LETTER, *supra* note 2, at 9-10 ("Huxley's spectre of a biologically designed caste system with its alphas, betas, gammas and deltas looms on the horizon").

10. Opponents of genetic engineering purport to be unswayed by promises of increased utility. [W]hat makes opposition to the Brave New World so difficult is the seductive path that leads to it. Every new advance in human genetic engineering is likely to be heralded as a great stride forward, a boon for humankind. Everyone [sic] of the breakthroughs in genetic engineering will be of benefit to someone, under some circumstances, somewhere in society.

THEOLOGICAL LETTER, *supra* note 2, at 7; see R. MCCORMICK, *supra* note 4, at 285 ("the greatest good of the greatest number, unassailable as it might be as a theoretical criterion, is practically the warrant for present practices and policies that all but guarantee that the greatest good will not be served").

11. Cf. *Making Babies*, *supra* note 7, at 48 (increasing control over procreation results in depersonalization, which is dehumanizing); THEOLOGICAL LETTER, *supra* note 2, at 7 ("step by step, advance by advance, we human beings might well choose to trade away the spontaneity of natural life for the predictability of technological design").

The devaluation of human life and dissolution of the institutions that are primarily responsible for fostering individuality, however, have rarely been linked in any coherent manner to genetic engineering. At the root of these concerns appears to be a seldom-articulated notion that genetic engineering amounts to a choice between two different potential human lives—a choice that is unethical because it implies that one human life is more valuable than another.

In contrast to the individual and private foci of the opponents to genetic engineering, social utility is the rallying call of its proponents.¹² Those who support genetic engineering generally emphasize benefits in the “therapeutic” context,¹³ generally leaving the critical task of distinguishing therapy from nontherapy to someone else.¹⁴ Thus, rather than address directly the specter of a dehumanizing “Brave New World,” the proponents dismiss it as utterly unrealistic.¹⁵ As if to concede the point they are conspicuously silent about the individuality, freedom, and the special family relationships that preoccupy their opponents.

12. See Davis, *supra* note 1, at 597 (“If, in panic, our society should curtail fundamental genetic research, we would pay a huge price. We would . . . block the possibility of learning to repair genetic defects [I]t is hardly necessary to note the long and continuing record of nonmedical benefits from genetics.”); Francoeur, *We Can—We Must: Reflections of the Technological Imperative*, 33 THEOL. STUD. 428, 431-433 (1972) (past achievements in embryology and genetics substantially raised quality of life).

13. See Crotty, *The Technological Imperative: Reflections on Reflections*, 33 THEOL. STUD. 440, 448 (1972) (reproductive technology appropriate for therapeutic purposes, but probably not for nontherapeutic); Szebenyi, *Reflections of a Biologist*, 33 THEOL. STUD. 450, 451 (1972) (proposing genetic engineering primarily for therapeutic purposes).

14. That distinction presents one of the most serious problems that proponents of genetic engineering face. Commentators use the terms as if they were objectively definable. One commentator, for example, attempts to distinguish them as follows:

By therapeutic measures I mean . . . those aimed at remedying defects which are clearly recognized and accepted as genetic disease. . . . However, . . . the complex and far-reaching problems . . . emerge . . . in regard to the nontherapeutic measures; for now it is a question not of providing a person with the health we all normally enjoy or of ensuring to a future child the normal biological heritage of man generally.

Crotty, *supra* note 13, at 448.

The distinction is illusory. The term “therapeutic” implies the existence of a “defect” to be cured which, in turn, implies some judgment as to what it means to be a “normal” human being. But that which is “clearly recognized” as a defect varies from society to society and from one generation to the next. Similarly, to limit genetic intervention to maintenance of the “normal biological heritage of men” is to set no limit. The standard is subject to manipulation depending upon what each of us believes that heritage is or ought to be. Instead of defining “therapeutic,” I use the term generically to signify that minimum level of intervention that would be acceptable to those who would permit some amount of engineering.

15. Davis, *supra* note 1, at 594 (behavioral trait modification “will remain indefinitely in the realm of science fiction”); Lappé, *supra* note 1, at 25 (*in vitro* fertilization and cloning are “no more likely to be applied today on the mass scale envisioned by Huxley than they will be 30 years from now [sic]”) (footnote omitted); Szebenyi, *supra* note 13, at 451 (“genetic reconstruction and mass production of custom-made people . . . is fiction and is not about to happen”).

One supporter of genetic engineering, however, goes to the extreme:

If the greatest good of the greatest number . . . were served by it, . . . I suspect I would favor making and using man-machine hybrids . . . for dull, unrewarding or dangerous roles needed nonetheless for the community’s welfare — perhaps the testing of suspected pollution areas or the investigation of threatening volcanoes or snow-slides.

Fletcher, *Ethical Aspects of Genetic Controls*, 285 NEW ENG. J. MED. 776, 779 (1971) [hereinafter *Ethical Aspects*].

In dismissing those concerns, the proponents of genetic engineering have forgone an opportunity to make two powerful moral arguments. First, the special relationship between parent and child imposes on the parent a moral duty to rescue the child from suffering; that duty might entail a duty to genetically engineer our children. Second, the decision to execute such a genetic rescue does not necessarily amount to a choice between two human lives.

To be sure, the idea that technology may someday allow us to design every detail of our children is farfetched; such technology is perhaps unattainable.¹⁶ But proponents of genetic engineering need not de-emphasize its power in order to respond to its critics.¹⁷ This Article will cross the traditional lines and assume (unrealistically) that genetic engineering will be as powerful a tool as the most vigorous opponents predict, however fantastic their predictions may be.¹⁸ A shift in focus to the parental duty to rescue might nevertheless counter some of the opponents' apocalyptic predictions about a society that permits genetic engineering. If anything can prevent the pursuit of social utility from swallowing special relationships, devaluing human life, and smothering individuality, it is our reliance upon, and fortification of, those special relationships that infuse human life with value and nurture the individual. Further, the shift in focus to the parental duty to rescue also forces us to grapple with the notion that genetic engineering *ipso facto* constitutes "identity swapping." In the end, we might conceivably have a moral duty to genetically engineer our children.

At the outset, I emphasize two points about the scope of this Article. First, it will not address the moral decision to abort a defective fetus as an alternative to either suffering or genetic engineering.¹⁹ Rather, in discussing the

16. See G. KIEFFER, *supra* note 1, at 98-99 (discussing practical limits on genetic engineering); PRESIDENT'S COMMISSION, *SPLICING LIFE*, *supra* note 1, at 48 ("the technical uncertainties, the ethical implications, and the low probability of actually treating an affected person are strong contraindications against therapy of fertilized eggs or embryos becoming a useful clinical option in the near future"); Davis, *supra* note 1, at 593 (discussing limits on ability to genetically engineer details); Lappé, *supra* note 1, at 25 (even congenital disease is often more a function of environment than genetics).

17. The tendency to dismiss the notion as mere fantasy is unfortunate if not dangerous. If there is one lesson the twentieth century has taught us, it is that we are not particularly adept at predicting when today's fantasies will be realized. See Nirenberg, *Will Society Be Prepared?*, 157 *SCIENCE* 633 (1967) ("man may be able to program his own cells with synthetic information long before he will be able to . . . formulate the goals, and long before he can resolve the ethical and moral problems which will be raised"). It has been said that those who forget the past are condemned to relive it. The lesson of the past century has been that those who dismiss the fantasies of the present are condemned to live them as nightmares in the future.

18. In so doing, I ignore the many formidable barriers that stand in the way of a genetically engineered world. I have also taken some liberties to simplify genetic theory. The inaccuracies, while often extreme, should not undermine the analysis of the parental duty of genetic rescue.

19. Compare Neel, *Ethical Issues Resulting from Pre-Natal Diagnosis*, in *EARLY DIAGNOSIS OF HUMAN GENETIC DEFECTS: SCIENTIFIC AND ETHICAL CONSIDERATIONS* 221-22 (M. Harris ed. 1972) (it is more just to abort a fetus than to allow it to live and suffer from pain and injustice), and *Curlender v. Bio-Science Laboratories*, 106 Cal. App. 3d 811, 829, 165 Cal. Rptr. 477, 488 (1980) (dictum) ("we see no sound public policy which should protect those parents [who fail to abort a defective child] from being answerable for the pain, suffering and misery which they have wrought upon their offspring"); with Fletcher, *The Brink: The Parent - Child Bond in the Genetic Revolution*, 33 *THEOL. STUD.* 457, 482 (1972) [hereinafter *The Brink*] ("Whenever a strong group argues on behalf of a weaker group that their removal would be better than their survival, we should not be overly impressed").

extent to which parents might have a moral obligation to rescue their children genetically, I begin with the assumption that the parent intends to give birth to the child.

Second, this Article focuses primarily on the existence of a *moral*, not a *legal*, duty to genetically engineer. The suggestion that a parent's capacity to genetically engineer a child might trigger a moral obligation to do so, says little about the need for, or desirability of, implementing a legal obligation. Not all moral duties are, or should be, converted into legal duties.²⁰ For openers, not all members of society have the same sense of morality. In the absence of a moral consensus — and particularly when the question of morality is bitterly disputed, as is the case in the genetic engineering context — the imposition of a legal duty can be unwise.²¹ Moreover, quite apart from the dangers of imposing a moral judgment on those who disagree with it, there are often substantial administrative costs for the punishment associated with the conversion of a moral duty into a legal duty.²² Finally, it is arguable whether the state should interfere with certain spheres of private life, notwithstanding the emergence of a moral consensus governing that area.²³ Accordingly, I will at times discuss the parent's legal duty to rescue a child — born or unborn — only as a reflection (albeit a distorted one) of the areas in which society has reached a moral consensus.²⁴ But I leave for another time the issue whether any such moral duty should be converted to a legal duty.

20. The opposing positions of H.L.A. Hart and Lord Devlin on the extent to which laws should enforce morality are well known. Compare H. HART, *LAW, LIBERTY, AND MORALITY* 57 (1963) (private conduct should be regulated only to the extent necessary to prevent harm to others), with P. DEVLIN, *THE ENFORCEMENT OF MORALS* 25 (1965) (law should enforce morality because undermining of society's moral structure threatens to undermine the basis of society itself). See also Dworkin, *Lord Devlin and the Enforcement of Morals*, 75 *YALE L.J.* 986 (1966); Fletcher, *Law and Morality: A Kantian Perspective*, 87 *COLUM. L. REV.* 533 [hereinafter *Law and Morality*]; Reagan, *Politics and Morality are Inseparable*, 1 *NOTRE DAME J.L. ETHICS & PUB. POL'Y* 7, 10 (1984) (politics and morality are inseparable); *Vatican Letter*, *supra* note 4, at 709 ("It is part of the duty of the public authority to insure that the civil law is regulated according to the fundamental norms of the moral law in matters concerning human rights, human life and the institution of the family.") (emphasis omitted).

21. See Cahill, *In vitro Fertilization: Ethical Issues in Judeo-Christian Perspective*, 32 *LOY. L. REV.* 337, 355 (1986) (one prerequisite to moral justification of a law is a "public consensus which a law supposedly represents and which it may require . . . to be equitably enforced").

22. See *infra* note 39.

23. See I. KANT, *THE METAPHYSICAL ELEMENTS OF JUSTICE* 19 (J. Ladd trans. 1965) (laws cannot make people virtuous); Cahill, *supra* note 21, at 355 ("Purely private moral behavior is considered to lie outside the purview of public policy, while actions which affect non-participants or unwilling participants or the community at large can legitimately be restricted or supervised."); Epstein, *A Theory of Strict Liability*, 2 *J. LEGAL STUD.* 151, 201 (1973) ("It may well be that the conduct of individuals who do not aid fellow men is under some circumstances outrageous, but it does not follow that a legal system that does not enforce a duty to aid is outrageous as well"), *Law and Morality*, *supra* note 20, at 547-50 (explaining why Kant would reach different conclusions as to moral and legal duties to rescue).

24. While the absence of a legal duty to engage in particular conduct says little about whether that conduct is morally required, the recognition of such a legal duty is strong evidence of a societal consensus that it is.

I. THE AILING-CHILD SCENARIO: FOUNDATIONS OF THE PARENTAL DUTY OF EASY RESCUE

The point of departure is a hypothetical situation—the ailing-child scenario—from which a nearly universal moral consensus should emerge. Suppose a child is stricken with an ailment that threatens to consume his nervous system, leaving him to live out his life in severe physical pain. Suppose further that modern science has developed a miracle cure—a simple pill. The miracle pill is available to the child's parents at no cost and is always effective. But the child must take the miracle pill now in order to avoid the suffering. There should be little dissent from the position that the parents have a moral obligation to administer the pill to the child.²⁵

A. Philosophical Foundations

The intuition that the parents of the ailing child have a moral duty to rescue their child has firm foundations in the two major Western traditions of moral philosophy.²⁶ For utilitarians,²⁷ the duty of easy rescue stems from the goal of maximizing society's aggregate happiness.²⁸ Under a deontological analysis,²⁹ the duty of easy rescue derives from the categorical imperative to preserve, within limits, the physical and psychological integrity of others, because integrity is the means by which a person realizes her ends.³⁰ In each of these traditions, the existence of a special relationship, prototypical of which is the parent-child relationship, intensifies the duty to rescue.

1. *The Duty of Easy Rescue*

The utilitarian view on the duty of easy rescue was first expressed in Jeremy Bentham's query: "[I]n cases where the person is in danger, why should it not be made the duty of every man to save another from mischief, when it can be done without prejudicing himself . . . ?"³¹ Bentham's formulation of the

25. Those who believe that to administer medicine is always immoral would presumably reject the fundamental moral judgment on which my analysis is based. The remainder of this Article, for them, is irrelevant.

26. See generally Weinrib, *The Case for a Duty to Rescue*, 90 YALE L.J. 247, 279-92 (1980) (discussing philosophical foundations of duty of easy rescue).

27. "Utilitarianism" is "a theory elaborated by Jeremy Bentham and James and John Stuart Mill that the aim of moral, social, and political action should be the largest possible balance of pleasure over pain or the greatest happiness of the greatest number." WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY 2525 (P. Gove ed. 1981) [hereinafter WEBSTER'S DICTIONARY].

28. See Weinrib, *supra* note 26, at 280 ("avoidance of injury . . . obviously contributes to the greatest happiness of the greatest number") (footnote omitted).

29. A "deontological" view is one "that considers moral obligations to be knowable by intuition and without reference to conceptions of the good." WEBSTER'S DICTIONARY, *supra* note 27, at 603. Such "a moral obligation or command that is unconditionally and universally binding" is a "categorical imperative." *Id.* at 352. Adherents to this view believe that "[a]n authentically human ethics is one that is as concerned with means as it is with ends for we can choose to do some dreadful deeds with the best intentions and with the noblest ends in view." May, *supra* note 4, at 55.

30. See I. KANT, *THE METAPHYSICAL PRINCIPLES OF VIRTUE* 50 (J. Ellington trans. 1964).

31. J. BENTHAM, *AN INTRODUCTION TO THE PRINCIPLES OF MORALS AND LEGISLATION* 293 (J. Burns H. Hart. eds. 1970). Illustrations included a duty to re-position a sleeping drunk whose face fell into

duty was apparently an attempt to accommodate a fundamental conflict. A reduction in the amount of suffering or death would increase the world's aggregate happiness, but perfect altruism would have serious counterutilitarian consequences.³² It would force the rescuer to subordinate his happiness to that of all others, preventing him from ever achieving his own happiness and transforming him into an officious intermeddler. It would also block the formation of special relationships, which have their own utility.³³ Too much beneficence would be a disincentive to self-protection from potential evils and to self-advancement; neither is necessary when one can rely on future beneficence.³⁴ Finally, in a world of perfect altruists, no one would have any project other than to further the projects of others.³⁵ Each person would find himself chasing the other in a vicious circle of altruism.

In order to resolve the tension, Bentham apparently embraced two limits to the duty to rescue: emergency and convenience.³⁶ Limiting the duty to emergency situations prevents the beneficiary from unduly relying on future beneficence.³⁷ "[O]nly a fool would deliberately court a peril because he or others had previously been rescued from a similar one."³⁸ The convenience limitation prevents the moral duty to rescue from encroaching upon the rescuer's execution of his own projects. In so doing, it also indirectly ensures the individual's capacity to form special relationships in which one sacrifices some of one's own projects for the benefit of the special other. Bentham seemed unperturbed by the tension between the rationales for the convenience limitation

a puddle, to quench a fire in a woman's headdress with nearby water, and to warn the bearer of a lighted candle that he is about to enter a room full of gunpowder.

32. Weinrib, *supra* note 26, at 281-82. *But see* 1 W. GODWIN, ENQUIRY CONCERNING POLITICAL JUSTICE 165-66, 219-20 (I. Kramnick ed. 1976) (suggesting that if each person devotes his life to helping others, aggregate utility will be maximized).

33. *See* H. SIDGWICK, THE METHOD OF ETHICS 434 (6th ed. 1901) ("it is conducive to the general happiness that special claims to services should be commonly recognized as attaching to special relations; so as to modify that impartiality in the distribution of beneficence which Utilitarianism *prima facie* inculcates").

34. Mill believed reliance on the beneficence of others to have been "for the most part, injurious." J. MILL, THE PRINCIPLES OF POLITICAL ECONOMY 967 (W. Ashley ed. 1969). According to Mill, "[t]here are few things for which it is more mischievous that people should rely on the habitual aid of others than for the means of subsistence, and unhappily there is no lesson which they more easily learn." *Id.* Presumably, however, there are situations—including the parent-child or other special relationship—in which reliance upon the beneficence of others does increase utility.

35. "In a society of perfect and general altruism . . . any potential recipient of aid would himself be an altruist, who must, accordingly, subordinate the pursuit of his own projects to the rendering of aid to others. . . . Each person would continually find himself obligated to attempt to embrace a phantom." Weinrib, *supra* note 26, at 282. Both Fried and Rawls put forth these objections. C. FRIED, RIGHT AND WRONG 15-16 (1978) (objecting that "quite plausible interpretations of absolute norms lead to impossibly stringent conclusions, lead in fact to total paralysis"); J. RAWLS, A THEORY OF JUSTICE 14 (1971) (individuals "would [not] agree to a principle which may require lesser life prospects for some simply for . . . advantages enjoyed by others").

36. *See* Weinrib, *supra* note 26, at 283-285 (discussing emergency and convenience limitations implicitly embraced by Bentham).

37. *Id.* at 283; *see also* H. SIDGWICK, *supra* note 33, at 437 (duty to rescue in emergency has "no bad effect on the receiver [because of] the exceptional nature of the emergency"). Since an emergency is an extraordinary situation, an emergency rescue will not cause reliance in our ordinary affairs. *See* Weinrib, *supra* note 26, at 283.

38. Weinrib, *supra* note 26, at 283.

and the duty to rescue: that is, he seems to have ignored the possibility that, in some situations, a utilitarian duty to rescue might be warranted even though it is inconvenient. Thus Bentham must have assumed that the balance generally favored the convenience limitation.³⁹

The utilitarian approach presumably considers all costs and benefits. Thus, the duty to rescue a mentally anguished or emotionally suffering victim could be just as compelling as the duty to rescue him from physical injury.⁴⁰

The deontological formulation of the duty of easy rescue, like the utilitarian approach, incorporates emergency and convenience limitations.⁴¹ It reaches that result, however, by a different route — on the basis of the victim's right to be saved.⁴² Undergirding the deontological approach is the notion that physical integrity is the very means by which a person can accomplish his goals. Physical integrity is the essence of freedom itself, what Kant described as "the stuff (the matter) in man without which the ends of man would remain unfulfilled."⁴³ Insofar as emotional and psychological obstacles interfere with the accomplishment of one's projects, the Kantian rationale must also encompass emotional and psychological integrity. Within the Kantian framework, all humans are on the same moral footing.⁴⁴ This notion of universality demands that, to the extent that a person claims to himself a right, he must be prepared to afford the same right to others. In short, a person, "[b]ecause his claim to freedom implies a right to physical integrity that is necessary to its exercise, . . . must concede to others the right to physical integrity that he implicitly and inevitably claims for himself."⁴⁵ Conversely, under the rule of universality, a would-be rescuer need not sacrifice his own physical integrity to preserve that of another.⁴⁶

At this point in the Kantian analysis, the two limitations to the duty to rescue come into play. The emergency limitation is shorthand for the

39. Bentham never explained why he illustrated the duty only with examples of easy (*i.e.*, convenient) rescues. One plausible explanation is that Bentham anticipated conversion of the moral duty into a legal duty. Utilitarians are reluctant to impose too high a standard, because it carries with it costs related to punishment and administration. *Id.* at 285.

40. For criticisms of the utilitarian view see A. GEWIRTH, REASON AND MORALITY 218 (1978) (not accurate to describe rescue as act that increases social utility because duty runs to individual regardless of value of individual to society); Dworkin, *Hard Cases*, 88 HARV. L. REV. 1057, 1076-77 (1975) ("It might follow [from a utilitarian view] that an insignificant man must risk his life to save a bank president, but that a bank president need not even tire himself to save a nobody."); Weinrib, *supra* note 26, at 286-87 (health and life are "not merely components of the aggregate of goods," but are "preconditions for the enjoyment of other goods") (footnote omitted).

41. This formulation of the deontological analysis borrows heavily from Weinrib, *supra* note 26, at 288-92. See also *Law and Morality*, *supra* note 20, at 547-48 (explaining Kantian analysis of duty to rescue).

42. Dworkin, *supra* note 40, at 1076 ("If one man is drowning, and another may save him at minimal risk to himself . . . then the first has a moral right to be saved by the second.").

43. I. KANT, *supra* note 30, at 109.

44. Cf. E. CAHN, THE MORAL DECISION 195 (1955) (sole criterion for rescue of an individual under deontological analysis is that the individual is a human being); see Dworkin, *supra* note 40, at 1077 (bank president and insignificant man have the same right to be rescued regardless of social utility of each).

45. Weinrib, *supra* note 26, at 288 (citing A. GEWIRTH, *supra* note 40, at 141); Gewirth, *The Normative Structure of Action*, 25 REV. METAPHYSICS 238 (1971).

46. I. KANT, *supra* note 30, at 52, 118, 122.

imminence and degree of potential harm to integrity.⁴⁷ The greater and more imminent the threat to the distressed party's integrity, the more compelling the duty to rescue. The convenience limitation allows the would-be rescuer to value his own security over that of the subject, and to carry out his own projects "in a reasonably coherent way."⁴⁸

2. *The Parental Duty to Rescue*

In both the utilitarian and the deontological traditions, the duty to rescue is even more compelling in the context of the special parent-child relationship. The utilitarian tradition treats both the existence of the special relationship and its correlative duties as utility maximizing. Henry Sidgwick defined the parent-child relationship as a special relationship of beneficence.⁴⁹ Duties of parents to their children constitute a subset of the class of "duties arising out of comparatively permanent relationships not voluntarily chosen."⁵⁰ Parents "owe[] [their children] affection . . . and the tender and watchful care that naturally springs from affection."⁵¹

The special relationship, quite apart from the duties it engenders, is utility maximizing, "because . . . the most intense and highly valued of our pleasures are derived from such affections."⁵² Since benevolence is ordinarily reciprocated in special relationships, there is little danger of the recipient's passive reliance on such beneficence⁵³ and the consequent reduction in social utility. The imposition of duties concomitant with the special parental relationship, according to Sidgwick, further maximizes utility, "even if the affection be unhappily absent."⁵⁴

47. Weinrib, *supra* note 26, at 289. An "emergency" consists of two components: imminence and the degree of the threat. See *infra* notes 84-85 and accompanying text (discussing components of "emergency" and surrogate for imminence). We tend to think of an emergency as being more serious (and thus as triggering a more compelling duty to rescue) the more the potential victim has at stake and the sooner the loss becomes inevitable.

48. Weinrib, *supra* note 26, at 290 (footnote omitted). Fried explains that "we must stop short of the equal or maximin [sic] satisfaction of needs if such a goal would interfere excessively with the pursuit of happiness (the pursuit of *their* chosen life plan) by those called upon to make sacrifices to the possibly extravagant needs of the least fortunate." C. FRIED, *supra* note 35, at 123 (emphasis in original).

49. H. SIDGWICK, *supra* note 33, at 248-49.

50. *Id.* at 248. That class includes "Kindred and in most cases Citizenship and Neighbourhood." *Id.* The parent also owes her children duties "arising out of special needs: for no doubt children are naturally objects of compassion, on account of their helplessness . . ." *Id.* at 249. Indeed, the parent may be said to have *caused* any suffering of the child because of the parent's role in bringing the child into existence. *Id.*

51. *Id.* The duty is not, however, limitless. As Sidgwick points out:

[I]t is easy to say broadly that [the parent] ought to promote his children's happiness by all means in his power. . . . [S]till it seems unreasonable that he should purchase a small increase of their happiness by a great sacrifice of his own: and moreover there are other worthy and noble ends which may (and do) come into competition with this.

Id.

52. *Id.* at 433.

53. See *id.* (beneficence from special relationship has "less tendency to weaken the springs of activity in the person benefited; and may even strengthen them by exciting other sources of energy beneficence").

54. *Id.* at 434.

It is necessary for the well-being of mankind that in each generation children should be produced in adequate numbers themselves, they should be adequately nourished and protected during the period of infancy . . . [.] [A]nd it is commonly believed that the best or even the only known means of attaining these ends in even a tolerable degree is afforded by the existing institution of the Family.⁵⁵

This duty, however, is not unlimited. Since most of us only have limited capacity for such strong affection, the duties that inhere in special relationships do not explode into perfect altruism.⁵⁶

The Kantian philosophers, again, take a different route to the same conclusion. Even those who oppose a general duty of easy rescue agree that the parent-child relationship gives rise to a duty to rescue. Charles Fried, for example, while opposing a duty of easy rescue on libertarian grounds,⁵⁷ assumes a duty "to provide for one's children, . . . to assure they have proper schooling, and so on."⁵⁸ That duty encompasses an obligation to rescue the child from harm, "to care for . . . the child in the child's best interests."⁵⁹ Correlative to that duty is a broad "right to form one's child's values [and] one's child's life plan."⁶⁰ The right grows out of the basic right not to be interfered with in pursuing these ends for oneself.⁶¹

The parental duty of easy rescue, whatever its philosophical basis, fits the ailing-child scenario well. The situation is an emergency, involving an imminent threat of a lifetime of future suffering. The parents, with trifling inconvenience to themselves, could rescue their child from the emergency.

B. Legal Foundations

Like both philosophical traditions discussed, the law has been reticent to embrace a general duty to rescue, even in situations in which a rescue would be easy. That reticence is based on some notion that misfeasance stands on a different legal (and moral) footing than does nonfeasance. As one commentator characterized current law, "no legal liability [attaches], either civilly or criminally, in any . . . case[]" in which a person declines to rescue a stranger as long as the would-be rescuer "was in no way responsible for the perilous situation, . . . did not increase the peril, [and] . . . took away nothing from the person in jeopardy. . . . The law does not compel active benevolence between man

55. *Id.* at 435.

56. *See id.* at 433-34; *see also supra* notes 32-35 and accompanying text.

57. A "libertarian" is "one who upholds the principles of individual liberty of thought and action." WEBSTER'S DICTIONARY, *supra* note 27, at 1303. Fried recognizes what appears to be a very limited "duty to lend assistance without endangering the discretionary space" of the rescuer. C. FRIED, *supra* note 35, at 130. That duty would require us to "relieve immediate, critical and anomalous needs." *Id.*; *cf. id.* at 184-85 (rescue of miners from mine disaster is institutional function; rescue by noninstitutional person is act of "friendship" and discretionary).

58. *Id.* at 152.

59. *Id.* at 154.

60. *Id.* at 152.

61. *Id.* The duty and right, for Fried, stem from the special biological relationship between parent and child. *Id.* at 153-55. The child is tied intimately to the parents' physical integrity and sexuality, both of which are "part of [the] basic equipment and resources [of] a person." *Id.* at 154.

and man. It is left to one's conscience whether he shall be the good Samaritan or not."⁶²

As if to confirm a widespread recognition of the parents' moral duty of easy rescue, however, our society has imposed on parents a legal duty essentially parallel to the parents' moral duty. Just as philosophers have recognized that a special relationship triggers a moral duty to rescue where none otherwise exists, the law has also recognized that a special relationship can trigger a legal duty.⁶³ And, as is true of the two philosophical traditions discussed, the parent-child relationship is the prototypical and most well-established special legal relationship.⁶⁴ Thus, while parents are accorded broad discretion in assessing their children's medical, nutritional, and housing needs, the law has traditionally imposed on parents a general duty to provide their children with such necessities.⁶⁵ Further, parents are subject to a general legal duty to save their children from danger in situations in which no such duty would attach toward a stranger.⁶⁶

When the parent shirks the duty of ordinary care, the child has a remedy in tort.⁶⁷ Further, in particularly outrageous cases, the state does not hesitate to intercede on the child's behalf. All states have statutes that prohibit child neglect and provide procedures by which a court may deprive the neglectful parent of custody.⁶⁸ When a parent makes a medical decision that is clearly against her child's best interests (as is the case in the ailing-child scenario), the state steps in and makes the rescue that the parent is legally obligated

62. Ames, *Law and Morals*, 22 HARV. L. REV. 97, 112 (1908); see also Weinrib, *supra* note 26, at 247. While there is much controversy as to whether the distinction between misfeasance and non-feasance makes sense in that context, "[t]here is no distinction more deeply rooted in the common law and more fundamental." Bohlen, *The Moral Duty to Aid Others as a Basis of Tort Liability*, 56 U. PA. L. REV. 217, 219 (1908). Compare Ames, *supra*, at 113 (proposing a duty of easy rescue), Schroeder, *Two Methods for Evaluating Duty to Rescue Proposals*, 49 LAW & CONTEMP. PROBS., Summer 1986, at 181 (same), and Weinrib, *supra* note 26 (same); with Bohlen, *supra*, at 219-22, 244 (concluding that a legal duty to rescue attaches only when harm entirely and exclusively in control of rescuer), and Epstein, *supra* note 23, at 189-204 (because causation is the key element in a legal system that values liberty, a misfeasance/nonfeasance distinction is crucial and no legal duty to rescue should be imposed). In any event, the absence of a general legal duty to rescue does not necessarily imply a societal judgment that there is no moral duty either. See *supra* notes 20-24 and accompanying text.

63. See Weinrib, *supra* note 26, at 248 n.7 (citing cases finding special relationship).

64. Ames, *supra* note 62, at 111-12 (father-child relationship imposes legal duty to act).

65. Bohlen, *supra* note 62, at 227 & n.10. See generally W. KEETON, D. DOBBS, R. KEETON & D. OWEN, *PROSSER AND KEETON ON THE LAW OF TORTS* 907-08 (5th ed. 1984) [hereinafter *THE LAW OF TORTS*].

66. Rudolph, *The Duty to Act: A Proposed Rule*, 44 NEB. L. REV. 499, 505 (1965) ("a father who has a general duty to support his child must act to save that child from danger") (citation to statute omitted).

67. Most jurisdictions have abandoned the old doctrine of parental tort immunity. See, e.g., *Plumley v. Klein*, 388 Mich. 1, 8, 199 N.W.2d 169, 172-73 (1972); Special Project, *Legal Rights and Issues Surrounding Conception, Pregnancy, and Birth*, 39 VAND. L. REV. 597, 828-30 (1986) [hereinafter *Conception, Pregnancy, and Birth*].

68. See generally Katz, Howe & McGrath, *Child Neglect Laws in America*, 9 FAM. L.Q. 1 (1975) (describing substantive and procedural aspects of child neglect laws in all states).

to make.⁶⁹ In extremely rare circumstances, the law has even been known to punish a parent criminally for failure to rescue his child.⁷⁰

II. THE AILING-EMBRYO SCENARIO: THE DUTY TO RESCUE THE FUTURE PERSON WHO IS NOW AN EMBRYO

The ailing-child scenario was a rather easy case from both a moral and a legal perspective. The duty to rescue an ailing embryo, on the other hand, presents much more complex moral and legal problems.

Consider the ailing-child scenario with a minor change. The child is now a one-month-old embryo in its mother's womb. The parents discover that the embryo is afflicted with the same ailment as was the ailing child.⁷¹ The same miracle pill, which is equally foolproof, inexpensive, and innocuous to the mother, is available. Whether or not the mother swallows the miracle pill, she fully intends to carry the child to term; she does not contemplate abortion.⁷² But the mother must swallow the pill now in order to rescue her child from a lifetime of suffering. Is she morally obligated to swallow the pill?

A. The Legal Duty to Rescue the Ailing Embryo

The law governing the mother's obligation to swallow the miracle pill seems fairly straightforward.⁷³ There is little reason to believe that the other's

69. See, e.g., *In re Phillip B.*, 92 Cal. App. 3d 796, 156 Cal. Rptr. 48 (1979) (state challenge to parental refusal to consent to medical treatment for child), cert. denied, 445 U.S. 949 (1980); *Custody of a Minor*, 375 Mass. 733, 379 N.E.2d 1053 (1978) (court orders chemotherapy treatment of child without parental consent).

70. In one particularly graphic example, a man who stood idly by and watched his wife drown their two children and then herself was found guilty of manslaughter, even though he did not in any way encourage his wife's act. *Rex v. Russel*, 1933 Vict. L. Rev. 59; see Recent Cases, 47 HARV. L. REV. 531-32 (1934); see also *State v. Shephard*, 255 Iowa 1218, 1235-36, 124 N.W.2d 712, 722 (1963) (upholding murder conviction of mother for malicious failure to provide infant with medical care).

71. This hypothetical fact is not inconceivable given the growing list of genetic screening procedures available. See Robertson, *The Right to Procreate and In Utero Fetal Therapy*, 3 J. LEGAL MED. 333, 352 (1982) [hereinafter *Right to Procreate*]; Note, *The Constitutional Limitations on State Intervention in Prenatal Care*, 61 VA. L. REV. 1051, 1052 & n.81 (1981) [hereinafter *Constitutional Limitations*]. Some states even require certain high-risk patients to undergo genetic and post-conception screening. *Becker v. Schwartz* 46 N.Y.2d 401, 386 N.E.2d 807, 413 N.Y.S.2d 895 (1978) (physician held liable for failing to inform a "high-risk" patient of prenatal diagnostic screening for Down's Syndrome); *Right to Procreate*, supra, at 352.

72. Thus, the sole imposition on the mother, should she choose to rescue her future child from a lifetime of pain, would be the negligible inconvenience of swallowing a single pill.

73. Various factors could complicate the problem of ailing embryos. First, although the status of an ailing embryo inside the mother's womb is uncertain and controversial, the embryo that is expected to be brought to term can be considered a patient with rights and interests. Dougherty, *The Right to Begin Life with Sound Body and Mind: Fetal Patients and Conflicts with Their Mothers*, 63 U. DET. L. REV. 89, 90-92 (1985) (discussing current and potential techniques of *in utero* fetal treatment); Nelson, Buggy & Weil, *Forced Medical Treatment of Pregnant Women: "Compelling Each to Live as Seems Good to the Rest,"* 37 HASTINGS L.J. 703, 710-13 (1986). But unlike the ailing child, treatment of the embryo necessarily invades the body of the mother. Lastly, the state is said to have an interest in protecting the health of pregnant mothers and the potential for human life. *Roe v. Wade*, 410 U.S. 113, 163 (1973).

The ailing-embryo scenario, however, does not present such a difficult balancing problem. The state's interest in safeguarding the embryo's potential for human life, see *Roe v. Wade*, 410 U.S. at

legal duty in the ailing-embryo scenario should be any different from the parents' legal duty in the ailing-child scenario. In the mother-embryo relationship, as in the parent-child relationship, reasonable medical judgments are reserved to the parent's discretion.⁷⁴ However, that discretion is no more expansive in the former context than in the latter. Just as parents may be held liable in tort for injuring their children, the mother of the ailing embryo may be held liable for injuring the embryo during pregnancy.⁷⁵ Just as parents can lose custody for neglect or abuse of children, the mother can lose custody of a newborn for neglect and abuse of the embryo during pregnancy.⁷⁶ And just as a parent

163, is irrelevant where, as in the ailing-embryo scenario, the mother has decided to carry the embryo to term. Nor are the mother's interests in bodily integrity and personal privacy seriously implicated in this scenario. See 410 U.S. at 152, 154; *Rennie v. Klein*, 462 F. Supp. 1131, 1144 (D.N.J. 1978); L. TRIBE, *AMERICAN CONSTITUTIONAL LAW* 890-91 n.3 (1978); *Constitutional Limitations*, *supra* note 71, at 1053. In the ailing-embryo scenario, the mother's qualified right to bodily integrity is *de minimus*: no physical harm will come to her, because the pill is innocuous. The mother's privacy right to decide "whether or not to terminate her pregnancy," 410 U.S. at 153, is not implicated in the ailing-embryo scenario, since she intends to carry the embryo to a live birth.

Thus, the sole relevant interest seems to be that of the ailing embryo in being rescued.

74. See *supra* note 65 and accompanying text.

75. *Grodin v. Grodin*, 102 Mich. App. 396, 400, 301 N.W.2d 869, 870 (1981) (mother can be held liable for unreasonable ingestion of tetracycline during pregnancy, allegedly causing the discoloration of the child's teeth after birth, because "a child's mother bears [the] same liability for injurious, negligent conduct, resulting in prenatal injuries, as would a third party."); *RESTATEMENT (SECOND) OF TORTS* § 869 (1982). "There now appears to be no American jurisdiction still standing that refuses" to recognize the liability to the child for prenatal harm if the child is subsequently born alive." *Id.* at reporters note, subsection (1) (1982). But see *Mayberry v. Prior*, 134 Mich. App. 826, 832, 352 N.W.2d 322, 324-25 (1984) (reasonable parental action applies to the scope of parental authority, which is immune to tort liability).

Some courts have suggested that an embryo has a "right to begin life with a sound mind and body." *Womack v. Buckhorn*, 384 Mich. 718, 725, 187 N.W.2d 218, 220 (1971) (citing *Smith v. Brennan*, 31 N.J. 353, 364, 365, 157 A.2d 497, 503 (1960)). But cf. *Toth v. Goree*, 65 Mich. App. 296, 237 N.W.2d 297 (1976) (nonviable embryo is not a person within the meaning of the Michigan Wrongful Death Act). For a general discussion of parental liability for prenatal injuries see *Beal, Can I Sue Mommy? Analysis of a Woman's Tort Liability for Prenatal Injuries to Her Child Born Alive*, 21 SAN DIEGO L. REV. 325 (1984); Note, *Parental Liability for Prenatal Injury*, COLUM. J.L. SOC. PROBS. 47 (1978) (discussing a theoretical foundation for a cause of action by a child against her parent for negligence). See also *Dougherty*, *supra* note 73, at 96-99 (discussing recent cases breaking with precedent and allowing tort recovery for injuries inflicted before birth). See generally *Robertson, Toward Rational Boundaries of Tort Liability for Injury to the Unborn: Prenatal Injuries, Preconception Injuries and Wrongful Life*, 1978 DUKE L.J. 1401, 1404-20; Annotation, *Liability for Prenatal Injuries*, 40 A.L.R.3d 1222 (1971).

76. *In re Baby X*, 97 Mich. App. 111, 115, 293 N.W.2d 736, 739 (1980) (evidence that a newborn child suffered from drug withdrawal symptoms was sufficient to conclude that the mother neglected the embryo's health); see N.J. STAT. ANN. § 30:4C-11 (West 1981) (application to state agency whenever child's welfare endangered "include[s] an application on behalf of an unborn child"). See generally *Myers, Abuse and Neglect of the Unborn: Can the State Intervene?*, 23 DUQ. L. REV. 1 (1984). Cf. *In re Ernst*, 130 Mich. App. 657, 344 N.W.2d 39 (1983) ("best interests" standard used in *In re Baby X* not applied in child custody action; instead, the court applied the standard of "whether the parent has been shown by clear and convincing evidence to be unfit and unable to become fit within a reasonable period of time").

One court has even suggested that a parent might be liable for proceeding with a pregnancy, even though she knew that a seriously impaired child would result. *Curlender v. Bio-Science*, 106 Cal. App. 3d 811, 829, 165 Cal. Rptr. 477, 488 (1980) (dictum) (laboratory failed to detect Tay-Sachs disease in an embryo, resulting in the birth of a diseased child).

In response to *Curlender*, the California legislature exempted parents from liability for injuries to children subsequently born alive. CAL. CIV. CODE § 43.6 (West 1982). However, the law's purpose was simply to eliminate liability as an economic disincentive to conceive a child and as an incentive to abort. *Turpin v. Sortini*, 31 Cal. 3d 220, 229, 182 Cal. Rptr. 337, 342 (1982). For other state

may be subject to criminal prosecution for neglect of a child's serious medical needs, a parent may be subject to similar prosecution for failure to provide medical care to an embryo.⁷⁷

The state has even been known to intercede on the fetus' behalf, just as it might intervene to provide life-sustaining medical care to an ailing child.⁷⁸ This has been true even in cases where (unlike in the ailing-embryo scenario) the mother's interest in bodily integrity has been profoundly implicated.⁷⁹ Courts have overruled pregnant mothers' (usually religious) objections to medical procedures—ranging from blood transfusions⁸⁰ to caesarian sections⁸¹—that

statutes precluding wrongful-life causes of action see Andrew, *The Legal Status of the Embryo*, 32 LOY. L. REV. 357, 385 n.159 (1986).

77. See CAL. PENAL CODE § 270 (West Supp. 1987) (up to one year imprisonment and \$2000 fine for failure to provide fetus with medical and nutritional needs); *Right to Procreate*, supra note 71, at 350 n.82 (mother of fetus with congenital defect "might be . . . subject to criminal . . . penalties for not employing a therapy that would prevent the birth of a dead or handicapped child") (footnote omitted). In general, the legislative intent behind such embryo-neglect laws is to secure support for the child or fetus. See, e.g., *People v. Sorenson*, 68 Cal. 2d 280, 66 Cal. Rptr. 7 (1968).

One commentator predicts that if the expansion of fetal rights continues "[a] woman could be held civilly or criminally liable for . . . any behavior during her pregnancy [which has] potentially adverse effects on her fetus [or embryo], including failing to eat properly, using prescription, nonprescription and illegal drugs, smoking, drinking alcohol, . . . [or] engaging in immoderate exercise or sexual intercourse . . ." Note, *The Creation of Fetal Rights: Conflicts with Women's Constitutional Rights to Liberty, Privacy, and Equal Protection*, 95 YALE L.J. 599, 606 (1986) (footnotes omitted) [hereinafter *The Creation of Fetal Rights*]; cf. *Chicago Trib.*, Aug. 31, 1978, at 1, col. 2 (reporting that mother acquitted, by reason of temporary insanity, of abortion resulting in embryo's death. *But see Reyes v. State*, 75 Cal. App. 3d 214, 141 Cal. Rptr. 912 (1977) (dismissing charges against woman who abused heroin during pregnancy because criminal child-neglect statute did not apply to embryos); *State v. Osmus*, 73 Wyo. 183, 200-02, 276 P.2d 469, 475-76 (1954) (reversing manslaughter conviction because of insufficient evidence of mother's failure to obtain medical care during pregnancy).

78. See Comment, *The Fetal Patient and the Unwilling Mother: A Standard for Judicial Review*, 14 PAC. L.J. 1065, 1076 (1983) (describing California law authorizing civil action by fetus for anything beneficial to its interests).

79. There is a growing body of legal scholarship on the issue of compelled treatment of the fetus in cases where the mother's interests are more seriously implicated. See, e.g., Annas, *Forced Caesareans: The Most Unkindest Cut of All*, 12 HASTINGS CENTER REP. 16, 45 (mother should have absolute legal right to make all medical decisions that bear on fetus); Dougherty, supra note 73, at 116-17 (state should intervene only if therapy is medically necessary and proven and risk to mother is low); Hallisey, *The Fetal Patient and the Unwilling Mother: A Standard for Judicial Review*, 14 PAC. L.J. 1066, 1091-93 (1983) (proposing no affirmative legal duty to screen for fetal defects, but legal duty to cure serious fetal defects for which cure poses no substantial risk to mother); Lenow, *The Fetus as a Patient: Emerging Rights as a Person*, 9 AM. J.L. & MED. 1, 23-29 (1983); Mathieu, *Respecting Liberty and Protecting Harm: Limits of State Intervention in Prenatal Choice*, 8 HARV. J.L. & PUB. POL'Y 19, 51-52 (1985) (balancing mother's interests against interests of fetus, which increase as pregnancy progresses); Myers, supra note 76, at 65-71 (presumption against intervention); Nelson, Buggy & Weil, supra note 73, at 749-63 (state invasion on behalf of fetus is both unconstitutional invasion of privacy and unwise public policy); *Right to Procreate*, supra note 71, at 351-61 (mother has duty to produce healthy infant once fetus is viable); *Constitutional Limitations*, supra note 71, at 1066-67 (state invasion of bodily integrity is constitutional if designed to prevent serious harm to fetus, imposes least intrusive means, and provides procedural safeguards); *The Creation of Fetal Rights*, supra note 77, at 599.

80. See *Raleigh Fitkin-Paul Morgan Memorial Hosp. v. Anderson*, 42 N.J. 421, 201 A.2d 537 (per curiam), cert. denied, 377 U.S. 985 (1964); *State v. Ferricone*, 37 N.J. 463, 181 A.2d 751, cert. denied, 371 U.S. 890 (1962).

81. See *Jefferson v. Griffin Spalding County Hosp.*, 247 Ga. 86, 274 S.E.2d 457 (1981) (per curiam); *Conception, Pregnancy, and Birth*, supra note 67, at 833-35 & n.1470 (discussing Colorado and Chicago cases involving similar facts). *But cf.* *Taft v. Taft*, 388 Mass. 331, 446 N.E.2d 395 (1983)

are in the fetus' best interest. They have even gone so far as to take protective custody of the *fetus* in the only way possible: placing the pregnant woman in custody.⁸²

Thus, whether through the operation of tort law, criminal law, or direct state intervention, the mother in the ailing-embryo scenario already would appear to be subject to a legal duty to swallow the pill and rescue her child from a lifetime of suffering.

B. The Moral Duty to Rescue the Ailing Embryo

The mother's legal duty to rescue her ailing embryo, if such a duty exists, is presumably based upon some notion that the mother has a comparable moral duty. Certainly, those who agreed in the first scenario that the parents had a moral duty to administer the pill to their child should not reach a different conclusion just because of the child's change in geography. The skeptic might balk at that characterization of the difference between an embryo and a child, since there are other differences as well. The most obvious difference is that the embryo is not currently suffering and, depending upon whom we ask, may neither be alive nor have any right to life. Further, alive or not, the embryo's chances of becoming a child are obviously more contingent than an entity that already is a child.⁸³ Those distinctions do not, however, change the result.

1. *The Irrelevance of Present Suffering and Future Facts*

At first glance, there might appear to be a little need to a rescue an embryo that is not presently suffering. Although an "emergency" ordinarily involves a risk of serious and imminent harm,⁸⁴ current or imminent suffering are not necessary elements of an emergency. What makes an emergency compelling is that events have taken a course that, without immediate intervention, is likely to cause serious harm. Whether that harm occurs now or later is irrelevant if, absent immediate intervention, there is little that can be done later

(rejecting husband's plea to order pregnant wife to undergo "purse string" operation to prevent miscarriage).

82. In one notable case, a schizophrenic pregnant woman was ordered involuntarily hospitalized for nearly three months in order to protect the fetus. See Dougherty, *supra* note 73, at 94-95. Although medication might have stabilized her condition, doctors feared that it might harm the fetus. Instead, the doctors sought, and obtained a court order involuntarily committing the woman. *Id.* See also Chicago Trib., Apr. 9, 1984, at 1, col. 4 (reporting that a judge had deemed a fetus a ward of the state due to maternal abuse). But see *In re Steven S.*, 126 Cal. App. 3d 23, 178 Cal. Rptr. 525 (1981) (overturning juvenile court's order detaining pregnant woman in psychiatric facility for fetus' protection, because fetus not covered by child-neglect statute).

83. Another difference may be the embryo's inability to ask for help. However, an imperiled party's inability to ask for help is irrelevant to the duty to rescue. For example, when a drowning person reaches the point of inability to communicate is when his distress is likely to be greatest.

This is not to say that a victim's wishes are irrelevant. A duty to rescue may sometimes be absolved, perhaps precluded, by the "victim's" desire not be rescued. See, e.g., *Satz v. Perlmutter*, 362 So.2d 160 (Fla. Ct. App. 1978) (competent adult with terminal condition allowed to refuse treatment). But since the embryo lacks the ability to ask either that we rescue or refrain from rescuing it, the best we could hope to do is to predict the desires it will have when it develops into a child. As we will see, the problem is that our very intervention may alter those desires.

84. See *supra* note 47 and accompanying text.

to prevent the harm or to reverse it.⁸⁵ A child's ingestion of fatal poison is no less an emergency just because that poison may take a week or a year to kill him. In short, an emergency that poses serious and virtually irreparable harm will trigger a rescue.

This understanding of the term "emergency" clarifies two aspects of the ailing-embryo scenario. First, that the ailing embryo is not currently suffering and will not suffer until born in eight months is irrelevant to the urgency of the matter at hand, and therefore to the mother's duty to rescue her ailing embryo (so long as we adhere to the assumption that failure to act now will result in *irreparable* harm). Conversely, whether the embryo will be around long enough for the miracle pill to make a difference is the *only* question of future fact relevant to the mother's moral duty to take the pill now.⁸⁶ All events subsequent to birth, contemplated or expected, are irrelevant to the mother's obligation to take the pill, unless they are certain to curtail the suffering.⁸⁷ The mother cannot absolve herself of the duty simply because she expects that the child will lead a miserable life, anyway. Nor would her plans to overcompensate with love for her child's suffering absolve her of her duty. No matter how happy she makes her child, he would presumably be happier, yet, had his mother prevented suffering when she could have.⁸⁸

85. The availability of other means to prevent or cure the suffering does not relieve the mother of her duty if the other means either entail substantially greater costs or are substantially less likely to be effective. For example, doctors might be able to prevent the same effects in seven months, or to cure the ailment at birth by rebuilding the child's nervous system. But neither option would absolve the mother of her duty to effect an easy rescue now if its execution would drain the family's budget. Nor would the fact that the mother could lessen some of the child's pain once it is born absolve her of her duty to rescue the embryo now, as long as her current prevention would be more effective than the future cure.

86. This assertion seems to point to a troubling paradox: The parents need not rescue the embryo from a severe genetic disease that will prevent its birth, but must save it from a slightly less severe disease that will allow the child to be born, but to a lifetime of suffering. I believe that to be the case, although it is, at first, counterintuitive in two respects. First, our rescue behavior seems to indicate that we believe the curtailment of a life to be more serious an emergency than one that threatens a "mere" lifetime of suffering. Second, the embryo, given a chance, might prefer a lifetime of suffering to no lifetime at all. The difference for me is that, while I feel that a living person has some right to continued life, I do not believe (at least, not as strongly) that an embryo has a right to be born.

Those whose intuition is different must be reacting not to the duty to rescue the embryo from future suffering, but to a duty to give birth to it in the first place. To be sure, where the ailment is so severe that the embryo will never come to term, the two duties are so intertwined that to act on the former is to accomplish the latter. Under that scenario, however, the duty to rescue simply does not come into play. Those who believe there is no duty to give birth to an embryo in the first place could readily choose not to take the pill that will bring the embryo to term (and need never reach the issue of the duty to rescue from suffering). Those who believe there is a duty to bring embryos to term might take the pill (but would also never reach the second issue).

87. This assertion breaks down once we do away with the assumptions of a costless and fool-proof rescue. There may be less costly "rescue" alternatives that prevent less suffering, which are nonetheless permissible because the marginal cost of the more effective rescue outweighs its marginal benefit. See *infra* notes 167-170 and accompanying text (discussing cost and effectiveness as limits to duty).

88. The assumption, again, is that the extra affection would never leave the suffering child indifferent to his suffering. However, one difficulty is that suffering is intimately tied to the sufferer. See *infra* text accompanying notes 166-167. Perhaps the best qualification is that the mother must rescue her child unless she is reasonably sure that the child would be indifferent to the anticipated suffering.

2. *The Duty to Rescue the Nonliving*

Perhaps the most serious objection to analogizing the ailing embryo to the ailing child lies in the dispute as to the moral status of each. On the one hand, there are those who would argue that there is no duty to rescue the embryo because it is simply not alive, or, if it is, it is not human. On the other hand, to believe, as do some of the "pro-lifers," that there is no morally relevant difference between the embryo and the child, would only strengthen the cases for the duty to rescue. Were the choice between aborting and not aborting, or between rescuing and aborting, that dispute would be not only highly relevant, but perhaps dispositive. In this context, however, we need not dwell on the moral status of the embryo. As counterintuitive as it may seem, that the ailing child happened to be alive when his parents were deciding whether to administer the pill to rescue him from a lifetime of suffering was, as we shall see, irrelevant to his parents' duty to rescue him. And the issue whether we consider the embryo human, or even alive, is no more relevant to the duty to rescue in the ailing-embryo scenario.

The proposition that the living or nonliving status of the imperiled party is irrelevant to our moral duty to rescue "him," seems initially counterintuitive because we rarely face problems in which the "imperiled" party is not alive. When we do, we do not think of it in such surreal terms.

One such problem is the allocation of scarce resources. Some have argued that we owe future generations a duty to reduce further suffering by conserving resources, or that future generations have a right to a particular resource allocation.⁸⁹ The differences between any such duty to future generations and the duty of the mother to rescue her child, however, are too great for the analogy to be of much use. First, the needs, values, and very nature of future generations may differ substantially from our own, making it virtually impossible for us to base our decision upon a notion of their own good.⁹⁰ Thus, the peril to future generations does not present an emergency in the sense in which ailing-embryo scenario does. Second, each one of us is not responsible for the existence of future generations in the same sense that the mother of the ailing embryo, having decided not to abort, is responsible for the birth of her suffering child. The

89. See, e.g., Feinberg, *The Rights of Animals and Unborn Generations*, in RESPONSIBILITIES TO FUTURE GENERATIONS 1, 39 (E. Partridge ed. 1981) [hereinafter cited as RESPONSIBILITIES] (future generations have rights that are no less real merely because we cannot name specific members); Pletcher, *The Rights of Future Generations*, in RESPONSIBILITIES, *supra*, at 167 (future generations have right to world that is not so changed by our actions that their choices and actions are impeded). *But see* De George, *The Environment, Rights, and Future Generations*, in RESPONSIBILITIES, *supra*, at 157 (future generations cannot "have rights" because they cannot "have" if they do not exist; to grant future generations rights indefinitely into future places upon us impossible demands); Macklin, *Can Future Generations Properly Be Said to Have Rights?*, in RESPONSIBILITIES, *supra*, at 151 (future generations have no rights because rights apply only to actual, not possible, persons; sentience is necessary precondition to rights).

90. See Note, *A Ghost of Christmas Yet to Come: Standing to Sue for Future Generations*, 1 J.L. & TECH. 67, 83-94 (1986) (discussing difficulties in representing interests of future generations when problems change, values change, and humans change, especially with capacity to genetically engineer).

special relationship is lacking. Finally, given the nature of the allocation problem, any meaningful rescue of future generations from their potential suffering could not constitute an easy rescue. To save them, by definition, would involve great costs and inconvenience to our generation.

Since the real-life problems that implicate a duty to the nonliving are not helpful, perhaps another hypothetical can help illustrate the irrelevance of the living or nonliving status of an imperiled party. Imagine that it is possible to bring a cadaver back to life. Imagine further that we might accomplish this life restoration by administering either a blue pill or a red pill. The blue pill (forgetting for the moment, that we might have trouble forcing the cadaver to swallow it) will simply bring the cadaver back to life, but will not reverse the deterioration of the cadaver's tissue that occurred while he was dead. Instead, he will live out the rest of his renewed life in pain. The red pill is identical to the blue pill in all ways, including cost, except that it contains an added ingredient. The red pill will not only revive the cadaver, but it will also reverse the tissue deterioration.

Once we have decided to bring the cadaver back to life by giving him a pill, we have a moral obligation to give the cadaver the red pill—the pill that prevents the greater amount of suffering.⁹¹ The cadaver's present lifelessness is irrelevant to the choice of pills. All that is relevant is that the subject, alive or not, will be alive in the future, and that depending on which pill we administer, the cadaver may or may not suffer excruciating pain while alive.

The lesson of the revived-cadaver scenario is that the potential of future life is what triggers the duty to rescue a subject from future suffering. If we were to decide not to administer any pill to the cadaver, we would not be morally bound to lessen his future suffering. And if we were to decide to bring the cadaver back to life only to see if we could do it, and then "kill" him, our choice of pills would matter little. In either case, moral philosophers might argue about the morality of the underlying decision (not to revive the cadaver, or to revive him just for kicks), but would be indifferent to our choice of pills. That leads us to the simple corollary: we have no moral obligation to rescue the subject from suffering that he will not be alive long enough (or at all) to experience.

These observations are readily applied to the ailing-embryo scenario. The mother's duty to rescue her embryo now from future suffering depends not on whether it is now alive, but on the fact that she expects it to begin a lifetime of suffering in eight months.⁹² Whether the current form of the future human being that we are ultimately rescuing is an ailing child, an embryo, or a pea pod,

91. To generalize the rule, all else being equal, the moral obligation would be to administer the pill that reduces the greatest amount of suffering.

92. "[T]he [embryo] is said to possess rights not to be harmed, but its rights exist by virtue of the fact that the [embryo] will be brought to term. Hence, the right is not that of the [embryo] so much as the right of the child that the [embryo] will become." Robertson, *Embryos, Families, and Procreative Liberty: The Legal Structure of the New Reproduction*, 59 S. CAL. L. REV. 939, 971 n.102 (1986).

the moral duty attaches. Once the mother has committed herself to bearing the child, she is morally obligated to save her child now from a future of torture.

Conversely, if the mother knew for sure that some intervening cause would curtail the embryo's life before the eight months are up, or shortly thereafter, there would be no duty to rescue that embryo from the future suffering. Of course, few intervening causes are certain to kill the embryo within eight months.⁹³ From the mother's perspective, the intervening causes most certain to do so, are those that are in her control. As was true in the revived-cadaver scenario, if the mother were to resolve now, for whatever reason, that she would abort the embryo next week, moral philosophers would have much to say about the morality of the abortion. They would be indifferent, however, to the mother's decision whether to ingest the miracle pill. Such a "rescue" would only "save" the embryo from suffering that it will never live to experience.

III. THE GENETICALLY AILING-EMBRYO SCENARIO: THE MORAL RELEVANCE OF THE GENETIC DEFECT

Throughout the discussion of the ailing-child and ailing-embryo hypotheticals, the source of the "ailment" has been ignored. Suppose that the "ailment" that inflicts the embryo is a genetic defect that precludes normal development of the embryo's central nervous system. The pill works through a site-specific attack on, and alteration of, a single building block, or "nucleotide," of the embryo's DNA. A compelling case can be made for the proposition that the genetic rescue is not morally different from a more conventional rescue that yields an identical result.

The arguments against the genetic rescue fit into two broad categories: consequentialist and deontological.⁹⁴ The consequentialist arguments are rooted in the notion that the *end result* of a genetic rescue is not identical to that of the more conventional rescue. First, the genetic rescue is an attack at the source of the defect. Second, the genetic rescue affects the target's progeny as well. The deontological arguments, on the other hand, object to genetic engineering as a *means*, even if the ends are identical to those of more traditional modes of treatment. One such argument is that the genetic engineering amounts to an immoral judgment as to the relative value of different lives.⁹⁵ Another argument, espoused most emphatically by Roman Catholic theologians, holds that genetic engineering is immoral because it severs the sacred bond between the unitive and procreative functions of sex.⁹⁶

93. Notice that as long as there is *some* chance that the embryo will live, the mother has a duty to rescue it.

94. For a panoramic view of the range of moral, ethical, and social objections to genetic engineering see PRESIDENT'S COMMISSION, *SPLICING LIFE*, *supra* note 1, at 51-79.

95. To the extent that this argument views the end result of the genetic rescue — the creation of a new person — as different from the end result of conventional cures, it has a consequentialist component. However, both the notion of what amounts to a different person and the conclusion that it is wrong to assign different values to different people are based on *a priori* notions of rights.

96. A third consequentialist argument is that in order for medical technology ever to develop a risk-free and costless miracle pill, someone at some time must experiment with an embryo. P. RAMSEY, *supra* note 6, at 134-35; *Making Babies*, *supra* note 7, at 26-30; see also R. MCCORMICK,

A. The Genetic Cure as an Attack at the Source

The first consequentialist argument against the genetic rescue focuses on the most obvious difference between the genetic rescue and conventional forms of treatment or cure: The cure of a metabolic defect affects not much more than the ultimate manifestation of the child's undesirable characteristics; the cure of a genetic defect, in stark contrast, targets the very source, the blueprint of those characteristics. However, if that distinction is morally relevant at all, it cuts in favor of the genetic treatment. After all, why not attack a problem at its source instead of its fringes?

Insofar as the first consequentialist argument suggests an injunction against making choices that fundamentally affect the future child's life, it applies equally to the traditional cure of the fetus suffering from a metabolic defect and to the cure (or prevention) of any serious ailment in a child.⁹⁷ The argument proves too much. If a genetic and a conventional treatment would have the same impact on the child's life and the former is objectionable only because it effects too fundamental a change, then the latter must be equally objectionable. Moreover, the proponent of the first consequentialist argument would be hard-pressed to draw a principled distinction between (1) effectively curtailing *now* the pain and suffering that will be caused by the genetic ailment, and (2) doing nothing now, but waiting for the suffering to begin and *then* using all our best efforts and resources to stop it. If they effect equally fundamental changes, they are equally objectionable.

B. The Genetic Cure as an Inheritable Cure: The Effect-on-Progeny Attack

Few opponents of genetic engineering would seriously assert that the treatment is immoral merely because it focuses on the defect's cause. A second, more problematic ends-oriented objection to the genetic rescue also focuses on the DNA's unique role as a genetic blueprint. Since the genetic code will be

supra note 4, at 287-88, 290-91; Kass, *The New Biology: What Price Relieving Man's Estate?*, 174 SCIENCE 779, 780-81 (1971). Ramsey expresses this view: "[A] parent cannot legitimately submit a child who is as yet a hypothetical nothing to additional hazards for the sake of the accumulation of knowledge. . . . [T]here is no way by which we can *morally* get to know whether many things now planned are technically feasible or not." P. RAMSEY, *supra* note 6, at 134 (emphasis in original).

This objection would have applied equally to development of such techniques as amniocentesis and sonograms because "hypothetical nothing[s]" could not morally have been subjected to them when their hazards were unknown. Furthermore, the argument assumes that the parents expect the "hypothetical nothing" to become a real something. That is, the argument only has force if one assumes abortion is morally wrong. If the mother is going to abort the fetus anyway, objections to experimentation with the embryo might be voiced, but the exposure of the embryo to "additional hazards" could not be one of them. Finally, the argument is entirely irrelevant once the technology is in place. If reticence to experiment with potential life is Ramsey's sole reason for opposition to genetic engineering, he might protest vehemently its development, but would be the first to embrace it once it became foolproof. At any rate, since I have posited the existence of the technology—a risk-free miracle pill—this objection is beyond the scope of this Article.

97. See Schull, *Genetic Counselling: Past, Present and Future*, 63 AM. J. PUB. HEALTH 925 (1973) ("'genetic engineering' is merely a more permanent solution to the same sorts of problems" that conventional treatments cure).

passed on from this embryo to its progeny, the effects of a genetic rescue are much further-reaching than those of a conventional cure. In that sense, a genetic cure of a defect is necessarily more fundamental than a conventional cure of the same defect.

It does not seem intuitively wrong to solve the ailments of more than one generation at a time. Assuming the existence of a miracle pill, the genetic rescue—precisely because of its far-reaching effects—is necessarily more effective than any alternative conventional rescue. If we can also prevent the embryo's progeny from inheriting the defect, the moral duty seems even more compelling. Nevertheless, that long-range effectiveness, however, is the target of the effect-on-progeny attack. The concern is ecological. Simply stated, in eliminating what we perceive to be the "bad" genes we might narrow the human gene pool. That decrease in genetic diversity, the argument goes, reduces the species' capacity to adapt to a changing environment, thereby reducing its prospects for survival.⁹⁸

Of course, the ecological objection cannot apply to the cure of genetic defects that never enter the gene pool. For example, the defect might kill the victim before he reaches procreative age. Thus, if the sole objection to the genetic rescue were based upon its potential ecological consequences, the objector would have to concede the existence of a moral duty of genetic rescue from diseases that would prevent the child from ever reaching procreative age. The danger comes, however, when the genetic defect can be passed on either by the "defective" person, or by a carrier — one who has the genetic material for, but whose genes never express, the defect.

As to those "defects" that do diversify the gene pool, there are several possible responses to the ecological objection. First, there is no reason to assume, as the objection seems to do, that genes, once altered, are further unalterable. If we could engineer away "defects," we could presumably engineer them back were we later to discover that they had desirable side-effects (unless one generation were to take the unlikely step of engineering into the next an aversion to genetic engineering or an inability to engage in it). Indeed, we might even engineer the "side-effect" without the "defect."⁹⁹ The engineered response to the changing environment is certainly more effective than reliance on slower and more random natural selection.

Second, implicit in the ecological objection is the unwarranted assumption that genetic engineering will unify, rather than diversify the gene pool. While some characteristics that we now consider "defects" will certainly disappear from the gene pool, genetic engineering is likely to introduce other characteristics that are not currently in our gene pool. The Brave New World, populated

98. The argument does not depend upon predictions of some catastrophic event. A "sudden major discontinuity in the human gene pool might well create a major mismatch between our social order and our individual capacities," thereby destroying the fine balance between biological evolution and human culture. Sinsheimer, *supra* note 1, at 611.

99. This solution is not entirely satisfactory since it assumes that changes to which we might need to adapt genetically will be gradual. If a catastrophic change instantly kills all those who lack the desirable trait, we will not have time to genetically engineer a next generation that has that trait.

by clones, is just one potential consequence of genetic engineering. Equally (if not more) likely is a world in which divergent parental tastes introduce diversity. And we have no reason to assume, as the ecological objection does, that nature's "plan" is any better than human ingenuity. Nature has no plan; if a certain "defect" turns out to have beneficial effects, it will have been a matter of random chance. It is the natural *selection* among diverse traits, not their natural *production*, on which evolutionary theory is based. Human intervention, while not omniscient, is rational and planned. It makes far more sense to plan for the future even with imperfect information, than to sit idly by waiting for the genetic roulette wheel to stop spinning.

Finally, even to grant the validity of the two assumptions and to conclude that the most prudent course is the passive, natural course, would not get us far. It is no longer clear what the passive course is. Medicine, it is said, has already "contaminated" the human gene pool by preserving to procreative age many carriers whose genetic traits would otherwise have killed them "naturally."¹⁰⁰ Thus, even nonintervention could have a profound impact on the gene pool.¹⁰¹ Genetic engineering, viewed in that light, might merely balance that effect and restore the natural state.¹⁰²

The ecological objection to genetic engineering speculates about the possibility of some future harm. The scenarios feared may never come to pass, and if they do, we might by then be able to avoid or respond quickly to the harm. The contingent, and possibly curable, anticipated harms must be balanced against the certain and imminent suffering that the genetically ailing-embryo will experience when it is born. That balance favors genetic intervention now.¹⁰³

100. Scholars disagree as to the degree to which the human gene pool has been deteriorating. Compare J. FLETCHER, *THE ETHICS OF GENETIC CONTROL* 182 (1974) ("We are now approaching a situation in which genetic causes account for as many or more deaths than 'disease' in the popular sense.") (emphasis in original) and Francoeur, *supra* note 12, at 437 (genetic engineering is necessary because "[t]oday's medicine has opened the door to a pollution of the human gene pool which may well be a death warrant for mankind") with Lappé, *Moral Obligation and the Families of "Genetic Control,"* 33 *THEOL. STUD.* 411, 419 (1972) ("Imminent 'genetic deterioration' of the species is, for all intents and purposes, a red herring."). Assuming the gene pool is approaching "contamination," some argue that the adoption of prophylactic measures, and not genetic engineering, is the better response. See Lappé, *supra* at 425-27.

101. The issue of our obligation to future generations to "bequeath an optimal gene pool" is implicated here. CONTEMPORARY ISSUES, *supra* note 1, at 569-70; see PRESIDENT'S COMMISSION, *SPLICING LIFE*, *supra* note 1, at 66 ("where does justice to future generations end and generosity begin?").

102. The problem is not limited to interference with the human gene pool. "Regardless of whether or not we choose to engage in controlled genetic therapy, the genetic make-up of our world will change for the worse in the future unless current trends toward atomic warfare, overpopulation, pollution, and environmental destruction are remedied." Fletcher, *Moral Problems and Ethical Issues in Prospective Human Gene Therapy*, 69 *VA. L. REV.* 515, 542 n.101 (1983).

103. The only reason the suffering in the genetically ailing-embryo scenario might not be considered certain is that the embryo might never be born. That possibility does not change the balance. The urgency of a genetic intervention is diminished but the ecological argument is mooted as well because if the child is never born with the suffering gene, the diversity of the gene pool remains unchanged.

C. Identity Swapping: The Rescue that Creates a Different Person

The deontological arguments, unlike the consequentialist arguments, oppose the very means of the genetic rescue, not the end result. The most troubling deontological challenge to the genetic rescue is rarely raised, at least not explicitly. The objection is that genetic engineering amounts to an identity swap. To change the victim into someone else in the course of a genetic rescue raises both moral and logical problems.

1. *The Logical Non Sequitur*

It is indeed odd to say that one's intervention has "rescued" a victim if, in the course of the intervention, the victim ceases to exist and becomes someone else. The intervenor has essentially sacrificed the person that was and reshaped his parts into a *new* person. Thus, while one might conceive of a situation in which we might owe person *A* a duty to rescue him by ending (or preventing) his life,¹⁰⁴ it is difficult to see how we could owe him a duty to end his life *and* to bring a different person *B* into existence.

Under this view of the duty to rescue, the mother's act could only logically be deemed a rescue if the product of the act—the engineered embryo—is still the same (or, more accurately, destined to become the same person) as the unengineered embryo. Thus, a working definition of "identity"—what it means to be the "same" person over time—is indispensable to an analysis of the duty of genetic rescue.

2. *The Moral Prohibition*

Identity-swapping raises more than just logical problems. The most typical deontological argument against genetic engineering is that the decision to change the genetic traits of some potential person must be based upon some image of a perfect person. "The very language of 'defect,' 'abnormality,' 'disease,' and 'risk' presupposes such an image, a kind of prototype of perfection."¹⁰⁵ Implicit in such a supposition, the argument goes, is a statement that some human lives are more valuable than others,¹⁰⁶ and our decision to act on such value judgments is immoral. Thus while noninterventionists rarely declare *identity* to be the central issue, this objection to genetic engineering must be rooted in an assumption that to tamper with genes is to change the individual's identity.

Initially, we must refine the objection, for it could not possibly mean all that it says. To hold an image of a perfect person is not, itself, immoral. One of the characteristics that distinguishes us from other animals is our ability to aspire to better ourselves. Nor could it be immoral to act on that aspiration.

104. See *supra* note 19 (citing conflicting views on morality of aborting deformed child).

105. Callahan, *The Meaning and Significance of Genetic Disease: Philosophical Perspectives*, in CONTEMPORARY ISSUES, *supra* note 1, at 582.

106. Callahan demonstrates that the goal of genetic engineering—the elimination of "defects"—is in tension with our efforts to accept "defective" individuals into society. *Id.* at 583-84. We try to tell ourselves that they are just as valuable as "normal" persons. We turn around however, and do all we can to eliminate their characteristics from our society. *Id.* at 582-83.

Parents, in particular, must have some notion of perfection against which to measure their children. Otherwise they would be unable to teach manners and values to their children or to shape intellects, personalities, and bodies. Parental influence is intended to mold our children toward some ideal. Yet we do not equate any of these interventions with judgments as to the relative values of different human lives.

Certainly, most of us see a distinction between simply shaping a child's values, personality, or physical attributes and genetically engineering her. That difference in perception is attributable, at least in part, to our view of identity. In the former case, we are making an individual more ideal. In the latter, we are making a more ideal individual. The seldom-acknowledged focus of the noninterventionists' argument must be on whether the changes suffice to turn one person into another *different* person.

Since the duty to rescue could never, as a logical matter, require us to convert the victim into someone else, we need not (for purposes of this Article) address the assumption that it is wrong to value one life over another or to choose between two lives on the basis of such a valuation. I would not, however, rule out the possibility of an individual's ethical obligation—running to *society*—to genetically engineer an embryo, even where to do so would yield a different person.

I divert momentarily from the duty to rescue to demonstrate why one might harbor doubts as to the validity of the assumption that one life should never be valued over another. A couple of examples should suffice. Suppose an astronaut, while spacewalking outside his starship, inadvertently tumbles into a wrinkle in space. He is permanently cut off from his companions who need every worker they can get. They can see him floating around, but he can neither perceive nor communicate with them. The only way to retrieve him is to beam him up, but in so doing, "his" molecules will be rearranged to produce an entirely different person. To transport and transform the astronaut could not be a rescue. Yet a utilitarian argument can be made for a duty to transform the "useless" astronaut inside the wrinkle into a "useful" astronaut on the starship. A similar argument might compel us to transform a severely retarded child, cut off from the rest of this world, into a child that can produce in a society that desperately needs productive members. Even if the engineering would yield what we perceive as a different person (so that no duty of genetic rescue could run to the retarded child), one can still imagine a duty to society to genetically engineer the defective embryo.

Furthermore, the increased utility resulting from the swap may not have to be overwhelming to justify the choice between two lives on the basis of their relative value. Suppose a husband and wife wanted to conceive a child, but the husband carries a gene that ninety-nine times out of a hundred will produce a mildly retarded child. By some miracle of modern science, the couple knows that if the husband inseminates his wife at the stroke of midnight, the one sperm in a hundred that does not carry the trait will fertilize the egg. The couple that takes advantage of that knowledge is choosing between two potential

human beings on the basis of their relative values. Nevertheless, few would consider their plan morally reprehensible.

3. *Identity Through Time*

To summarize, the duty of genetic rescue, as a logical matter, cannot extend beyond the point at which the intervention would amount to an exchange of one person for another. Even if it could, some might consider such a swap immoral because it would amount to a choice between two equally valuable lives. In either event, the pivotal issue is what it means to be the "same" person.

In one sense, any rescue creates a "different" person. A rescue might, itself, change the victim's form. For example, to rescue a miner who is pinned beneath a beam in a collapsing mine, we might have to break his spine. Despite the decreased physical capacity of the now-paralyzed miner, we have little trouble considering ourselves his rescuers. Conceivably, the very purpose of a rescue might be to change the form and capabilities of a person. For example, an operation that restores vision to a blind child is certainly a rescue even though it will fundamentally affect that child's sensory capacity and, hence, her future life.

The same is true if the victim's personality or mentality are targeted. Consider, for example, a psychiatric patient with a dual personality. One personality is reclusive, noncommunicative, and unaware of its surroundings. The other is well adjusted, intelligent, and sociable. The personalities share equally the same body. The duality tortures both personalities; each does not understand and cannot explain to the outside world the actions of the other. A psychiatrist wants to help the patient regain contact with the world. In curing (or "rescuing") the patient, the psychiatrist will have to choose one personality over another.

While in each of these examples we effect changes that make the victim different enough for us to say colloquially that she or he is a "different person," we would not hesitate to deem each act a "rescue" (or the change effected, a "cure"). That must be because, colloquialisms notwithstanding, we still consider the resultant rescue—the paralyzed miner, the child with restored vision, the former psychiatric patient with a "normal" personality—the same person.

Robert Nozick's closest-continuer theory provides a workable starting point toward determining under what circumstances a post-rescue person, *y*, is the same as the pre-rescue person, *x*. The closest-continuer theory holds that:

y at [post-rescue] time t_2 is the same person as *x* at [pre-rescue time] t_1 only if, first, *y*'s properties at t_2 stem from, grow out of, are causally dependent on *x*'s properties at t_1 , and, second, there is no other *z* at t_2 , that stands in a closer (or as close) relationship to *x* at t_1 than *y* at t_2 does.¹⁰⁷

Two of Nozick's many examples demonstrate how this theory, in its simplest form, works.¹⁰⁸ In one case, every aspect of person *A*'s brain, including his

107. R. NOZICK, *PHILOSOPHICAL EXPLANATIONS* 36-37 (1981).

108. *Id.* at 37-39.

personality and memories are copied and inserted into a duplicate person *B*. In the second case, the brain of a dying heart attack victim *A* is transplanted into a healthy body that was cloned from *A*, to form person *B*. In the first case, Nozick intuitively feels that the person who was *A* has continued in *A*'s original body and *B* is a new person. In the second case, we feel more comfortable saying that the person who was *A* has continued in body *B* and that the person occupying body *B* is the same person as *A* was before the operation. In each case, there is some continuity between person *A* and the person occupying body *B* that satisfies Nozick's first condition. The sole difference is the existence in the first case of a person—the person occupying the old body—who is an even closer continuer of person *A*.¹⁰⁹

Applying this view to the genetically ailing-embryo scenario, we see that the post-miracle-pill embryo *B* is the same as the pre-pill embryo *A*. Embryo *B* keeps the physical matter and most of the characteristics of embryo *A* (all the same characteristics of *A* except for the genetically-induced potential suffering). Since no entity exists with any part of the physical make-up of pre-pill embryo *A* and with a closer match of that embryo's genetic code, embryo *B* is the closest continuer of pre-pill *A*. Therefore, the taking of a pill does not change the child who would have been born into a different person, and may legitimately be called a "rescue."

On the other hand, if all the genes of embryo *A* except for the gene for potential suffering were duplicated and transplanted into a new embryo *B* while still allowing embryo *A* to develop, embryo *A* would be the closest continuer of pre-transplant embryo *A* and the transplant would not be a rescue.

Intuition confirms this conclusion. I would consider myself the same person even if a massive dose of radiation targeted every one of my cells and altered one nucleotide on some gene that is never expressed. Similarly, I would not believe myself to be a different person if that same dose of radiation changed several genes to cure some severe suffering. Certainly those who favor therapeutic treatment of somatic (nongerm-line) cells would agree.

From this discussion of the closest-continuer theory, we may conclude that the application of a duty-to-rescue analysis to genetic engineering is not a *non sequitur*, if two conditions are met. First, the genes that are replaced must not be inserted elsewhere (so as to create an even closer continuer). Second, the changes engineered must not be so drastic that we could not still consider the engineered embryo a continuer in the first place. The latter condition will be dealt with in greater detail later. Suffice it to say that the use of genetic engineering to change a single molecule in the genetic code of an embryo to prevent a lifetime of suffering cannot necessarily be objected to solely on the ground that the resulting nonsuffering child's identity is different from that which the ailing embryo would have produced.

109. *Id.* at 38-39.

D. Begotten, Not Made: The Debasement of Traditional Values and Human Life

Closely related to, and in some respects dependent upon, the objection that genetic intervention amounts to an identity swap, is the argument, enunciated most clearly by the Christian, and particularly Roman Catholic theologians, that the engineering of human life will undermine traditional values and devalue human life. The Vatican, for example, has drawn a sharp line between two categories of medical treatment of fetuses. On the one hand, it upholds certain *nongenetic* medical treatment of embryos, even if directed toward "the healing of . . . maladies . . . stemming from chromosomal defects . . ." ¹¹⁰ According to the Vatican, "such an intervention would indeed fall within the logic of the Christian moral tradition."¹¹¹ On the other hand, the Vatican objects vehemently to *genetic* intervention in fetuses:

[G]enetic manipulation of human embryos . . . [is] contrary to the human dignity proper to the embryo, and at the same time [it is] contrary to the right of every person to be conceived and to be born within marriage and from marriage. . . .

Certain attempts to influence chromosomal or genetic inheritance are not therapeutic but are aimed at producing human beings selected according to . . . predetermined qualities. These manipulations are contrary to the personal dignity of the human being and his or her integrity and identity. . . . Every person must be respected for himself: in this consists the dignity and right of every human being from his or her beginning.¹¹²

Two strands to the Catholic position¹¹³ are readily identifiable. Most prominent is an assertion that genetic manipulation undermines the fetus' integrity and identity, and implicitly, that it amounts to an immoral judgment as to the relative values of different human lives. As demonstrated in the previous section, however, that is not necessarily so.

The second strand, which will be the focus of this section, consists of an assertion that any procreation that is not "within marriage and from marriage" is immoral. In a nutshell, human life is "meant to be begotten, not made."¹¹⁴ This maxim has been spelled out most explicitly in the reproductive-technology context.¹¹⁵ Life that is begotten has kept intact the divinely blessed relationship

110. *Vatican Letter*, *supra* note 4, at 702 (internal quotes omitted).

111. *Id.* (internal quotes and footnote omitted). Specifically, it sanctions "procedures carried out on the human embryo which respect the life and integrity of the embryo and do not involve disproportionate risks affecting it, but are directed toward its healing, the improvement of its condition of health or its individual survival." *Id.* (emphasis omitted).

112. *Vatican Letter*, *supra* note 4, at 703 (footnotes and emphasis omitted); *see also id.* ("Also, attempts or hypotheses for obtaining a human being without any connection with sexuality . . . are to be considered contrary to the moral law, since they are in opposition to the dignity both of human procreation and of the conjugal union.") (emphasis omitted).

113. For convenience, the position will be referred to in this section as the Catholic position. There are, of course, non-Catholic theologians, most notably the Methodist theologian Paul Ramsey, who ascribe to it as well. *See P. RAMSEY*, *supra* note 6, at 124.

114. *May*, *supra* note 4, at 55. For the most recent and authoritative overview of this argument *see generally Vatican Letter*, *supra* note 4, at 704-08.

115. The arguments that are addressed in this section were levied primarily against *in vitro* fertilization and other reproductive technologies. Even the *Vatican Letter* does not spell out this strand of its rationale in any great detail until its discussion of the morality of reproductive interventions. However, the same arguments apparently apply *a fortiori* to genetic engineering, the ulti-

between marital love—as manifested most powerfully in the act of marital lovemaking¹¹⁶—and procreation.¹¹⁷ Life that is made in the laboratory severs those unitive and procreative strands that were meant to be inseverable.¹¹⁸ In that respect, genetic engineering is in the same class as nonmarital sex,¹¹⁹ contraception,¹²⁰ *in vitro* fertilization by husband or donor,¹²¹ and cloning.¹²²

1. The Vicious Circle

Some proponents of the Catholic position expect that the inseverability of the unitive and procreative functions of sex be taken on faith. That is to say,

mate form of "artful childmaking." May, *supra* note 4, at 32; *cf. id.* (discussion "prescind[s] from a consideration of [cloning] insofar as what I will have to say about *in vitro* fertilization will be applicable *a fortiori* to cloning"). They are also particularly relevant because a major religious objection to the development of reproductive technologies has been that they might make it easier to correct genetic defects at their source. Kass, *New Beginnings in Life*, in *THE NEW GENETICS AND THE FUTURE OF MAN* 15, 38-41 (M. Hamilton ed. 1972) [hereinafter *NEW GENETICS*]; Ramsey, *Genetic Therapy: A Theologian's Response*, in *NEW GENETICS*, *supra*, 157, 163.

116. See May, *supra* note 4, at 51 ("exclusive character of marital love . . . can perhaps be best understood by reflecting on the significance of the act of which spouses, and spouses alone, are capable, namely the marital or conjugal act").

117. "[T]here is an indissoluble union willed by God and not to be deliberately sundered by human choice between the unitive or love-giving and the procreative or life-giving meanings of human sexuality." May, *supra* note 4, at 31 (citation omitted).

118. This reflects the age-old argument between the separatists and the nonseparatists. Compare A. MONTAGU, *SEX, MAN AND SOCIETY* 14 (1969) ("[i]t is necessary to be unequivocally clear concerning the distinction between *sexual* behavior and *reproductive* behavior") (emphasis added) and *Ethical Aspects*, *supra* note 15, at 776-83 (Catholic position based on "a priori metarational opinion"; "laboratory reproduction is radically human . . . [because it] is willed, chosen, purposed and controlled") with W. MAY, *SEX, MARRIAGE, AND CHASTITY: REFLECTIONS OF A CATHOLIC LAYMAN, SPOUSE, AND PARENT* 1-31 (1981) and P. RAMSEY, *supra* note 6, at 38, 124 (1970) (inseparability of unitive/procreative functions "came to us from the Creator"; we must not sever "what God joined together in creation"). Not all who take the Catholic position are absolutists, however. Some believe that the severance of the unitive and procreative functions of sex is permissible in extreme cases and under certain conditions. See C. CURRAN, *POLITICS, MEDICINE, AND CHRISTIAN ETHICS* 210-19 (1973) (artificial insemination from husband and *in vitro* fertilization permissible under certain conditions if married couple cannot have children); R. MCCORMICK, *supra* note 4, at 306-33 (same); P. RAMSEY, *supra* note 6, at 42 (approving of artificial insemination by husband); J. AREEN, P. KING, S. GOLDBERG & A. CAPRON, *LAW, SCIENCE AND MEDICINE* 175 (1984) (quoting Pope John Paul II; approval of genetic engineering for severe diseases).

Commentators have understood this inseverability requirement in two ways. McCormick considers the unitive and procreative functions to be physically inseverable. R. MCCORMICK, *supra* note 4, at 328-29. In May's view, "the basic objection to the laboratory generation of human life is *not*, as McCormick claims the *physical inseparability* of the unitive and procreative meanings of the marital act but the deliberate choice to generate human life nonmaritally." May, *supra* note 4, at 46 (emphasis in original) (footnote omitted).

119. See May, *supra* note 4, at 52-53 n.58 ("Unmarried persons may be able to engage in sexual coition, but . . . such acts are in no way the manifestation of an exclusive sort of love.") (footnote omitted).

120. See Pope Paul VI, *ON THE REGULATION OF BIRTH* 11 (1968) (contraception is immoral because "man on his own initiative" severs the "inseparable connection"); see also May, *supra* note 4, at 53 (those who use contraception sever bond between marriage, marital love, and procreation because "[t]o attack one of these is to attack . . . the others").

121. See generally May, *supra* note 4, at 46-55.

122. *Cf. id.* at 32, 46-55 (argument against *in vitro* fertilization applies *a fortiori* to cloning).

we know that they are inseverable because God said so.¹²³ One either accepts that as true or not; logic cannot resolve the issue.

The more dominant line of Christian scholarship, however, attempts to escape this *a priorism*: The objection to the genetic rescue is not based solely upon the intrinsic merit of maintaining intact that sacred relationship, but also upon the putative deleterious consequences of its severance.¹²⁴ In the view of some adherents to the Catholic view, it is precisely because of the anticipated consequences that we know God must have intended the unitive/procreative bond to be inseverable. The choice to generate life nonmaritally is "destructive of goods crucial to human existence."¹²⁵ That choice undermines the goods of marriage, parenthood, and family¹²⁶ because it "debiologizes" those goods,¹²⁷ and in so doing endangers human life.¹²⁸ The generation of life outside of the marital act "transforms the act of generating human life from one of procreative marital love to one of *artistic production*, thereby treating human life not as a good of incomparable and priceless value but rather as subordinate to its producers."¹²⁹

Even that formulation is hopelessly circular. While decidedly more consequentialist in structure, it boils down to the same *a priori* assertion. The argument, followed through, looks something like this: We know that God intended the unitive/procreative bond be inseverable. How do we know that? Because the generation of human life outside the act of marital lovemaking undermines the good of marriage and, consequently, devalues human life by turning generation into an act of artistic production. How do we know that such

123. See P. RAMSEY, *supra* note 6, at 124 (inseverability "came to us from the Creator"). Even those who purport to take the deontological view, however, often slip into language that is consequentialist. See R. MCCORMICK, *supra* note 4, at 290 (discussing Ramsey's tendency to introduce consequentialist arguments into analysis).

124. See R. MCCORMICK, *supra* note 4, at 289 (functions "inseverable because to separate them would dehumanize us and for this reason we may say that God has joined them") (emphasis in original); *Making Babies*, *supra* note 7, at 50 (nexus inseverable because consequence is to undermine parenthood and marriage).

125. May, *supra* note 4, at 50.

126. Pope Pius XII asserted:

Let it not be forgotten that the procreation alone of a new life, according to the will and the plan of the Creator, carries with it an amazing degree of perfection and the realization of intended aims. It is at the same time in conformity with the corporal and spiritual nature and the dignity of the marriage partners and with the normal and happy development of the child.

Address by His Holiness (Pope Pius XII) to the Fourth International Convention of Catholic Doctors, Castelgandolfo, Italy, Sept. 29, 1949, reprinted in 48 CATHOLIC MIND 250, 252 (emphasis added). The recent *Vatican Letter*, *supra* note 4, at 704, reiterates the point:

By reason of the vocation and social responsibilities of the person, the good of children and of the parents contributes to the good of civil society; the vitality and stability of society require that children come into the world within a family and that the family be firmly based on marriage.

127. R. MCCORMICK, *supra* note 4, at 303; May, *supra* note 4, at 33-54.

128. *Id.* at 54.

129. *Id.* at 54-55 (emphasis added). Such "artistic production" does violence to the notion of human life as "a living word of God . . . vicariously imaging God Himself." *Id.* at 54; see also Ramsey, *supra* note 115, at 175 ("We may finally lose our faith that, under God, life should always be affirmed with joy and hope beyond despair—and lose also our concern that even genetically defective lives be saved and cared for."); *Making Babies*, *supra* note 7, at 49 (to "lay one's hands on human generation is to take a major step toward making man himself simply another one of the the man-made things") (emphasis omitted). Other critics of genetic engineering echo this theme from other perspectives. See *infra* notes 138-141 and accompanying text (discussing notion of production of man).

generation of life devalues life? Because God intended that the unitive/procreative bonds be inseverable.

If we decree, by fiat, that the unitive/procreative bond *is* severable, then severing it does not undermine the goods of marriage, family, and parenthood, does not amount to an act of "artistic production," and does not debase human life.

2. *Severing the Inseverable*

Even granting the premise that the unitive/procreative bond is sacred, the injunction against the genetic rescue does not necessarily follow. The Catholic position does not define what it means to "sever" that sacred bond, other than to observe that it encompasses genetic engineering, nonmarital sex, cloning, *in vitro* fertilization, and artificial insemination.¹³⁰ Having itemized the forbidden means, the adherents to this view make no effort to distinguish the permissible from the impermissible means.

If, for example, a pregnant woman with a seven-month-old fetus were to decide to eat lunch—mainly because that would provide her developing child with the essential nutrients it needed to develop into a healthy baby—we would not stop her on the ground that to eat lunch would sever the inseverable bond between marital lovemaking and the birth of a human being. That conclusion would presumably be no different if the mother's failure to eat a few lunches would so severely retard the fetus' development that the fetus would emerge from the womb deformed and mentally deficient. The Catholic theologians would presumably impose an absolute duty to eat lunch, precisely *because* of the anticipated severity of a failure to do so. They would be hard pressed to explain why two acts (eating lunch and genetic engineering) that accomplish the same end result (the prevention of physical deformity and mental retardation) are treated differently.

Of course, one difference between eating lunch and genetic engineering might be that eating lunch is something that the woman presumably does every day, so that her act merely preserves the status quo. In sharp contrast, genetic engineering is unquestionably a departure from the status quo.

The status quo distinction does not, however, further the inquiry. Certain departures from the status quo, the Christian theologians presumably would concede, are morally required to preserve the form and mentality of the fetus. For example, suppose that the pregnant woman in the previous example is a gymnast whose forte is the uneven parallel bars. Every day for fifteen years, she has spent hours honing her skills. Her practices usually include swinging towards the lower bar at high velocities and wrapping her lower abdomen around it. Most would concede that, assuming the mother-to-be intends to give birth, gymnastics is one element of the status quo from which she is morally required to depart in order to preserve her child's form and mental capacity. Similarly, the Vatican has recognized as morally mandated other departures

130. See *supra* notes 119-122 and accompanying text.

from the status quo, such as the taking of a pill to prevent a lifetime of suffering (as in the nongenetically ailing-embryo scenario) or fetal surgery.

In short, the notion that severance of the sacred nexus is immoral does not compel the conclusion that genetic rescue is immoral unless some baseline course of conduct is assumed that distinguishes those acts that are to be considered severance from those that are not. However, no one has offered a principled formulation of such a baseline.¹³¹ The Catholic theologians have come to the scene with their own value system. Genetic engineering, cloning, artificial insemination, and *in vitro* fertilization sever the inseverable and amount to "artistic production," but eating lunch, refraining from swinging on the uneven parallel bars, and conventional medicine do not. This choice of values may be acceptable. But no principle makes this value system superior to any other.

3. *The Questionable Conclusions*

To adopt the *a priori* list that classifies genetic engineering as a "severance" of the inseverable link still would not compel the conclusion that human life will thereby be endangered. Each step along the way to that conclusion is based upon an *a priori* view of the way the world should be. Genetic engineering is properly considered a severance only if one accepts each of those *a priori* views.

In the first place, whether the debiologization of procreation unties the family knot depends upon what we believe to be the fabric of that knot.¹³²

131. May, himself, provides one of the most telling examples of just how unprincipled these distinctions are. May, *supra* note 4, at 55. In the context of his argument against *in vitro* fertilization under any circumstances, May observes that couples that are unable to produce children naturally should not despair. At least those whose sterility is the result of the wife's blocked fallopian tubes can resort to two other means that are not off limits. First is the surgical reconstruction of the fallopian tube, a procedure that is morally preferable to *in vitro* fertilization because the former is "truly therapeutic of a human pathology," while the latter "simply helps fulfill desires." *Id.* The operative words seem to be "truly" and "simply." The human pathology is the inability to make a sperm meet an egg. Both fallopian tube reconstruction and *in vitro* fertilization are artificial means of achieving that goal. Both fulfill the desire to have a child. Why is one method of achieving that goal any more "truly therapeutic" than the other?

The second permissible means is even more troubling: "to remove the ovum from the ovaries, implant it in the fallopian tube below the point where the tube is blocked, and then have husband and wife unite in the act of marital love." *Id.* (footnote omitted). May apparently considers it irrelevant whether the ovum is removed entirely after it is plucked, so long as it is put back in the fallopian tube. Indeed, presumably the doctor could pluck the ovum and put it in a test tube—again—so long as he puts it back in the fallopian tube before it is fertilized. The question is, what is the difference between (1) a husband who makes love to his wife and inseminates her ovum after it has been removed from the ovary, dropped in a test tube, and implanted and (2) a husband who makes love to his wife and withdraws to ejaculate directly into the test tube?

Equally incomprehensible is May's distinction between fallopian-tube implantation and artificial insemination. Both are artificial surgical means used to bring the sperm and the egg in closer contact. One accomplishes the task by bringing the sperm closer to the egg, the other accomplishes the task by bringing the egg closer to the sperm. See also *Vatican Letter, supra* note 4, at 707 ("artificial insemination within marriage cannot be admitted except for those cases in which the technical means is not a substitute for the conjugal act but serves to facilitate and to help so that the act attains its natural purpose") (emphasis omitted).

132. See *supra* note 118 (discussing separatist/nonseparatist debate). It is unclear to me what it means to "debiologize" marriage and the family. To McCormick, however, the debiologization of marriage is the "single certainty" that we can all agree results from *in vitro* fertilization, cloning, and (*a fortiori*) genetic engineering. R. MCCORMICK, *supra* note 4, at 303. But this certainty is not

That question is at the heart of the debate between the separatists and the non-separatists. If, as the separatists believe, parenthood is a nurturing relationship, and not primarily (or even partly) a biological relationship, then the debiologization of that relationship is not detrimental.

Even if we were to accept that biology is an important aspect of human relations, how the debiologization of procreation debases human life is still something of a mystery. In explaining how that debiologization undermines the family, McCormick asserts that man is a mix of everything: "reason, body, emotions."¹³³ That much, I admit, is true. If we entirely remove a man's ability to reason or to feel emotion, or if we suck those elements into a glass bulb and disintegrate his body, the remaining entity would not be human.¹³⁴ The conclusion that McCormick draws from this observation—that "to suppress any one of [the human elements] from his humanity is dehumanizing"—proves too much.¹³⁵ It is impossible to advance one of those elements without suppressing another. For example, by advancing the "biological" or "bodily" element in the mix, the Catholic position suppresses the role of reason. What McCormick has ignored is that his formulation assumes, without proving, that some baseline mix of these elements is human; to depart from that mix is to dehumanize. Again, the baseline that he chooses—humanity as it was before the invention of reproductive technologies and contraceptives—is fine, but it is not the only conceivable choice.¹³⁶

Equally mysterious is why "artistic production" debases rather than enhances the value of human life. The Vatican's most recent statement of the nexus is as follows: "The one conceived must be the fruit of his parents' love. He cannot be desired or conceived as the product of an intervention of medical or biological techniques; that would be equivalent to reducing him to an object of scientific technology."¹³⁷

Nor is that argument unique to the Catholic theologians. Nobel laureate Salvador Luria, for example, asked, "When does a repaired or manufactured man stop being a man . . . and become a robot, an object, an industrial product?"¹³⁸ The relevant question is why we think that genetic planning will ever

an inevitable truth. Underlying this notion seems to be some concept of a right and wrong state of biology. McCormick never explains why that state of biology cannot include a human that is biologically advanced enough to design himself.

133. R. MCCORMICK, *supra* note 4, at 304.

134. Although he would not be human in the sense in which we generally use that term, this would not necessarily mean, as McCormick seems to suggest, that his current state would be any better or worse than his original state.

135. R. MCCORMICK, *supra* note 4, at 304.

136. Even to accept the premise that there is only one overall mix between body, mind, and emotion that is just right (*i.e.*, human), does not compel McCormick's conclusion that a breach of the unitive/procreative nexus is dehumanizing. An individual might still be able to achieve a human mix by "debodifying" procreation and then compensating for the loss by engaging in more sex or jogging a few more laps around the track.

137. *Vatican Letter*, *supra* note 4, at 706.

138. THEOLOGICAL LETTER, *supra* note 2, at 2 (quoting Luria); *see also* PRESIDENT'S COMMISSION, *SPlicing LIFE*, *supra* note 1, at 58 (suggesting that genetic engineering could "be used to develop a group of virtual slaves—partly human, partly lower animal—to do people's bidding"); Tribe, *supra* note 2, at 649 ("But does not that dream [of designing every detail] at least potentially entail the

make a human "stop being a [hu]man."¹³⁹ Since humans are the sole species on earth that can plan and create, perhaps there is something uniquely human about procreation through genetic engineering.¹⁴⁰ In a sense, human life would be debased if we could easily do something fundamentally to improve that life but refrained from so doing. The response to the debasement argument is that action or inaction only debases human life if it will make the fetus worse than it is or could otherwise be.¹⁴¹

Finally, we might even grant the entire Catholic argument: Severance of the unitive and procreative functions of sex by genetic engineering will break down family, parenthood, and other traditional values, and will amount to artistic production, which devalues human life. However, a serious boundary problem would still remain. Birth is an arbitrary cutoff. The Vatican, for example, recently approved of somatic genetic engineering "when its aim is to 'ameliorate the conditions of those who are affected by chromosomic [sic] diseases' because this offers 'hope for the great number of people affected by those maladies.'"¹⁴²

final transformation of man into an object—a thing to be 'engineered' according to technical specifications along with the many other products of human ingenuity?") (footnote omitted).

139. Fried hints at one possible answer. C. FRIED, *supra* note 35, at 154-55. According to Fried, "our sense of ourselves as unique, particular beings" is pivotal. *Id.* at 155. That sense:

would be undermined if . . . we were bred "to order" according to some plan. The random biological hazard of our parents' mating affirms that we belong to ourselves, for no one planned us. . . . Belonging at first to our parents, whom we will replace, we have a chance of believing we belong to ourselves.

Id. See also PRESIDENT'S COMMISSION, *SPLICING LIFE*, *supra* note 1, at 68 (genetic engineering "could have considerable impact on the way people think of themselves. The current tendency is to think of a person as an individual of a certain character and personality that . . . is relatively fixed within certain parameters."); Tribe, *supra* note 2, at 648 ("one's sense of 'selfhood' or 'personhood,' and the related experience of one's autonomous individuality, may depend, at least in some cultural settings, on the ability to think of oneself as [not] fabricated genetically"). It is unclear, however, why randomness permits us to belong any more to ourselves than does design.

140. Fletcher adopts this view of man as a designer or co-creator. In the context of reproductive technologies, Fletcher argues:

Man is a maker and a selector and a designer, and the more rationally contrived and deliberate anything is, the more human it is. Any attempt to set up an antimony between natural and biological reproduction, on the one hand, and artificial or designed reproduction, on the other, is absurd. . . . [L]aboratory reproduction is radically human compared to conception by ordinary heterosexual intercourse. It is willed, chosen, purposed, and controlled, and surely those are among the things that distinguish *Homo sapiens* from others in the animal genus.

Ethical Aspects, *supra* note 15, at 780-81. He echoes this theme in the genetic engineering context. *The Brink*, *supra* note 20, at 484 (genetic technology does not interfere with humanness because most basic human characteristic is to attempt to change self and own condition). See also Francoeur, *supra* note 12, at 438-39 (must dismiss *a priori* judgment that genetic engineering violates "God-given nature" if our role is to "direct[] and choos[e] the path of our ongoing creation").

Fletcher's position has come under severe attack, primarily by the religious scholars, as an overemphasis on one of the many elements of human nature. See R. McCORMICK, *supra* note 4, at 285 (Fletcher's equation of humanity with deliberation and rationality is "distortion of the human"; a person's mere ability to act in a particular way does not mean he should so act); *Making Babies*, *supra* note 7, at 48-50 (procreation not simply activity of "rational wills It is a more complete human activity precisely because it engages us bodily and spiritually, as well as rationally"); May, *supra* note 4, at 36-37 (Fletcher emphasizes artistic, creative function and ignores contemplative, truth-seeking, moral, and ethical operations of human beings). The debate parallels the separatist vs. nonseparatist debates. See *supra* note 118 (discussing separatism).

141. What it means to be worse or better is, of course, also a value judgment. The constraints to the exercise of that judgment are discussed *infra* Part IV.

142. J. AREEN, P. KING, S. GOLDBERG & A. CAPRON, *supra* note 118, at 175 (quoting Pope John Paul II, *La sperimentazione in biologia deve contribuire al bene integrale dell'uomo*, *L'Osservatore Romano*, Oct. 24, 1982, at 2).

It is unclear why interference with the composition and capacities of a fetus is immoral, but equally effective interference sheds its cloak of immorality the moment the child is born. The distinction is all the more troublesome in light of the Vatican's frequent reminder that a fetus is a live person whose status is no different from ours. Any difference is purely a matter of geography. Why, then, should so much ride on geography?

Much of the act of child-rearing might be viewed as an act of artistic production. The essence of personality is formed in the first few years of life. Parents bear the bulk of the burden of "artistically" molding that personality from scratch. A truly loving parent will do all that can be done to mold the child as near to perfection as possible.¹⁴³ Far from degrading the value of human life by subordinating human life to its producers, personality-sculpting is the ultimate expression of *love* for that life. Otherwise, the Church would take a firm stance against teaching one's children and instilling in them the proper values. Instead it raises that task to the level of a profound duty. The boundary problem underscores the notion developed earlier that underlying the deontological opposition to genetic engineering is a concern that genetic engineering is equivalent to identity swapping—the choice to change one person into someone else.

IV. LINE DRAWING: THE DIFFICULTY IN DEFINING THE DUTY OF GENETIC RESCUE DOES NOT NEGATE ITS EXISTENCE

The lesson of the first three scenarios is a simple one: the moral duty, in a particular circumstance, to treat the genetically-ailing embryo could not be blocked, or even absolved, solely because the treatment happens to be genetic. But to state the proposition that genetic treatment is morally mandated in any situation in which we find a parallel duty to treat the child using more "conventional" medicine does not further the inquiry much. Genetic engineering has the potential to be phenomenally more powerful and effective a tool than any tool of conventional medicine. With the genetic code at her fingertips, the genetic engineer may eventually be able to pre-program more than "simple" corrections to "defects."

In the genetically ailing-embryo hypothetical, the mother had a duty to ingest the miracle pill where it would rescue her future child from a lifetime of genetically induced physical pain. A lifetime of physical pain is an evil that, nearly everyone would agree, is unpleasant. Perhaps this is the reason that the notion of rescuing an individual from physical suffering is not troublesome.¹⁴⁴ Physical pain, however, is only one of many possible forms of suffering.

143. That does not mean that the parents have a duty to control the child completely. If the parents believe that perfection includes allowing the child a certain amount of freedom to make choices on his own, then part of the parents' duty is to allow that freedom. Further, if the parents believe that some choices are value-neutral, then perhaps those, too, should be left to the child.

144. While no one craves pain, it does not necessarily follow that a person who is free from physical pain is necessarily a "better" or more "valuable" person than the person who lives a life of pain. There are many people, Woodie Guthrie, to name one, whose physical suffering may have been the impetus for their great contributions to society. Thus, even physical pain may not be as clear a case for intervention as I have made it seem.

Assume that, instead of a lifetime of physical suffering, the genetically ailing-embryo is "condemned" to suffer a lifetime of Down's Syndrome, emotional instability, lack of artistic skill, athletic incompetence, shortness, or freckles. The miracle pill that the mother can take will reliably change any or all those characteristics.

An unsightly, permanent physical deformity that isolates an individual from society might inflict a lifetime of severe psychological suffering. An emotional disorder that robs an individual of self-control could be equally excruciating. The analogy to physical pain, however, is not perfect. In the case of non-physical suffering, the apparent seriousness of the "defect" to the outsider may not be an accurate yardstick of actual suffering. Individuals whom an observer might consider grotesquely deformed have adapted well to society, made major contributions, and suffered little. On the other hand, a person with a relatively minor deformity (or none at all) may feel more self-conscious and spend an isolated lifetime in psychological distress. Similar arguments can be made on the social, emotional, and psychological levels. Is there a moral imperative to genetically rescue them all? The question adds a new twist to an old problem: when does "rescue" end and "officious intermeddling" begin?

The difficulty in drawing principled lines between different types of "suffering" is an argument raised often by opponents of genetic engineering. They see this slippery slope of suffering as the ultimate evil. To touch one gene—even a gene that will cause a lifetime of suffering—they argue, condemns all genes to human meddling. "If diabetes, sickle cell anemia, and cancer are to be cured by altering the genetic make-up of an individual, why not proceed to other "disorders," myopia, color blindness, left handedness."¹⁴⁵

Having demonstrated that no principled distinction can be drawn between different types of suffering, they rest their case. The debate is won. Bring on the next moral issue. Even if principled distinctions are difficult or impossible, however, the argument does not end there. That indeterminacy can cut either way. For those who oppose genetic engineering, the argument can be directed to a ban. For those who support genetic engineering, the argument points to an absolute duty to design every genetic trait that might be relevant to a person's suffering. Deny that there exists a moral duty to genetically engineer every relevant facet of your child's genetic composition, and you are hard-pressed to find a moral duty to raise your children in a manner that will best equip them for life, or even to cure your child's disease. Ultimately, the inability to draw principled lines defining a duty does nothing to negate its existence.

145. THEOLOGICAL LETTER, *supra* note 2, at 2. In a prototypical statement of the slippery slope argument, the THEOLOGICAL LETTER suggests, "that once the scientists are able to repair genetic defects 'it will become much harder to argue against adding genes that confer desired qualities, like better health, looks or brains.'" *Id.* (quoting unidentified *New York Times* editorial); see also CONTEMPORARY ISSUES, *supra* note 1, at 571 ("The notion of 'repair' presupposes a conception of health and disease, and it is but a short step from the elimination of genetic defects to the enhancement of human genetic capabilities."). The opponents rarely articulate why even the projected end result is undesirable. What really seems to be happening, again, is that the opponents are objecting to genetic engineering because they perceive it as being a choice between two different people. See *supra* Part III(C)(2) (arguing that several objections to genetic engineering are rooted in assumption that it amounts to a choice between two *different* people).

V. DEFINING PRINCIPLED BOUNDARIES OF THE MORAL DUTY OF GENETIC RESCUE

Although the existence of a moral duty does not depend on our ability to draw principled boundaries defining its scope, something is disconcerting about devising a moral duty whose "boundaries" are unprincipled. This section presents an initial attempt to sketch approximate boundaries that divide those situations to which the duty of genetic rescue attaches from those that are beyond the duty.¹⁴⁶

The first step in this analysis requires us to define the circumstances in which genetic intervention constitutes a "rescue." Since all rescues are not morally mandated, the second step is to determine what types of genetic rescues are morally required.

Because both steps of the analysis get complicated, a preview is in order. The definition of a rescue—step one of the duty to rescue analysis—proceeds in two parts: identity and benefit. In order to be considered a rescue, an intervention must not change the victim into someone else.¹⁴⁷ The identity inquiry, it turns out, is relativistic. Whether a genetically engineered embryo is the same entity as the one with which we started will turn on the purpose of the inquiry. For us, the purpose is to discern whether the characteristics of the resulting person are the same. And that will turn on the relative value that we place on particular human characteristics. Since those values will vary from one society to another, from one person to another, and from one time to another, they cannot be quantified definitively or objectively. Each of us can, however, through application of devices such as Nozick's "caring" test,¹⁴⁸ get an intuitive sense of the relative values that we currently place on them.

In order to qualify as a rescue, an intervention must also benefit the victim. Since the definition of a benefit, like the value of a particular human characteristic, is also subjective, the best that one could hope to do is to devise a similar means by which to intuit what is a benefit and what is not.

Step two in determining the scope of the moral duty of genetic rescue involves the problem of discerning which genetic rescues a parent is morally obligated to undertake. That problem is not very different from those problems that parents face every day in determining whether, and to what extent, to prevent or cure defects in their children. Accordingly, we can look to the same factors that currently inform a parent's decision on such matters. These will include the effectiveness and cost of the prevention or cure.

146. Again, I do not here consider whether there might be some duty, other than a duty to rescue, that compels genetic engineering.

147. Identity could serve also as an absolute boundary for those who object to genetic engineering solely on the ground that such meddling amounts to a choice between two different, but equally valuable human beings. See B. WILLIAMS, PROBLEMS OF THE SELF 1-25 (1973) (arguing that bodily continuity is a necessary condition of personal identity).

148. R. NOZICK, *supra* note 107, at 29-30, 62-70.

A. Defining a "Rescue"

As suggested above, at least two considerations come to mind in defining whether a particular intervention constitutes a "rescue": identity and benefit. I have already observed that any intervention that changes an imperiled person into an entirely different person cannot be considered a rescue. Thus, the concept of identity through time will play an important role in defining a rescue. However, just because we might consider a person to be the same person after our intervention as he was before does not mean that we have rescued that person. For example, we might intervene in an imminent accident by pushing a pedestrian out of the way of an oncoming motorcycle and into the path of a Mack truck. The victim on whose "behalf" we have intervened is unquestionably the same person after our intervention as he was before. Nevertheless, unless our intervention yields some benefit to the victim, we cannot be said to have rescued him.¹⁴⁹ Identity and benefit are considered in turn.

1. Identity of the Victim as a Limit on the Rescue Definition

A convenient starting point for determining whether the product of a genetic intervention is the same as before is Nozick's closest-continuer theory. In our first consideration of the closest-continuer theory, the sole conclusion was that the use of genetic engineering to excise the gene that would cause physical suffering did not amount to a judgment as to the relative value of two different human lives, and consequently, that the taking of the pill to genetically prevent that suffering could be considered a "rescue."¹⁵⁰ Each conclusion was based on the intuition that the resulting embryo was the closest continuer of the pre-pill embryo. It both bore the greatest resemblance to and had the closest causal dependence on the characteristics of the pre-pill embryo. The question how close is "close enough" was left open. In other words, how much of the physical substance or traits of embryo *A* must a later embryo *B* have, and how close does *B*'s causal connection to *A* have to be, before we can consider them the same in the first place?¹⁵¹ That question is pivotal where, as here, our ability to change any and every genetic trait is assumed.

Obviously, if we kill embryo *A* and manufacture a nonidentical embryo *B* from materials that were never part of embryo *A*, then embryo *B* would not be the same as embryo *A*. Or suppose we remove all the DNA from a newly fertilized embryo (*i.e.*, a single cell), discard it, and insert entirely new genes that were fabricated in the laboratory. The cytoplasm containing the newly inserted

149. Danger or pre-existing harm might be considered a third element of a rescue. A back massage both leaves the recipient with the same identity and (if done correctly) benefits her. But one would probably not consider it a rescue. Since the degree of danger will be considered in defining the scope of the duty to rescue, I will reserve until then discussion of that element. See *infra* note 163. For the general rule on rescue, see generally THE LAW OF TORTS, *supra* note 65, at 307-11 ("the risk of rescue . . . is born of the occasion. The emergency begets the man.").

150. See *supra* notes 107-109 and accompanying text (discussing identity through time in context of genetically ailing-child scenario).

151. See R. NOZICK, *supra* note 107, at 34 ("something may be the closest continuer of *x* without being close enough to *x* to be *x*").

genes is probably the closest continuer of the cell.¹⁵² The mere continuity of the cytoplasm of a single egg, however, would not suffice to deem the embryo the same before and after the "transplant." A deeper inquiry into identity is necessary.

a. The Relativity of Identity

Nozick provides the first step toward resolving the question: "How close something must be to x to be x . . . depends upon the kind of entity x is as do the dimensions along which closeness is measured."¹⁵³ The step is, however, a small one. Embryo A is a newly fertilized cell. Now what? The threshold issue must be why we care about A , or more precisely, for what purpose we are trying to determine its identity.

Thus, identity is relativistic.¹⁵⁴ Suppose, for example, that in performing the DNA exchange in the previous example, you had to inject into the cytoplasm of human egg A a substance that is lethal when ingested by fully developed people, even in trace amounts. Suppose further that, having gone through this arduous experiment, you are famished, but there is no food anywhere. You would like to eat all of the leftover eggs—all of them except for egg A (you're not that famished). The intricacies of each cell's DNA are not relevant in determining which egg to eat. The sole criterion that is relevant to determine which egg is the "same" as egg A is the content of each egg's cytoplasm.

The focus of the identity inquiry is different, however, when the reason that we care about the egg's identity is that we want to know whether the change we have induced amounts to a rescue. In that case, the concern is with the similarity between the person that egg A would have become had we not intervened and the person that egg A will become since we inserted its new DNA.¹⁵⁵

One aspect of this measure of closeness seems odd. In order to measure the closeness of egg A at post-experiment time t_2 to the precursor egg at pre-experiment time t_1 we must refer to the characteristics that we expect egg A to have at some much later time t_3 . Simply put, whether two entities are the same

152. As will become clear shortly, the discarded DNA might actually be the closest continuer of cell A . However, the designation of a closest continuer need not detain us for now because the inquiry is whether the cell, assuming it is the closest continuer, may be considered close enough to be the same as cell A . See *infra* note 155 and accompanying text.

153. See R. Nozick, *supra* note 107, at 34 (footnote omitted).

154. Nozick hints at the relativity of identity when he suggests that the dimensions by which we measure closeness depend on the "kind" of entity. He observes that "if the kind determines the relative weights different kinds might give different weights to the very same properties." *Id.* at 655 n.6.

155. Under Nozick's theory, we should also care about the dependence of the DNA in the engineered egg upon the DNA in the nonengineered egg. But the lack of such dependence does not seem to matter. One might either change a single nucleotide on an existing DNA molecule of a cell or lift the DNA entirely and reinsert an identical synthetic copy of the DNA that incorporates the change. In light of the measure of closeness, the two would be equivalent for purposes of determining sameness, at least as long as no other entity has a closer dependence.

now depends upon their closeness at a projected future date.¹⁵⁶ That oddity is merely a reflection of the purpose for which the relativistic-identity inquiry is being conducted. The identity comparison is not being made to determine whether the two eggs are the same, but to determine whether the ultimate product of one would have been considered the same person as the product of the other.¹⁵⁷

b. "Tallying": An Objective Comparison of Characteristics

Our identity analysis boils down to no more than a comparison of the person that the egg would have produced (but for the intervention) to the person that it will produce (after the intervention). One might begin by identifying independent characteristics and comparing the number of characteristics that are the same to the number that are different. This simplistic "tallying," however, will not work.

What we identify as an independent characteristic will depend upon how much we value it. For example, most of us would agree that a person with genes that code for freckles at an average density of three per square inch has the same "characteristic" as the person whose genes code for four per square inch. We say they both are moderately freckled, even though one has thirty-three percent more freckles than the other. However, most of us would think that a person with an IQ of 160 does not have the same "characteristic"—natural brilliance—as a person with an IQ of 120. The difference between the two cases is simple: We do not perceive freckles as a major component of a person's identity. We do, however, perceive IQs as supremely relevant.

Compare a "less enlightened" tribal society that perceives freckles as God's outward sign of a blessing, and that considers degrees of intelligence irrelevant because each member of the tribe does nothing all day but pick a set number of berries for the tribal meals. Freckles might then take on such importance that each additional freckle would be considered a separate characteristic. Various degree of intelligence, however, would be tallied as a single characteristic, possessed by all those with an IQ sufficient to pick the quota of berries.

156. That notion, however, is no more counterintuitive than was Nozick's theory, at first, that whether x at t_2 is the same as y at t_1 depends on whether there is some other z at t_2 that is closer at t_2 to y than is x . See *supra* notes 107-109 and accompanying text.

157. The t_3 referent would not be obviated by focusing on the similarities between the DNA of the the eggs at t_1 and t_2 . One could not simply calculate a numerical proportion of the number of nucleotides—the DNA building blocks—that have changed to the number that have remained the same, because not all nucleotides would count. For example, nucleotides composing genes that are never expressed (of which there are many) and matching portions of genes that are common to the entire human population would not count. They would have no bearing on the purpose for which they are being counted—to measure the identity of the resulting person. See G. BURNS, *THE SCIENCE OF GENETICS* 259, 288, 335 (1969) (explaining the composition and similarity of nucleotides across the human population, as well as the fact that not all nucleotides are expressed).

Nor would it be helpful simply to compare the nucleotides in the variable genes of one egg to those in the other. Some characteristics take more nucleotides to express than others and some characteristics we consider more important than others. The only choice then is to compare the *characteristics* that the original DNA would have produced to those that the engineered DNA will produce.

Even if we could objectively determine what should be considered an individual characteristic for purposes of the tally, it is clear that a simple ratio of the number of identical characteristics to the number of different characteristics is unsatisfactory. That some characteristics are simply more important to us than others (as the previous illustration demonstrates) means that such a ratio would say little about whether we should consider egg *A* the same entity before and after engineering.

By now one thing should be clear: Any attempt to apply the closest-continuer theory objectively becomes frustratingly circular. In determining whether a genetic alteration of an egg changes that egg into another, we ask whether the altered egg is the closest continuer of the precursor egg and is close enough to the precursor egg. The criterion by which we measure closeness is the current potential of the egg to develop certain characteristics. But the determination of which characteristics count, and how heavily, is integrally tied to our notion of what makes one person different from another—the very question that this whole analysis was designed to answer.

The problem, of course, is that the question is not objectively answerable. What it would take to convert a person into a different person (or what it would take to convert an egg that will become a person into an egg that would become a different person) turns entirely on our subjective valuation of the differing characteristics. As we have already seen, that valuation might vary from one society to another. Moreover, valuation of characteristics could easily differ among individuals in a given society and will undoubtedly change over a given period of time.

c. “Caring”: A Subjective Comparison of Characteristics

Given the subjectiveness inherent in placing a value on a characteristic, it is pointless to venture a definitive definition of a rescue. It is, however, worthwhile to find ways to assess the relative weights that we each assign to various characteristics.

We could consider, for example, whether one would consider oneself the same person after a massive dose of radiation changes a single genetic trait. Intuitively, we would consider the later person the same as the earlier one when (1) the genetic change induces no perceptible change, or (2) the sole apparent effect is the curtailment of pain (somatic gene therapy). I presume that the latter would be true even if, suddenly relieved from the suffering, the person's entire outlook on life and disposition changed drastically. These speculations, if true, would tend to support the notion that genetic intervention can be a rescue where the sole change is some internal change that simply reduces our suffering.

As to the subjective weighing of the more troublesome characteristics, Nozick furnishes a useful exercise—a “caring” analysis—by which we might rank characteristics one at a time.¹⁵⁸ Nozick applies the notion to distinguish between two continuers and determine which is closer. As appropriately

158. R. NOZICK, *supra* note 107, at 29-30, 62-70.

adapted, the “caring” approach has two steps. First, segregate different parts of whatever comprises your “self” into two different persons. Then, ask which entity you would care about more. Nozick’s illustrations of the closest-continuer theory that were presented earlier in this Article illustrate such an allocation of parts.¹⁵⁹ If *A* knows that she is going to switch brains with *B*, and also knows that afterwards something terrible and painful will happen to one of the two bodies, it seems clear that *A* (if she were choosing on purely selfish grounds) would prefer that the terrible thing happen to the person occupying the *A*-body. That is because she could believe that the entity occupying the *B*-body (with *A*’s brain) is the closest continuer of herself. This implies that psychological functions are more weighty on the sameness scale than are physical attributes. Indeed, this illustration demonstrates that despite the limitations or enhancements that an entirely different body might furnish, a person could still have the same identity if every one of her physical attributes were to be redesigned.

Among psychological attributes, however, the problem becomes tougher. We tend to think of our psyche as one whole, from which all parts—intellect, compassion, personality—are inseparable. The caring test may be adapted to such cases. Imagine that you know something terribly physically painful will happen to you in ten minutes. Imagine further than between now and then, several doses of radiation will hit you, altering one psychologically related gene at a time. At some point in this exercise, you will presumably cease worrying about the impending pain in the same way that you would worry about feeling the pain *yourself*. That point is where (you think) you will have ceased to exist as a person and someone else will have replaced you in your body.

Presumably, if you believe that a particular combination of trait changes would change you into someone else, you must also believe that the same combination will change any other person into a different person. Similarly, that same combination will constitute a situation in which any genetic intervention would change the human egg (and the person it will produce) into a different human egg (one that will produce a different potential person). At that point, the genetic intervention would no longer be a rescue.

2. *Benefit to the Victim as a Limitation on the Rescue Definition*

The second element of the rescue definition—that the intervention must benefit the victim—requires less development than did the first. The question whether someone is better off after intervention than he was before is simply more familiar than the question whether an intervention has turned one person into another.

Two observations about the benefit element of the duty to rescue are immediately apparent. First, it is axiomatic that an intervention cannot be considered beneficial if it is likely to put the victim in a situation worse than he was in before the intervention. As noted earlier, to push a victim out of a

159. See *supra* notes 108-109 and accompanying text (discussing two of Nozick’s closest-continuer illustrations).

motorcycle's path and into the path of a Mack truck is obviously not beneficial, and therefore is not a rescue. Second, in order to constitute a rescue, the intervention must also be likely to put the victim in a better position than he was in before. It would not ordinarily be beneficial, for example, to push the victim out of the path of one motorcycle and into the path of another.

Parallel, and equally obvious, hypotheticals can be imagined in the genetic engineering context. Consider an embryo that is destined to develop brown hair and only one arm. Genetic intervention that would produce a person with no arms would not be a rescue. Because we generally consider one arm to be better than none (perhaps on some notion of physical necessity), the child will be worse off than she would otherwise have been. Nor would intervention that would produce a child with blond hair and only one arm be a rescue. Because we generally consider hair color essentially neutral, the child will be no better than she otherwise would have been.¹⁶⁰

The above conclusions are obvious only because our society has reached a virtually universal consensus as to their bases (that one arm is better than none and that hair color is essentially neutral). However, that does not mean that what is a benefit and what is not is objectively verifiable. We already observed as much in discussing identity. That which is beneficial is subjective in the sense that certain characteristics within our society might be considered good by some and bad by others. It is subjective also in the sense that different societies at different times value different characteristics to a varying degree. Indeed, even a characteristic that all might consider to be obviously good in our society may not be objectively so. To intervene by giving a two-armed embryo the capacity to grow a third arm would not be considered by anyone in our society to constitute a rescue even though there is a sense in which it would be beneficial (just as it would be beneficial to give another arm to a one-armed embryo). That is because we live in a society in which the norm is two arms, and there is a certain, albeit a subjective, benefit to adhering to the societal norm.

The subjective nature of the benefit inquiry does not undermine its usefulness in defining a rescue. Certainly, any change that everyone in a given society would agree is beneficial would constitute a rescue (as long as it does not change the victim's identity).¹⁶¹ Other changes might be subject to disagreement, but there is no question that a given person could readily decide for himself whether a particular change is beneficial.¹⁶²

160. This may not be entirely accurate. The choice between brown and blond hair is not an absolute neutral for all (or even most) people. If it were, people would not dye their hair or prefer others with a particular hair color. It is perhaps more accurate to characterize the change as one that is of so little consequence that it is not considered a rescue, in contrast to the situation in which the change gives the child a second arm.

161. For example, scientists have recently identified the genetic cause of "elephant man" disease. *N.Y. Times*, May 29, 1987, at 14, col. 4. This disease is characterized by multiple tumors, which may result in serious disfigurement or death. This discovery may lead to a genetic cure for the disease. Clearly, such a cure would benefit the victim and not change his identity. Thus, we would obviously refer to such a cure as a rescue.

162. Obviously, the affected embryo will not make this decision as to whether the genetic rescue is beneficial to him; his parents will. This is not much different from the parent's latitude to decide what medical treatment is in an infant's best interests. In both cases, the relevant question

B. Limits to the Duty to Genetically Engineer

The determination of what genetic interventions could constitute a rescue, is only half the task. Not every rescue is morally required. A useful way to begin discerning the limits to the moral duty of genetic rescue is to identify the factors that limit a parent's duty to rescue and cure in a more "conventional" setting. The mere capacity to benefit the child in some way does not always impose upon parents an obligation to do so. There must be a certain level of harm, actual or anticipated, that triggers the duty. Further, once a duty to rescue attaches, the question arises how far the rescue must go. Ultimately, each of the questions—when the duty attaches and the extent of the duty—will turn on the degree of harm that is to be prevented and the effectiveness and cost of the contemplated rescue.

1. Comparison to the "Conventional" Duty to Rescue

a. The Parallel-Harm Principle

The situations in which we believe that parents are morally obligated to rescue their children from external sources of harm can shed some light on the situations in which an analogous duty attaches in the genetic engineering context. I start with the parallel-harm principle: If the risk of a particular harm that is *externally* induced triggers a duty to rescue a particular victim, a comparable risk of the same harm triggers an identical duty to rescue the victim (all else being equal) when the source of the harm is internal or genetic.

Suppose a child is sitting in his crib playing with a time bomb that is set to detonate in thirty seconds. If it explodes, it will permanently disfigure or physically incapacitate the child. The mother notices the bomb and immediately realizes it could be defused merely by pressing a button on the top of the bomb. Given the urgency of the situation and the ease of rescue, the mother undoubtedly has a duty to rescue her child. The result should not change if the bomb is very small and the child swallows it. If the bomb is likely to cause the same physical disfigurement and incapacity and the rescue is equally easy and risk free, the parallel-harm principle would compel the mother to push the toddler's belly button to defuse the (now internal) bomb. And if the same bomb had multiple tiny (but powerful) "warheads" housed in a few cells of the child's body, all else being equal, the principle would call for a duty to rescue the child from the same disfigurement. Finally, if the source of the same harm turned out to be a twisted gene, the mother would have to "defuse" that harm by swallowing the appropriate miracle gene-detwister, again, if all else is equal.

The parallel-harm principle applies to any type of harm. If the mother must save her child from a blow to the head that might leave him with reduced mental capacity, all else being equal, she must also save the child from mental retardation that is internally or genetically caused. Or suppose the parents

is not whether the affected party is making the decision, but rather which rescues are morally mandated. This issue will be discussed in the next section.

knew that exposing their daughter to Beethoven's *Fifth Symphony* would spark in her a love of music so intense that she would prefer music to all other possible interests—trucks, friends, Dr. Seuss, Sesame Street. The parents might have a moral duty to “rescue” the child from Beethoven's *Fifth* to ensure that her intellect, social skills, and awareness of the outside world are up to the level that they believe would enable her to function in society. If so, the parents would have a parallel duty to genetically alter a gene that coded for an identical musical obsession.

Conversely, a parent has no duty to rescue the child from genetically induced “suffering” for which a parallel duty does not attach when the same effect is caused by an external force. If going out in the sun would merely darken a child's skin or produce freckles, or lighten the child's hair, with no other effect, the parent may want to, but would be under no moral obligation to “rescue” the child from those effects. Consequently, the parent would not have a parallel duty to genetically engineer hair color, skin color, or freckles.¹⁶³ Likewise, once the child has a certain level of mental stability, the parents might properly conclude that they have no duty to protect the child from the external ups and downs of normal childhood so as to further stabilize her personality. The principle would provide that once an embryo has the genetic basis for that same level of mental capacity or emotional stability, the parents are under no duty to intervene and enhance the child's intellect or stabilize her emotions.

b. The Extent of the Rescue: The Parallel-Cure Principle

The parallel-harm principle might help identify the trigger of the duty to genetically engineer, but it does not define its scope. In each of the illustrations of external harm, the child's current status serves as a baseline from which to measure the effect of the external source of harm. The parents might be certain that a bomb, or blow to the head, or exposure to Beethoven will leave the child worse off than the child would otherwise be. In each case, the sole question is whether or not to allow the external stimulus to affect the child. Genetic engineering raises much more difficult problems of degree. The question becomes how far the rescue should proceed. What is the proper figure, personality, or intellect for a human?

Of course, parents face questions of degree every day in deciding to what extent they should cure their children. Our familiarity with questions of degree suggests the “parallel-cure principle.” Under that principle, parents must rescue their children genetically (all else being equal) to the extent that they would be morally bound to cure or compensate for the child's trait conventionally, once it manifested itself. For example, most parents would feel morally obligated to compensate for a child's defective vision by giving her eyeglasses. The parallel-cure principle would require them (all else being equal) to redesign the

163. There is a sense in which such intervention might not even be considered a rescue in the first place and, therefore, could not be subject to a duty to rescue. A rescue usually means intervention to prevent harm. See *supra* note 149. To the extent that hair color, freckles, and skin color are essentially neutral characteristics, a change in any one of those characteristics would not be beneficial, and thus, the intervention would not be a rescue.

gene that is responsible for her poor vision. The new gene should code for vision that is as good as the child's corrected vision would be if the defective gene were to manifest itself and the parents were to buy the child eyeglasses of the morally required strength (however that strength may be determined). Similarly, the parents might feel morally obligated to develop the retarded child's intellect to the third grade level. Under the parallel-cure principle, the duty to genetically engineer would require that the redesigned fetus be given genes that code for the same level of intellect (however that level may be determined) as the parents would feel morally bound to nurture absent genetic engineering.

2. *Identifying the Limits*

So far, the parallel-harm and the parallel-cure principles have described the situations in which the duty of conventional rescue would attach. However, the pivotal questions have yet to be answered. In the conventional rescue, how does one define that "certain" level of (external or genetic) threat to physical integrity, mental ability, or emotional stability that triggers the parents' duty to rescue their child? And once the parents decide that a conventional cure of an existing defect or a conventional rescue from a potential defect is warranted, how do the parents decide how far the cure or rescue should go?¹⁶⁴

The illustrations of these two principles suggest a rule governing the scope of the "conventional" duty to cure children,¹⁶⁵ and if the principle holds, the scope of the duty of genetic rescue. One formulation of that rule might provide that parents, in deciding how to raise their children, are morally bound, to the extent practicable, to help their children make the most of their potential.

There are two constraining factors in this formulation of the conventional duty to cure. The first is the child's potential. A child, even with eyeglasses, can only see so far. Certainly, the parents have no duty to give the child x-ray or telescopic vision. The rule would presumably require the parents at most to obtain a pair of glasses that gives their child 20/20 vision. Similarly, the mentally retarded child might never reach a fourth grade level because he simply does not have the capacity to learn that much.

This first factor demonstrates just how sticky the baseline problem becomes in the genetic engineering context. Potentials do not constrain the duty of genetic rescue. What capabilities the child will have—how far he should be able to see, how strong an intellect he will have—is precisely the question that the genetic engineer might be deciding.

Just because genetic potential may not limit the duty to genetically engineer does not mean that the parallel-cure principle must fall. A reexamination of the role of potential in the conventional duty to cure context reveals that potential is not necessarily an insurmountable limit in that context either. Parents

164. The two questions are really the same. If the costs are the same, no situation comes readily to mind in which the parents would be obligated to rescue a child from a source of harm but would not have to cure the child once that harm occurs.

165. Although the rule has been phrased in terms of a duty to cure, it might easily be phrased in terms of a duty to rescue prior to occurrence of the harmful event or the manifestation of the harm.

could, if they were willing to spend enough, equip their child with a telescope or radar to help her transcend what appear to be the limits of her genetic potential. Similarly, they might fund years of expensive research to find a cure for mental retardation, and ultimately subject the child to a risky operation that would reorganize his brain cells. The second constraining factor of the rule, then, is practicability or cost.

Even if, as we assume for the sake of argument, that engineering would be both costless and foolproof, the practicability/cost factor might still limit our duty to rescue. Certain costs were not assumed away. One such cost is the cost or burden of the cure to the child. In the conventional-cure context, the parents might not be obligated to strap a radar dish to their child's back or tape telescopic lenses to his eyebrows, even if the equipment were available for free, because those "cures" would unduly burden the child. They might make the child less happy because they are cumbersome or simply because they would give him more potential than he wants. Those costs would count against the cure in the utilitarian calculus. The cures might also unduly hinder the child in carrying out his projects, thereby undermining the goal of a Kantian rescue. If, for example, his chosen project were to be a dancer, the radar device and telescopic lenses would be sure to turn his *grands jetés* into awkward skips. Under either the utilitarian or the Kantian view, this enhanced ability to "see" behind walls would not outweigh the child's loss of happiness or capacity in other respects.

The difficulty with even this limited view of costs is that the costs are no more objectively definable than were the benefits. Even in the context of the conventional duty to cure, it is impossible to separate the suffering from the sufferer. Physical or psychological states that we, as observers, might perceive as "suffering" may not be perceived as such by the putative sufferer. A severely retarded child may be happy because he cannot transcend his own capabilities and understand what he is missing. Conversely, we cannot transcend our own mental and physical state and determine whether we are truly "happy." Perhaps, no matter how happy we might perceive ourselves to be, we would be even happier with reduced mental capacity, and much less happy with an increased capacity to understand the world around us. Even an evil, such as pain, that we can all agree is unpleasant, has meaning only with respect to a particular sufferer. We might all be in excruciating pain compared to an alien who has no physical sensation except absolute euphoria.

The definition of suffering is even more unmanageable when we are the ones designing the sufferer. The relative values that the child places on his ability to see behind walls and his ability to dance might themselves be genetically manipulated. Under the utilitarian analysis, the child's perception of the costs and benefits will be variables for the genetic engineer to determine. Under the Kantian analysis, which projects the child will perceive as *his* projects could be the very question before his designer.¹⁶⁶

166. See Sinsheimer, *supra* note 1, at 611 (genetic engineering will "make human design responsible for human nature"). The development of any new technology reshapes its user. Tribe, *supra* note 2, at 650-51. Genes are particularly problematic in this regard. As one commentator warned:

If the only cost that we could consider in addressing the questions of degree of rescue and cure were the cost to the child, the duty of genetic rescue could be boundless. Depending on how a parent quantifies these costs, the parent could be obligated to redesign every detail that she thinks would make her child suffer.¹⁶⁷

The assumptions of costlessness and effectiveness that have until now simplified our scenarios are, of course, unrealistic. Genetic engineering is likely to be exceedingly expensive. Further, genetic engineering, like any other medical or technological procedure, will never be foolproof. These limiting factors are useful in our search for a principled distinction between traits that the duty to rescue does and does not require us to redesign and a principled answer to the question of degree. These costs may be viewed either from the parents' or society's perspective.

Both the utilitarian and the Kantian justifications for the duty to rescue leave room for consideration of the costs to the parents. The utilitarian calculus calls for a direct weighing of the costs to the rescuer against the benefits of the rescue.¹⁶⁸ The Kantian analysis, under the rubric of "convenience," presumably would allow parents to forgo curing their child if to do so would threaten their own physical integrity or interfere substantially with their ability to carry out their own projects. Three main costs to the parents must be considered. The first and most obvious is the price of the technology. Few mothers would be willing to raise their child's vision from nearly normal to normal (or from normal to above normal) if the pill that would accomplish that task would cost \$10 million. The greater the number of changes, the more costly the design will be.¹⁶⁹

Second, we must consider the non-quantifiable costs. If the technology of redesign involved not simply the swallowing of a pill, but rather a particularly painful or long process, the mother might be justified in opting not to cure what we perceived as a defect.

The final consideration is the effectiveness of the pill. If the sole issue to be considered were the probability that the treatment will cure the perceived

[I]f any one age really attains . . . the power to make its descendants what it pleases, all men who live after it are patients of that power. They are weaker not stronger: for though we may have put wonderful machines in their hands whe [sic] have pre-ordained how they are to use them.

C. LEWIS, *THE ABOLITION OF MAN OR REFLECTIONS ON EDUCATION WITH SPECIAL REFERENCE TO THE TEACHING OF ENGLISH IN THE UPPER FORMS OF SCHOOL* 36 (1962). Our inability to transcend our genes is what many opponents to genetic engineering fear. See R. MCCORMICK, *supra* note 4, at 286 ("It is possible, after all, that by engineering the engineer we would become very competent barbarians."). For extensive discussions on the role of genetics in controlling human ethics see generally P. SINGER, *THE EXPANDING CIRCLE: ETHICS AND SOCIOBIOLOGY* 3-22 (1981). For a similar discussion on the role of biology and neurology in controlling human ethics see M. MIDGELY, *BEAST AND MAN: THE ROOTS OF HUMAN NATURE* 169-75 (1978).

167. See R. MCCORMICK, *supra* note 4, at 291 ("[P]erhaps . . . the parents' consent to therapy directed at the child's own good is both required and sufficient because it is the closest we can come to a *reasonable presumption of the child's wishes*") (emphasis in original).

168. See *supra* note 51 (discussing Sidgwick's view on costs of rescue to parent).

169. This is likely to be true if we were to start with the original embryo's genetic code and design from that starting point. If, however, the code is engineered from scratch, the cost will probably not depend as much on the number of characteristics that are being changed.

defect, the parents would merely have to discount their valuation of the benefits by the extent to which those benefits are likely to be achieved.¹⁷⁰ Effectiveness also encompasses a calculation of "risk." The parents would have to put some weight on the possibility that the design will "fail" — *i.e.*, increase the child's or the parents' suffering.

C. The Problem of Warped Values

I have already observed that the definition of a rescue—including both the identity and benefit elements—is utterly subjective. It is equally clear that each parent will have his or her own view of what constitutes a perfect human being and of the marginal value and cost of each step towards perfection. Each parent will also have his or her own preconception of the harm associated with the bearing of a "defective" child.¹⁷¹

The subjectivity of these judgments raises serious problems under the proposed duty of genetic rescue. The moral duty as formulated to this point seems to impose no restraint on the parents' ability to "waste" resources by designing characteristics that are irrelevant in both a utilitarian and a deontological sense. Thus unrestrained, parents might feel themselves duty-bound to engineer away dark skin pigmentation or to exchange brown hair and brown eyes for Aryan features, even though, as noted earlier, most people in the society consider those features either utterly neutral or of little relevance. Moreover, there seems to be no limit to the parents' ability to weight their own "warped view" of perfection or their own abnormal pleasure in seeing their children suffer. Some warped parent, if permitted to make his own assessment of benefits and costs, might design a child with three arms or no arms, even though (as also discussed earlier) everyone else in society would consider either characteristic detrimental rather than beneficial.

These are, perhaps, the most troubling implications of the moral duty of genetic rescue. Certainly there are and will always be people whose values differ drastically from those of the overwhelming majority. These warped values, when plugged into even universally accepted moral imperatives, can compel results that the rest of society finds abhorrent. But the mere fact that such people exist in no way undermines the validity of the universally accepted social norm. For example, most people in today's society would not dispute that a parent has a moral duty not to harm her children. Of course, different parents have different, subjective notions of what is and what is not harmful. But the mere fact that some parents believe that hanging their children upside

170. Under a Kantian analysis, they would weigh the degree of inconvenience (*i.e.*, costs) against the degree of emergency. See *supra* notes 41-46 and accompanying text. However, one aspect of that weighing must be how likely it is that their inconvenience will be well "spent." A Kantian would have to agree that no matter how convenient such a "rescue" might be, the rescuer need not attempt to rescue a drowning person if the only way to do it safely is by tossing him a long piece of thread. The rescue is too unlikely to succeed.

171. See Callahan, *supra* note 105, at 580-81 (fear of bearing defective child not solely fear of cost but fear of "supreme undoing of the parents' image of themselves and reality"); *The Brink*, *supra* note 19, at 463 (discussing parental sense of "cosmic guilt" associated with bearing defective child); see generally Langsley, *Psychology of a Doomed Family*, 15 AM. J. PSYCHOTHERAPY 531 (1961).

down in the basement is beneficial does not belie the proposition that a duty exists not to harm one's children. Similarly, the possibility that a warped parent, whose values are drastically different from those of the rest of society, might find a duty of genetic rescue where no one else would (or find no duty where everyone else would) in no way undermines the assertion that such a duty generally exists. Society has ways of dealing with individuals whose values are beyond the pale. It simply prohibits them from acting on those values.

VI. CONCLUSION

The very thought of genetic engineering sends a chill down the spine of even the most ardent of genetic engineering proponents. Volumes of science-fiction and anti-utopian novels and dozens of low-budget horror flicks have predicted the worst. Some forecast a world of grotesque half-human monsters; they are created by mad scientists who are obsessed either with the prospect of being the first to achieve the unachievable or with a misguided aspiration to better the world. Others predict a society of clones manufactured by the state, each one custom-made for his role, each one having no more individuality or identity than a microchip.

The opponents of genetic engineering and the images they conjure up seem to portray genetic engineering as an immoral choice between two equally valuable human lives. The product of this immoral choice is a degradation and devaluation of the individual and human life, generally. The end result, according to these opponents, is an inevitable abolition of special relationships and obsolescence of the family unit. All this in the name of utility.

But an equally (if not more) plausible genetically engineered world is imaginable, a world that is not much different from the world we live in today. Inherent in the formulation of the parental duty of genetic rescue that this Article has suggested are three factors—the definition of a “rescue,” the scope of the duty, and its parental focus — that might begin to allay, in part, a reflexive rejection of a duty of genetic rescue.

First, the word “rescue” is, itself, a limitation that ensures (1) that the redesigned person is still the same—whatever that means—as the one that would otherwise have been produced, and (2) that the intervention is beneficial. Accordingly, a genetic rescue could never involve identity swapping, and therefore could never entail a judgment as to the relative values of two different human beings. At worst, it would amount to a subjective assessment as to what would better an individual. Further, a genetic rescue, also by definition, would not be an end in itself. The point would be neither to induce a change for its own sake nor even to advance all of society. Rather, a rescue, far from de-emphasizing individuality, focuses solely on the individual. By definition, a rescue benefits the individual.

Second, the extent of any such duty would be limited by the costs of the genetic rescue. These costs are likely to be prohibitive. Thus, the duty is likely to be triggered, if at all, only in those circumstances where most of society would consider the result extraordinarily desirable.

Third, even imputing to genetic engineering the greatest possible potential, there is a fundamental distinction between the parental duty of genetic rescue and the horrific predictions. The duty, as suggested here, is a *moral* and *parental* duty. It is not necessarily a legal duty, enforceable by the state. Nor would its recognition warrant the state's undertaking of an independent design obligation. Rather, the duty, like many others involving intensely private choices, might very well be off limits to state encroachment (except perhaps in cases of the most extreme parental abuse).

The parents, in the first instance, probably with substantial counselling, would be the ones who would engage in any necessary designing. Far from unraveling the traditional fabric of family and parenthood, the parental focus of the duty would reinforce, indeed would depend upon, the central role of the parent in "form[ing] one's child's values [and] one's child's life plan" ¹⁷² The duty would have as its basis "the tender and watchful care that naturally springs from affection," ¹⁷³ and that might best be achieved in the family context.

"Parenthood," far from being devalued or degraded, will mean more than ever. In addition to the traditional parental responsibilities, parenthood will impose a new responsibility both to predetermine the child's capacities and to ensure that the child actually attains the potential that the parents know the child has. ¹⁷⁴ The state's involvement might properly be limited to situations in which parents attempt to carry out (or shirk) their duty in ways that shock society's collective conscience.

For some, the reassurance that the duty is only a moral and parental one, rather than a legal and state one, may be insufficient. To be sure, societal judgments—as implemented by the state—can check the judgments of the overzealous or warped parent. But who will check the state? To acknowledge that the state might have *any* role in regulating the duty or the very existence of the technology on which such a duty is predicated is still troubling. Whenever so powerful a tool is unleashed, there is a potential for state abuse. The state has flirted with eugenic control before. ¹⁷⁵ For the most part, it has declined to

172. C. FRIED, *supra* note 35, at 152.

173. H. SIDGWICK, *supra* note 33, at 249.

174. The President's Commission has observed:

With this increased ability to act for the well-being of the child [that genetic engineering will furnish] would come an expansion of parental responsibility. The boundaries of this responsibility—and hence people's conception of what it is to be a good parent—may shift rapidly. It seems safe to say that one important duty of a parent is to prevent or ameliorate serious defects (if it can be done safely) and that the duty to enhance favorable characteristics is less stringent and clear.

PRESIDENT'S COMMISSION, *SPlicing LIFE*, *supra* note 1, at 65.

175. The notion of state-instituted eugenics dates back at least to Plato, who advocated the use of selective breeding to create a superior guardian class. PLATO, *THE REPUBLIC*, in II *THE DIALOGUES OF PLATO* 163, 217-20 (B. Jowett trans. 1953). Sir Francis Galton made it popular once more in the late nineteenth century. See F. GALTON, *HEREDITARY GENIUS* (1869). The popularity of eugenic control caught on in the United States in the 1920's. Many states (32 by 1931) passed eugenic laws calling for sterilization of certain groups of undesirables. See Smith, *Genetics, Eugenics, and Public Policy*, 1985 S. ILL. U.L.J. 435, 438-39. During the same period, Congress passed an immigration law that some critics argue was eugenically motivated. See THEOLOGICAL LETTER, *supra* note 2, at 5 (the source confuses the terms "emigration" and "immigration"). The atrocities of the Third Reich, at least partially eugenic in design, are often cited by noninterventionists as the prime example of how genetic engineering, the ultimate eugenic tool, will be misused. See *id.* at 6 (Genetic engineer-

use the tools already at its disposal, some of them very powerful, to achieve the same diabolical ends that the opponents to genetic engineering forecast.¹⁷⁶ That record of past failure may offer little comfort. But at the core of the decision whether to begin to customize our kids will be the judgment call: Do the current and certain benefits of the genetic rescue outweigh the contingent fears of state abuse? That is a considerably more difficult question than the one I have attempted to address in this Article.

ing is "where they figure out how to have us produce children with ideal characteristics. . . . Last time around the ideal children had blond hair, blue eyes and Aryan genes." (quoting Ethan Singer, speech at National Academy of Sciences Forum on Recombinant DNA). However, the fact that we can unanimously agree that the very thought of such schemes is an atrocity attests to the strength of human morals to resist such misuses.

176. The state has long had the power to influence the genetic composition of its population through breeding techniques. PRESIDENT'S COMMISSION, *SPLICING LIFE*, *supra* note 1, at 71. Even in the area of psychological variables, the state has always had considerably more power to affect its citizens than it has exercised.

For example, people's desires, values, and the way they live can be changed significantly through alterations in social and economic institutions and through mass education, indoctrination, and various forms of behavior control. Thus, even if gene splicing had the power that some are concerned about, it would not be unique in its ability to produce major changes in what it means to be human

Id. at 70.

