Harming Future Persons: Obligations to the Children of Reproductive Technology

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HARMING FUTURE PERSONS: OBLIGATIONS TO THE CHILDREN OF REPRODUCTIVE TECHNOLOGY

PHILIP G. PETERS, JR.*

Two paradigms dominate contemporary ethical and legal debate about the risks posed to children who owe their lives to reproductive technology. One asks whether the children have lives so tragic that life itself is harmful. The other approach asks whether children so conceived are likely to enjoy a minimally decent existence. Although the two approaches have quite different analytic foundations, they share one crucial trait. Each concludes that children who owe their lives to reproductive technology are harmed only when that technology causes genuinely catastrophic injuries.

Because these conventional paradigms define harmful conduct exclusively by reference to the magnitude of the injuries suffered, they sometimes lead to indefensible conclusions. In Italy, for example, authorities recently shut down a Florentine sperm bank that was selling the sperm of a man infected with hepatitis C and genital herpes to fertility clinics throughout Italy.¹ The sperm bank’s failure to screen its donors posed unnecessary risks to would-be mothers and their children. Under conventional analysis, however, no harm was done to any of the children affected by the sperm bank’s failure to screen.

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¹ See Diseased sperm forces fertility clinics to close, ST. LOUIS POST-DISPATCH, Nov. 30, 1997, at A5. Both diseases can also be transmitted to the mothers via the sperm.
because their only alternative to life with their illnesses was nonexistence. Better screening would not have improved their health. Instead, it would have resulted in the birth of a different child. Under conventional analysis, therefore, no harm was done by the failure to screen unless the affected children would have been better off never existing at all.

This conclusion defies common sense. Better screening would have avoided needless suffering. Responsible clinics already know this. They screen. Yet, conventional analysis cannot account for their concern. Because it focuses exclusively on the magnitude of the injuries suffered by the children actually born, conventional analysis overlooks the possibility that individuals using reproductive technology could reduce future injuries by conceiving other children who would suffer less. These injuries are avoidable by the substitution of one child for another.

Because conventional analysis looks only for individual victims, it ignores the harm that can be inflicted on future children as a class when irresponsible reproductive choices are made. Although the narrow focus of conventional thinking is appropriate in legal actions for compensatory damages, where proof of harm to the individual plaintiff is essential, it needs supplementation when the issue is whether future generations would benefit from public health regulation.

This Article explores an alternative way of determining whether an existence-inducing act is harmful to future children. The methodology proposed here focuses on the choices available to providers and parents who engage in reproductive conduct. When they choose a risky route over a safer one (perhaps, because it is more profitable, less risky to the mother, or more likely to result in conception), they threaten the welfare of future children.

Imagine, for example, a fertility clinic that implants more embryos than its competitors in order to maximize its success rate, even though this policy increases the number of dangerous multiple births. Or imagine a woman who is able to conceive naturally but chooses to clone herself despite the risks of using old DNA. These choices may cause unnecessary future suffering. Contrary to conventional analysis, the harmfulness of these choices does not turn exclusively on the magnitude of the injury inflicted. Harm can also be caused by the use of a dangerous procedure when a safer one is available.
HARMING FUTURE PERSONS

Part I of this paper reviews the contemporary reproductive settings in which these issues currently arise and introduces the debate over harmfulness. Part II examines the conventional ways of identifying harmful reproductive conduct. Parts III and IV then propose and explore a class-based method of identifying harm to future children that focuses on the choices made by parents and providers. The likely criticisms are answered in Part V.

I. THE CONTEMPORARY CONTEXT

For decades, ethicists and legal scholars have debated the moral implications of the unknown dangers that new reproductive technologies pose to future children. First, artificial insemination prompted this discussion; later, it was in vitro fertilization and surrogacy. Recently, two events have brought this issue back to prominence. First, the birth of the McCaughey septuplets and the Chukuri octuplets has renewed fears that unregulated fertility treatments would expose many parents and children to the risks of multiple pregnancies. Second, Dr. Ian Wilmut cloned a sheep named Dolly, producing an ethical and regulatory frenzy over the prospect of human cloning.

According to the National Center of Health Statistics, the number of triplets has more than tripled since the 1970s, and fertility treatments account for most of this increase. Fertility drugs, for example, induce women to produce more than one egg in a single cycle. And fertility clinics routinely implant more than one embryo when they perform in vitro fertilization and other similar procedures. As a result, both of these fertility treatments increase the risk of multiple pregnancy. In fact, 75% of the triplets, 90% of the quadruplets, and all of the quintuplets are born to women under treatment for fertility problems.

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5. See Daney Q. Haney, In Fertility Field, Septuplets are Failure Multiplied, USA Today, Nov. 21, 1997, at 3A.
Unfortunately, multiple births are associated with an increased incidence of blindness, learning defects, lung problems, and other ailments. Quintuplets are twelve times more likely to die in infancy. And many of the survivors will have serious medical problems. For this reason, the United Kingdom has placed a limit on the number of embryos that may be transplanted at one time. “Does the mother have the right,” asks Dr. John Balint, “to expose these little creatures to the risk of marked prematurity, with the risk of cerebral hemorrhage, bowel infarctions, lung complications and so forth?” Should a woman whose fertility drugs have produced too many eggs wait until “the bus is not so full,” asks ethicist Thomas Murray.

Like multiple pregnancies, cloning too may pose risks to the safety of future children. Although this risk probably is not the major source of the widespread uneasiness about human cloning, it is the risk most widely agreed upon and, thus, provided the articulated basis for the National Bioethics Advisory Commission’s (NBAC) recommendation that a three-to-five year moratorium be placed on human cloning.

Within twenty-four hours of the announcement that Dolly had been cloned using a technique known as somatic cell nuclear transfer, President Clinton called for a moratorium on human cloning research. A few months later, the NBAC issued its report, recommending that the cloning technique used to clone Dolly be temporarily banned. The NBAC’s recommendation “was based almost entirely on safety considerations: the high likelihood of failure and a

8. See id. at A1; Geoffrey Cowley and Karen Springer, Multiplying the Risks: More Group Births Mean More Preemies and, Often, More Problems, Newsweek, Dec. 1, 1997, at 66. Multiple pregnancies also place financial, emotional, and physical burdens on parents that could harm the welfare of both the parents and the children. See Fertility Experts Decry Multiple Births: One Healthy Baby is the Goal, They Say, St. Louis Post-Dispatch, Nov. 21, 1997, at A8 [hereinafter One Healthy Baby].
10. The maximum currently is three and may soon be reduced to two. See Carton, supra note 3, at A6. Boston’s Beth Israel Deaconess Medical Center sets a limit of three embryos and the American Society for Reproductive Medicine recommends a maximum of four embryos for women aged 35-40 and five for older women. See id.
14. See NBAC Report, supra note 4. The Commission’s proposal would apply only to the cloning that uses the technique reportedly used to clone Dolly: somatic cell nuclear transfer. See
consequent high rate of miscarriage, and the unknown risk of developmental abnormalities in the offspring." President Clinton sent Congress legislation to outlaw the cloning of humans for at least five years. When Dr. Richard Seed announced his plans to establish a center for the cloning of humans, President Clinton renewed his call for a prohibition.

In recommending a temporary prohibition on the cloning of adult human cells to create new human beings, the NBAC expressed its belief that dangers to cloned children make cloning morally unacceptable at the present time. It said:

The prospect of creating children through somatic cell nuclear transfer has elicited widespread concern, much . . . in the form of fears about harms to the children who may be born as a result. There are concerns about possible physical harms from the manipulations of ova, nuclei, and embryos which are parts of the technology, and also about possible psychological harms, such as a diminished sense of individuality and personal autonomy . . . . Virtually all people agree that the current risks of physical harm to children associated with somatic cell nuclear transplantation cloning justify a prohibition at this time on such experimentation.

The Commission specifically rejected the argument that cloned children are only harmed if they would be better off unborn.

This metaphysical argument, in which one is forced to compare existence with non-existence, is problematic. Not only does it require us to compare something unknowable—non-existence—with something else, it also can lead to absurd conclusions if taken to its logical extreme. For example, it would support the argument that there is no degree of pain and suffering that cannot be inflicted on a child, provided that the alternative is never to have been conceived.

id. at 1, 13, 33. The Commission did not make any proposals dealing with cloning by embryo-splitting.


19. See NBAC REPORT, supra note 4, at 63-65, 79-82.

20. Id. at 63 (emphasis added).

21. Id. at 66.
The Commission concluded that the wrongful life approach was not administrable and would lead to absurd results.

As John Robertson has subsequently noted, the Commission’s analysis is vulnerable to several criticisms. For example, the Commission’s analysis arguably relies on the very comparison that it says is impossible. If it is better for cloned children not to be born, suggests Robertson, then the Commission has implicitly concluded that nonexistence is preferable. Robertson also notes the Commission’s mistaken belief that the wrongful life approach would never permit intervention on behalf of suffering children. In truth, the wrongful life model would favor intervention whenever the anticipated suffering is so severe that nonexistence would be better. Robertson could also have included one additional criticism: the Commission did not articulate or defend an alternative conception of harmfulness that would support its conclusions.

Still, one cannot think about the risks posed by existence-inducing technologies without sharing the Commission’s intuitions that the wrongful life paradigm misses something important in our understanding of harmful conduct. The conduct of the Italian sperm bank is just one example of conduct whose harmfulness is not captured by conventional analysis. The same can be said of the fertility clinic that implants an unreasonable number of embryos or the physician who is

22. Robertson, supra note 13, at 76. There is no evidence, Robertson suggests, “that feared harms of cloning would cause such physical or psychological suffering that the child’s very existence would be a wrongful one.” Id. at 74. Robertson also makes several other cogent points in his criticism of the Commission’s recommendation. He notes, for example, that the Commission’s reasoning would also make it unethical to knowingly give natural birth to children who are not fully healthy, physically or psychologically. Id. at 73-74.

23. See id. at 75-76. Robertson also persuasively rebuts the Commission’s contention that this comparison is “metaphysical.” He notes that the comparison is made from the standpoint of the living child. See id. at 75. As I and others have noted, this test of harmfulness really calls for a comparison between the benefits of life and the burdens of life, a judgment that we routinely permit severely ill patients and their proxies to make. See, e.g., Nora K. Bell & Barry M. Loewer, What is Wrong with “Wrongful Life” Cases, 10 J. MED. & PHIL. 127, 138 (1985); Joel Feinberg, Wrongful Life and the Counterfactual Element in Harming, 4 SOC. PHIL. & POL’Y 145, 158-59, 161-67 (1986); Michael B. Kelly, The Rightful Position in “Wrongful Life” Actions, 42 HASTINGS L.J. 505, 518 n.58 (1991); Philip G. Peters, Jr., The Illusion of Autonomy at the End of Life: Unconsented Life Support and the Wrongful Life Analogy, UCLA L. REV. 673, 698-99 (1998).

24. As Robertson notes, “Either the conclusion that it is unethical because of harm to children should be rejected, or some other basis for the ethical claim established.” Robertson, supra note 13, at 76. This Article accepts his challenge to offer another basis.
willing to clone children for individuals who could have conceived naturally. This essay attempts to outline an analytic framework for the intuition that choices of this kind can be harmful.

II. CONVENTIONAL CONCEPTIONS OF HARM

Under conventional legal analysis, to cause harm is to make someone worse off than she would otherwise have been. In tort law, this conception of harm is embodied in the "but for" test of causation-in-fact. In most cases, the application of this test is quite straightforward. A driver who strikes a pedestrian has harmed the pedestrian. A physician who carelessly prescribes drugs that injure a pregnant patient and her fetus has harmed both of them. These simple examples involve the infliction of harm that could fairly be described as ordinary harm.

When a disputed act is existence-inducing, however, its harmfulness is typically more difficult to measure. Assume, for example, that a fertility clinic's failure to adequately screen its egg donors results in an unnecessarily high incidence of genetic disabilities among the resulting children. Under conventional analysis, no harm has been caused by failure to screen unless the children actually born have lives that are worse than the alternative—never existing at all. Only in those rare circumstances where the injuries are so catastrophic that life itself is harmful can the failure to screen be said to have made these children worse off than they would otherwise have been. Even a clinic's failure to screen for HIV infection may not rise to this level.


27. Sometimes, however, even existence-inducing activities can inflict ordinary harm. A fertility clinic that carelessly stores frozen embryos, causing injuries that could have been avoided, causes ordinary harm to the injured child. Indeed, Melinda Roberts persuasively argues that ordinary harm also occurs in some contexts mistakenly assumed to be governed by the wrongful life paradigm. For example, multiple cloning may injure the genetically-identical children by depriving them of their individuality, see, Mona S. Amer, Breaking the Mold: Human Embryo Cloning and its Implications for a Right to Individuality, 43 UCLA L. REV. 1659, 1677-84 (1996) (proposing that cloning be limited to a single success). It could have been avoided by cloning only one child. See Melinda Roberts, Human Cloning: A Case of No Harm Done?, 21 J. MED. AND PHIL. 537, 545 (1996). See also Melinda Roberts, Present Duties and Future Persons: When are Existence-Inducing Acts Wrong?, 14 LAW & PHIL. 297, 324-26 (1995).
As John Robertson notes, a person with HIV infection may have "years of life that are good for her."28

In wrongful life tort actions, American courts have wholeheartedly endorsed this way of analyzing the harmfulness of existence-inducing acts. They have uniformly concluded that mistakes, such as negligent sterilization,29 which lead to the birth of a child with disabilities do not harm that child unless her life is worse than not existing at all.30 In the rest of this paper, I will refer to this demanding test of harmfulness as the wrongful life approach.

If similar logic is used to ascertain the state's interest in regulating reproductive technology on behalf of future children, then the interests of those children will rarely, if ever, be taken into account. The risks associated with reproductive technology will very rarely be so catastrophic that life itself is harmful.

Bonnie Steinbock and others, including this author, have argued that the nonexistence threshold as traditionally construed is too strict and that persons who engage in existence-inducing conduct ought to provide the resulting children with a minimally-decent existence.31

29. See, e.g., Fassoulas v. Ramey, 450 So.2d 822 (Fla. 1984).
31. See, e.g., Michael Bayles, Harm to the Unconceived, 5 PHILO. & PUB. AFF. 292, 302 (1976); Cynthia B. Cohen, "Give Me Children or I Shall Die!" New Reproductive Technologies and Harm to Children, HASTINGS CENTER REP., March-April 1996, 19, 24; Fred Feldman, Justice, Desert, and the Repugnant Conclusion, 7 UTILITIAS 189, 196 (1995); E. Haavi Moreim, The Concept of Harm Reconceived: A Different Look at Wrongful Life, 7 LAW AND PHIL. 3 (1988); Peters, supra note 2, at 542-45; Bonnie Steinbock and Ron McClamrock, When is Birth Unfair to the Child?, 24 HASTINGS CENTER REP., Nov.-Dec. 1994, at 15, 21; Bonnie Steinbock, The Logical Case for "Wrongful Life," HASTINGS CENTER REP., April 1986, 15, 19. See also Matthew Hanner, Harms Future People, 19 PHILO. & PUB. AFFAIRS 47 (1990) (arguably supporting a minimum quality of life). This modification of the wrongful life threshold of harmfulness is intuitively appealing. However, defending it is a difficult assignment. After all, the resulting children have lives that are beneficial on balance even if they do not meet some ideal minimum.
This method of identifying the interests of future children broadens the range of cognizable harm, but only marginally. A "decent minimum" requirement continues to limit the notion of harmful conduct to reproductive behavior that causes catastrophic injury. Although this alternative to the wrongful life approach usefully expands the concept of harmful conduct, it fails to explain why the behavior of the Italian sperm bank seems irresponsible. For that, another notion of harmfulness is needed—one that focuses on the choices available to the actor, rather than the absolute magnitude of the injury to the child.

III. MAXIMIZING THE WELL-BEING OF FUTURE CHILDREN

By focusing exclusively on the presence or absence of harm to the children actually born, conventional analysis completely ignores the possibility that individuals using reproductive technology could reduce future injuries by conceiving other children who would suffer less. These are injuries that are avoidable by substitution of one child for another. Behavior of this kind causes future generations to suffer unnecessarily and, accordingly, threatens their collective welfare.

quality of life. See, e.g., Derek Parfit, Reasons and Persons 364 (1984); Robertson, supra note 28, at 75-76, 122; Melinda Roberts, Present Duties and Future Persons: When are Existence-Inducing Acts Wrong?, 14 Law & Phil. 297, 302-33 (1995); James Woodward, The Non-Identity Problem, 96 Ethics 804, 815 n.12 (1986). The articles cited here employ a variety of strategies to justify this shift in the threshold. In addition, Ronald Green, the Interim Director of the Office of Genome Ethics at the National Institute of Health's National Center for Human Genome Research, offers a more unique benchmark. He suggests that children are owed a quality of life equal to that of others in the child's birth cohort. Ronald Green, Parental Autonomy and the Obligation Not to Harm One's Child Genetically, 25 J. Law, Med. & Ethics 5, 8-9 (1997). See also Michael Bayles, Morality and Population Policy 3 (1980) (advocating a duty not to make it unlikely that future generations will have an equivalent quality of life). Under contemporary conditions, that promises to be a more robust obligation than a decent minimum. Because his proposal uses average well-being as its benchmark, it has some superficial similarities to the proposal made in this essay. Fundamentally, however, his approach is quite different as the obligation he discusses does not appear to arise out of, or depend upon, the availability of safer reproductive options. Taking a quite different route, James Woodward has argued that children can be wronged when parents have children knowing that they cannot fulfill their parental obligations to the children. See Woodward, supra at 815; James Woodward, Reply to Parfit, 97 Ethics 800 (1986). While Woodward's thesis is intriguing, it is quite narrow in its application. He concedes that there would be no obligation not to have children who will be well cared-for. It would not apply to impairments that do not arise out a failure to meet parental obligations. As a result, his thesis would not reach the cases of the sperm clinic or Dr. Seed.

Such behavior is exemplified by a fertility clinic that implants more embryos than its competitors in order to maximize its success rate and, thus, its business, even though this policy increases the number of dangerous multiple pregnancies. Likewise, a woman who is able to conceive naturally, but chooses to clone herself despite the risks of using old DNA is taking avoidable risks with her future children. Any injuries caused by these choices could have been avoided.

The harmfulness of these acts lies not in magnitude of the injury, but in the decision to take a risky route to reproduction when a safer one was available. The conventional model of harming overlooks this kind of harmful conduct because it does not make a specific child worse off. If the safer route had been chosen, a different child would have been born. Because conventional analysis requires an individual victim, it overlooks the fact that the collective welfare of future children is impaired by decisions of this kind. Although conventional wisdom's insistence on proof of harm to a specific individual is appropriate in actions for compensatory damages, this narrow notion of harming should not be relied upon by legislatures and administrative agencies contemplating public health regulation.

A. Parfit's Impatient Mother

The English moral philosopher Derek Parfit offers the provocative story of a woman who is advised by her doctor not to become pregnant until she gets over a temporary illness that causes birth defects.33 Although she could wait two months for the condition to pass, she ignores his advice and conceives a child who suffers the deformity. Intuitively, her choice was a harmful one. Yet, if she had waited, another child would have been born. The child actually born would not have existed. Because that child's only alternative to living with this deformity was nonexistence, conventional wrongful life analysis tells us that no harm was done unless life with her disability is worse than never existing at all.34

This conclusion assaults our common sense. The unacceptability of this conclusion is reinforced by comparing it with the conclusion that would be reached if, instead, the mother had possessed the power

34. See, e.g., Parfit, supra note 33, at 101; Bayles, supra note 31, at 297; Joel Feinberg, Wrongful Life and the Counterfactual Element in Harming, 4 SOC. PHIL. & POL'Y 145, 168-69.
to prevent the birth defects by taking medication during her preg-
nancy.\textsuperscript{35} In that event, her failure to take the medication would
unquestionably constitute harmful conduct because the child actually
born could have been born without these injuries. These vastly differ-
et conclusions simply do not pass a moral gut test.\textsuperscript{36} Both mothers
had an equal opportunity to avoid human misery. Both caused unnec-
essary human suffering.\textsuperscript{37}

The inadequacy of the traditional model is further illustrated by
comparing its conclusions in the case of unscreened sperm with those
that result when a sperm clinic negligently stores its sperm. Under
traditional notions of harmfulness, the negligent storage of sperm
causes ordinary harm because reasonable care could have prevented
injury to the resulting children. By contrast, the failure to screen for
infected sperm, because it changes the identity of the resulting chil-
dren, is harmless unless the injuries caused are so catastrophic that life
itself is harmful. Once again, two similarly culpable choices have dra-
matically different implications under conventional theory—implica-
tions that are not consistent with common norms of responsible
behavior.

The conclusions dictated by conventional analysis in these two
examples reveal the need for supplementation. Conventional analysis
overlooks the harm caused to future children as a class when a dan-
gerous means of reproduction is chosen in lieu of a safer one. Choices
of this kind cause unnecessary suffering. Parents intuitively under-
stand this idea. They avoid reproduction while on powerful drugs.
Many screen themselves or their embryos for genetic abnormalities.

Even Dr. Richard Seed, the notorious physician who purportedly
plans to clone humans in the near future, understood the power of this
moral perspective. His initial proposal would ostensibly have
restricted access to cloning to couples who were \textit{both} infertile. Why
would he impose such a narrow restriction? Dr. Seed understood that
cloning would be more vulnerable to criticism if used by couples with
access to less controversial reproductive options, such as artificial

\textsuperscript{35} See Parfit, supra note 33, at 103. Syphilis might be one such condition. See Robertson & Schulman, \textit{Pregnancy and Prenatal Harm to Offspring: The Case of Mothers With PKU}, Hastings Center Rep., Aug./Sept. 1987, at 26. By contrast, AIDS also presents a risk of infected offspring, but the absence of treatment makes the risk unavoidable for the mother who wishes to bear her own child. See id. at 31.

\textsuperscript{36} See Peters, supra note 2, at 513-14.

\textsuperscript{37} See Feinberg, supra note 34, at 178. Parfit calls this the "no-difference view." \textit{Parfit}, supra note 31, at 367-68.
insemination or egg donation. By excluding these couples, he reduced his vulnerability to the charge that his plans would harm future children by substituting a more risky procedure for a less risky one.

B. Theoretical Foundations

A prima facie duty to minimize suffering finds its strongest support in utilitarian theory. Derek Parfit, for example, recognized that having the happier child would maximize social utility. Table 1 illustrates this utilitarian implication.

Table 1

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Child Welfare

Assume, for example, that Option A is to conceive a child naturally and Option B is to clone a child. If cloning is reasonably believed on balance to threaten the welfare of the resulting child more than natural conception, then Option A maximizes the well-being of

38. Parfit felt that an appeal to “rights” could never solve cases like the failure to delay pregnancy because no specific individual is made worse off. Parfit said that the wrong in these cases is not “person affecting.” Parfit, supra note 31, at 378. Fishkin describes the analysis in these cases as “identity independent.” Fishkin, supra note 25, at 26. He notes that this method of assessing interests is, in this sense, anonymous. See id.

the anticipated child. From a utilitarian standpoint, therefore, Option A is better for future children.40

Derek Parfit articulated a principle that he called the “Q” to capture this insight.41

If in either of two outcomes the same number of people would ever live, it would be bad if those who live are worse off or have a lower quality of life than those who would have lived.42

Translated into simpler language, Q exhorts providers and would-be parents to have the child who will suffer least.

A prima facie obligation to avoid unnecessary suffering is also consistent with the method of moral reasoning associated with John Rawls43 and sometimes called Ideal Contractualism.44 This approach identifies binding moral obligations by asking whether they would be chosen by people who are under a veil of ignorance and, thus, are unaware whether they would bear the brunt of the chosen principles. I believe that people under the veil would agree, all other things being equal, that parents and the individuals who assist them should try to have the children who will suffer least. Although Parfit and others have suggested that we cannot imagine a future in which we do not exist, I believe that we can and that most people would prefer that their welfare be maximized if they are to be born at all.45 Put differently, they would favor the avoidance of unnecessary suffering.

Indeed, it is remarkable that so obvious a proposition has not already become a part of the fabric of academic thinking about reproductive decisionmaking. Yet, only the American philosopher Dan

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40. Whether it is absolutely better would turn on the utilities to other persons, like parents, of the choice between Option A and Option B. The point of this analysis is that child welfare should constitute a component of overall utility analysis.

41. PARFIT, supra note 31, at 360.

42. Parfit also called this principle “The Same Number Quality Claim.” Id.

43. JOHN RAWLS, A THEORY OF JUSTICE (1971).

44. See PARFIT, supra note 31, at 391.

45. However, Parfit disagrees. He assumes that we cannot imagine a history in which we do not exist. PARFIT, supra note 31, at 392. See also Jan Narveson, Moral Problems of Population, in ETHICS AND POPULATION 59, 78 (Michael D. Bayles ed., 1976) (finding the prospect “perfectly mind-boggling”). Parfit reports that other writers assume that we would choose a history that maximizes the future population, as long as the lives lived are worth living. Id. Narveson, however, assumes that our inability to imagine that we would not exist would lead us to maximize average utility and a better quality of life for those who do exist. Id.
Brock\(^{46}\) has endorsed Parfit's model and applied it to reproductive technology.\(^{47}\) Thus far, no legislator has publicly relied upon this conception of harmful conduct to defend the regulation of reproductive technology. Perhaps that is because legislators feel free to rely on their personal moral barometers without the need for a philosophical defense. Yet this reliance leaves them open to criticisms that their position is unprincipled. Furthermore, reliance on untutored intuitions will tempt legislators to assume that all the burdens imposed by a reproductive technology are harmful. However, that is not the lesson of Q. The harmfulness identified by this model lies in the choice of a dangerous option over a safer one. As a result, no conclusions about the harmfulness of a person's choices can be reached until the alternatives realistically available to the decisionmaker have been identified and examined.

In this respect, the NBAC's analysis of cloning was too blunt. The propriety of taking the risks associated with cloning turns on the alternatives available to the parents. The case for permitting cloning despite its risks will be strongest when the would-be parents are both infertile and ineligible to adopt.\(^{48}\) It will also be strong when both carry the genes for horrible birth defects. It will be weakest when a would-be parent is fertile and simply insists on having an identical child or a child cloned from some famous public figure.

Under the expanded conception of harmful conduct proposed here, a three-step inquiry will be needed to determine whether regulatory action is appropriate. The first step is to identify the parenting options realistically available to the affected parents and clinicians. The second is to compare the advantages and disadvantages of each alternative from the perspective of the resulting children.\(^{49}\) Finally,


\(^{47}\) A few other philosophers have hinted that they endorse a similar idea in the context of population policy. See, e.g., Gregory Kavka, The Paradox of Future Individuals, 11 PHIL. & PUB. AFFAIRS 93, 105 n.24 (1981); Woodward, supra note 31, at 806-07.

\(^{48}\) Whether adoption should be treated as an available option and, if so, whether parental interests in genetically-related children would justify refusal to adopt are examples of the interesting second-generation questions arising out of a duty to do the best you can.

\(^{49}\) It is important to emphasize that this analysis requires an honest appraisal of the burdens and benefits of the reproductive methods under scrutiny. Some controversial reproductive technologies, such as cloning, may actually offer advantages to the affected children that could potentially offset the burdens associated with the technology. Studies of genetically identical twins, for example, suggest that this relationship can confer significant emotional benefits. See Susan M. Wolf, Ban Cloning? Why the NBAC is Wrong, HASTINGS CENTER REP., Sept.-Oct. 1997, at 12, 13. Cloning may bestow some of the same benefits. See id.
the interests of future children must be balanced against the rights and interests of parents and providers. Only then can a final decision about regulatory action be made.

It is crucial to emphasize that this proposal does not dictate or even support state intervention every time a harmful choice is made. The interests of future children must be examined alongside the rights and interests of parents, providers, and the community as a whole. Those rights and interests will vary with the circumstances. Other principles, like procreative liberty and maternal bodily autonomy will often override the obligation to avoid harm to future children. The significance of this new way of looking at the interests of future children is not that it requires intervention in every case, but that it requires justification in cases overlooked by more conventional notions of harm.

The strongest cases for state regulation are likely to involve dangerous reproductive conduct on the part of clinics, researchers, and other third parties. These regulations will least directly interfere with the procreative and privacy interests of would-be parents. Regulation of this kind might include rules governing the harvesting of eggs and the acquisition of sperm, prohibitions on use of stale gametes or embryos, and minimum accreditation requirements for fertility specialists. Other potential targets of regulation are the artificial reproductive practices that least directly implicate the traditional zone of procreative privacy. Cloning is an obvious example. So, too, are extra-corporeal techniques, like in vitro fertilization. Practices least likely to pass muster are interventions that directly interfere with a woman's bodily integrity, such as the mandatory genetic screening of a woman or her fetus.

IV. DIFFERENT NUMBER CASES

The goal of respecting the interests of future children is easiest to operationalize when a choice must be made between two reproductive options that will each result in the birth of a single child. In these

In addition, we must avoid unsubstantiated assumptions about the burdens imposed by birth defects. Studies of persons with disabilities indicate that they view their quality of life more positively than others would expect.

50. See, e.g., John Robertson, Procreative Liberty and the Control of Conception, Pregnancy, and Childbirth, 69 VA. L. Rev. 405 (1983); John Robertson, Surrogate Mothers: Not So Novel After All, HASTINGS CENTER REP., Oct. 1983, at 28-29.

51. The extension of class-based interest analysis to genetic screening is discussed further in the text infra at notes 80-83.
cases, the anticipated welfare of the child born using one method can be compared to the anticipated welfare of the child born using the other. Table 1, above, illustrates simple choices of this kind.

Maximizing the welfare of future children is a much more complex task when the choice among reproductive options will affect the number of children who are eventually born. Imagine, for example, that a fertility clinic is deciding whether to increase the number of embryos that it is willing to implant at one time. Assume further that using additional embryos will increase the risks of multiple pregnancy, premature birth, and serious medical problems. Would it be better to aim for single pregnancies? Table 2 depicts a simplified version of this choice.

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52. See supra notes 9-12.

53. A more complex model would take into account the uncertainties in both the chance of injury and the odds of a live birth using each procedure. My own preliminary assessment is that the probability of injury can be taken into account in a relatively straightforward way by discounting the harm to reflect the odds. Taking the odds of live birth into account is likely to be more complex. Policy A, for example, may be to implant 3 embryos. It may pose a 40% chance of no births at all, a 50% chance of one child, and a 10% chance of multiple births. Policy B, by contrast, may be to implant 6 embryos. It could have a 20% chance of failure, a 50% chance of single birth, and a 30% chance of multiple birth. Any comparison between these policies must compare the sum of these probabilities. Interestingly, a recent British study found that transferring three embryos, rather than two, increases the chance of multiple births, but not the rate of pregnancy. Temple A. Morris, Reducing the risk of Multiple Births by Transfer of Two Embryos After In Vitro Fertilization, 339 N. En. J. Med. 573 (1998).

Although this complication certainly makes ethical analysis of the choice more complex, it raises only one new logical problem. That is how to take into account the chance that the procreative effort will fail altogether. It is easy to see how this prospect is contrary to the interests of the parents and, therefore, will need to be taken into account before final decisions about ethical and legal propriety are made. However, it is less clear how this possibility affects the interests of the future children. My tentative conclusion is that the case against a particular procreative choice will weaken in direct proportion to the odds that the safer course of action will fail to result in a live birth. A prima facie obligation to do the best you can assumes that an alternative, safer way of having a child is available. If not, then the avoidance of unnecessary suffering analysis is inapplicable and the wrongful life analysis should be used to evaluate the harmfulness of the reproductive choice.

This limitation on avoidability by substitution analysis is easiest to appreciate when a couple has absolutely no possibility of conceiving naturally and is unable to adopt. Under these circumstances, the choice to use assisted reproduction cannot be compared against natural conception. If the chosen method of assisted reproduction is the safest one available, then its use is only harmful to future children if their lives are worse than never existing at all.

The analysis is more complicated when the safer procreative strategies reduces, but does not eliminate, the risk of failure. The larger the chance of success using the safer procedure, the larger the cohort of future children whose lives could have been improved. The smaller the chance of success using the safer procedure, the smaller the opportunity for welfare gains and thus the weaker the case for intervention in the name of future children.
Option A will produce a single child with an anticipated welfare of 90. Option B will produce three children, each with an anticipated welfare of 70. Which choice optimizes the welfare of future children? The answer turns on the measure of utility used to compare the two outcomes. Option A will maximize average utility, while Option B will maximize total utility.

A. CONFLICTING PARADOXES

Both average utility and total utility can lead to unappealing preferences under some circumstances. A preference for total utility, for example, seems to force us "to prefer a huge, wretched population to a smaller, happy one, as long as the quantity of the huge population allows its total utility to exceed the total utility of the smaller population." Parfit called this "the Repugnant Conclusion." Applied in the context of reproductive decisionmaking, a total utility approach would often prefer multiple pregnancies over single ones, even if multiple pregnancies were strongly associated with serious physical or emotional injuries. Table 3 illustrates the Repugnant Conclusion.

55. PARFIT, supra note 31, at 388.
56. In addition, reliance on total utility measures arguably implies a duty to procreate as long as the utility generated by the additional lives outweighs the burden imposed on other persons. See PARFIT, supra note 31, at 381-90. Summers argues, however, that we are already past the point where more population is the best means of promoting human welfare. L.W. Summers, Classical Utilitarianism and the Population Optimum, in OBLIGATIONS TO FUTURE
The Repugnant Conclusion can be avoided by relying on average utility. Average utility favors choices that produce the greatest average welfare. In Table 3, that would be the single child option (Option A) because it produces an average welfare of 90, rather than 10.

Regrettably, average utility also has shortcomings. Average utility, for example, seems to favor a population policy that will result in 10 exquisitely happy people over a policy resulting in ten million very happy people. Average utility also seems to condemn the addition of one more happy person to a happy community if that person’s well-

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Generations 91 (R.I Sikora & Brian Barry eds., 1978). Furthermore, James Woodward argues that the repugnant conclusion is artificial because rights violations would occur well before the population is stretched to this point. Woodward, supra note 31, at 828.

At any rate, the duty proposed in this essay is narrower. It would require only that parents and providers who do decide to have children do a decent job of it.

57. See Parfit, supra note 31, at 401.
Parfit was unwilling to choose between these two measures of utility. He was, therefore, unable to extend his preference for having the happier child in same number cases (his "Q") into a broader principle (which he called "X") that would provide guidance for choices between courses of conduct that result in a different number of lives. 60 Nevertheless, he remained convinced that some such principle must exist. 61

B. SOLVING THE DIFFERENT NUMBER CASES

The underlying difficulty with the choice between average and total utility is that each illuminates a morally relevant factor. Average utility emphasizes quality of life while total utility emphasizes quantity. 62 Because both indicia can be relevant in some circumstances, an acceptable theory of moral obligations must be able to take both into consideration. 63

The possibility of combining the two considerations in a single formula has been most elegantly explored by Thomas Hurka. 64 Writing in the context of population ethics, Hurka persuasively argues that

58. See Laudor, supra note 54, at 1684. This is a standard characteristic associated with average utility. However, average utility considerations, properly interpreted, would not necessarily condemn every birth of a "below average" child. Michael Bayles wisely observes that:

A rule utilitarian would adopt a rule concerning having children such that general conformity to that rule would not lead to a lower average happiness. Such a rule might permit having children whose happiness would be below average so long as there would be enough children above the average that it would not decrease.”

Michael D. Bayles, Introduction to Ethics and Population ix, xx (Michael D. Bayles ed. 1976). By contrast, conduct, like cloning, that threatens to lower the overall average would be objectionable.

59. See Laudor, supra note 54, at 1678-79; Parfit, supra note 31, at 419-20.

60. Same number cases do not require a similar choice because having the happier child, as illustrated in Table 1, advances both average and total utility. For this reason, Parfit’s “Q” principle is explicitly limited to “same number” cases.

61. See Parfit, supra note 31, at 380-441.

62. See id. at 401.

63. See id. at 405. Parfit considered combining the two. He hypothesized a combination of the two factors in which quality of life would count down to a threshold amount and then be discounted entirely. Because this threshold approach was quite blunt, it produced results that are vulnerable to criticism. However, the use of a sliding scale or weighted formula should eliminate the counterintuitive implications of more blunt combinations.

total utility declines in importance relative to average utility as populations increase. Thus, the value that an additional individual contributes to the world is not constant, but varies with the number of other humans alive. While the value of additional people would be enormous following a crisis that shrank the population dramatically, as occurred in the biblical story of Noah or might occur following a nuclear holocaust, its value diminishes greatly when the human population reaches its current size.  

A formula which captures this variability avoids many of the unattractive aspects of both the average and total utility principles. By giving more weight to average utility when population levels are high, this approach avoids the Repugnant Conclusion except in the rare circumstances when increased numbers are genuinely more important than quality of life. By giving extra weight to increases in population size when total population is low, this compromise reflects how many of us already feel about population policy. This hybrid also avoids the Mere Addition Paradox in the most objectionable cases; it concedes that population increases are desirable despite a negative impact on quality of life when human survival is least secure. Hurka's hybrid, variable approach has the advantage of escaping the principal problems of both average and total utility in those situations where the shortcomings seem least tolerable. As a result, it constitutes a genuine improvement over exclusive reliance on either total or average utility alone.

A strong argument can be made that average utility should receive greater weight than total utility in this hybrid formula. As Jan Narveson notes, “we are in favor of making people happy, but neutral about making happy people . . . it seems repulsive to think that the goodness of a community is a function of its size.” And John Rawls

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65. See id. at 497. A similar adjustment could be made to reduce the importance of marginal increases in average utility as the average gets higher.

66. Not everyone feels so favorably towards Hurka’s work. James Hudson points out some potential shortcomings of this compromise. James L. Hudson, *The Diminishing Marginal Value of Happy People*, 51 PHILOSOPHICAL STUDIES 125 (1987). Hudson is a totalist who appears to object to any compromise with averagism. Hudson concedes that a hybrid offers advantages with respect to the Repugnant Conclusion. However, because he does not find the Repugnant Conclusion to be repugnant, he feels that this advantage is not sufficient to justify accepting the problems that he sees with average utilitarianism. See id. at 132, 134-35. He does not address the advantages that a hybrid offers in connection with the Mere Addition Paradox.

has concluded that average utility is the only version of utility obtainable using his theory of justice.68 Maintaining and improving the quality of life of people who actually exist seems more crucial than maximizing the number of persons who live, at least under current social and population conditions. As a result, average utility should be weighted more heavily in a hybrid formula that takes into account the impact of reproductive behavior on both average and total utility.

This solution of the dilemma posed by "different number" cases has direct implications for public health regulation. It instructs lawmakers who are considering restrictions on a particular reproductive technology to evaluate the likely impact of that technology on the average and total utility of the resulting children. Because the impact on average utility should be given greater weight, relatively small decreases in average utility could only be offset by relatively large increases in total utility. Promising candidates for such regulatory scrutiny would include fertility clinics that regularly transplant an extremely high number of embryos and fertility drugs strongly associated with multiple pregnancies.

V. CRITICISMS

Critics are likely to raise three key objections to the methodology proposed here. The first is that it identifies a phantom category of "harm" that has no victims and, therefore, has little, if any, moral significance. The second is that the utilitarian methodology underlying this notion of harmfulness has undesirable consequences. And the third is that an obligation to minimize future suffering could have unwanted implications for other reproductive conduct such as genetic screening.

A. VICtIMLESS HARM?

The conception of harmful conduct proposed here postulates that conduct can be harmful even though it makes no specific child worse off than he or she otherwise would have been.69 It is harmful because

68. Rawls, supra note 43, at 166; Narveson, supra note 45, at 77-78. However, Rawls ultimately rejects average utility as a general moral theory.
69. As a result, an action for conventional compensatory damages on behalf of the children actually born would be inappropriate except in those rare cases where life itself is harmful. However, a claim for child support might be defensible under some circumstances. See Philip G. Peters, Jr., Rethinking Wrongful Life: Bridging the Boundary Between Tort and Family Law, 67
it causes unnecessary human suffering. Although there are no individual victims, future children suffer as a class if the technologies used do not maximize the well-being of the resulting children.\textsuperscript{70} As they suffer, the community suffers. Dan Brock correctly observes that these reproductive choices are "person-affecting" in the sense that they inflict unnecessary human suffering.\textsuperscript{71}

This way of conceptualizing harmful conduct explains better than any alternative model why we have such a strong negative reaction to the conduct of the Italian sperm bank and the impatient mother.\textsuperscript{72} John Robertson has trivialized this insight by describing it as a "norm against offending persons who are troubled by gratuitous suffering."\textsuperscript{73} It is not simply a norm about offending sensibilities. It is a norm against inflicting gratuitous suffering.\textsuperscript{74}

\section*{B. UTILITARIAN VULNERABILITIES?}

Many of those who feel uncomfortable with parental failure to use the safer alternative may, nonetheless, have misgivings about the utilitarian underpinnings of a class-based interest analysis. In particular, they may fear the trade-offs commonly associated with unrestrained utility analysis.\textsuperscript{75} The typical illustration of these trade-offs involves the sacrifice of one person so that his organs can be used to save the lives of several other people.\textsuperscript{76}

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\begin{itemize}
\item \textsuperscript{70} See Brock, supra note 32, at 275.
\item \textsuperscript{71} See id. at 273.
\item \textsuperscript{72} Because this class interest approach compares the health or happiness of the two groups of possible children, it arguably assumes that causing a person to exist can benefit him. Parfit states that both views on this issue are defensible. Parfit, supra note 31, at 490. But that controversial assumption is not essential to the conception of harm proposed here. Even if we cannot directly prove that causing someone to exist is a benefit, we can coherently ask whether a person's life is or would be good. See id. at 487-89. See Singer, A Utilitarian Population Principle, in Ethics And Population 81 (1976). This question permits comparisons of how good life is or would be for different children. See Parfit, supra note 31, at 489. As a result, the likely happiness of the two groups of possible children can be compared.
\item \textsuperscript{73} Robertson, supra note 13, at 76.
\item \textsuperscript{75} See, e.g., Laudor, supra note 54, at 1685-86.
\item \textsuperscript{76} See Joel Feinberg, Offense To Others 80 (1985). Both the average utility approach and the total utility approach have sacrifice implications if accepted in their entirety. See Michael D. Bayles, Morality and Population Policy 103-12 (1981).
\end{itemize}
Fortunately, it is not necessary to endorse utilitarianism so wholeheartedly in order to favor the analysis proposed here. Utilitarian tools are used here solely to solve a problem posed by the shortcomings of more traditional, rights-based analysis in the unique circumstances associated with existence-inducing acts. The analysis proposed here uses utilitarian calculus to give content to the idea of beneficence in the context of future people. Most rights-based theories make beneficence an important moral consideration. Furthermore, no actual child is asked to suffer for the sake of the greater happiness of someone else. As a result, one can reasonably endorse this limited use of utility analysis while insisting that the goal of beneficence be subject to other moral norms, such as equal justice or a Kantian reluctance to use people as means to an end.

C. Extension of the Analysis to Genetic Screening

The normative implications of a class-based analysis of harm are not limited to the avoidance of dangerous reproductive technologies. The same logic could potentially impose affirmative obligations on parents in other settings as well. John Robertson, for example, assumes that a class-based analysis of harm would mandate "a moral duty to undergo carrier or prenatal diagnosis and abort if tests are positive." In his view, "such a counterintuitive result suggests a flaw in the argument."

In reaching this conclusion, Robertson mistakenly assumes that regulatory decision-making would turn exclusively on this class-based interest assessment. He overlooks the larger analysis of which class-based interest analysis is just one part. Class-based analysis only identifies the interests of future children in reproductive decisions. Determining whether a specific action is morally or legally obligatory also requires an analysis of the rights and interests of parents and providers who will be affected by a prohibition or restriction. As explained

78. See Feldman, supra note 31, at 202 n.22 (noting that this approach would not permit the killing of someone already in the world); Fishkin, supra note 25, at 30 (noting that these utility calculations apply only to future people, and not to actual people).
79. See Parfit, supra note 31, at 366, 394. As James Woodward notes, we need a theory than combines both consequential and nonconsequential components. Woodward, supra note 31, at 83.
80. Robertson, supra note 50, at 448.
81. Id. However, Parfit specifically declined to require genetic enhancement. Parfit, supra note 77, at 126-27. Accord Kavka, supra note 47, at 99-104.
above, regulation will be most defensible where the threat to the welfare of future children is serious and the conflicting interests are least powerful.\textsuperscript{82}

Context will be crucial. Mandating an abortion after a positive test for genetic abnormality is qualitatively different from asking Parfit's mother to wait a few months before conceiving. Each proposed intervention must be analyzed on its own terms, exploring both the benefits likely to be conferred on future children and the degree of likely interference with the recognized rights and interests of the parents, providers, and, in the case of mandatory abortions, the fetus. Mandatory abortion would sacrifice a living fetus on behalf of future class welfare and would do so by forcibly invading the bodily integrity of the mother. That is radically different from, for example, placing a limit on the number of embryos implanted at one time. Just as American courts do not require individuals to donate organs to dying relatives,\textsuperscript{83} they will not require women to undergo the coerced abortion of genetically impaired fetuses in order to protect the average well-being of future children. Mandatory abortions will remain unthinkable even if the analysis proposed here is adopted.

The virtue of this expanded conception of harm is that it forces us to address these contextual differences and account for them, rather than dismissing the welfare of future generations as morally irrelevant. The moral dimension of genetic screening, for example, is familiar to any woman who knows that she carries a dangerous gene or who conceives in her late forties. Under these circumstances, many women agonize over their choices. The wrongful life approach cannot account for this agony. A class-based analysis helps to fill that moral vacuum. By doing so, it enriches our understanding of the moral conflicts posed by the capacity to do genetic screening. Its ability to detect these moral dilemmas and bring them to the surface is a strength, rather than a weakness.

\textbf{VI. CONCLUSIONS AND FUTURE QUESTIONS}

The conventional model of harming overlooks an important category of harmful conduct. Because it focuses exclusively on the presence or absence of harm to individuals who are actually born, this model ignores the ability of actors, like the Italian sperm bank, to

\begin{itemize}
\item[82.] \textit{See supra} text accompanying notes 50-51.
\item[83.] \textit{See McFall v. Shimp, 10 Pa. D. & C.3d 90 (1978). See also} Head v. Colloton, 331 N.W.2d 870 (Iowa 1983).
\end{itemize}
reduce human suffering by engaging in more responsible conduct. When a reproductive choice results in the birth of a child who will suffer more, rather than one who will suffer less, that choice causes unnecessary harm. Although no individual child can claim to have been personally harmed, the class of children conceived as a result of these choices will suffer more than they need to have suffered.

The narrow focus of the traditional model of harm is well-suited for use in tort litigation. In an action for compensatory damages, proof of harm to the claimant is essential. However, this narrow notion of harm is not appropriate for public health regulation. Because public health regulation is concerned with community welfare, it can and should take into account the unnecessary harm that reproductive choices can inflict on future children as a class.

Lawmakers who contemplate the regulation of existence-inducing behavior, such as cloning and surrogacy, should consider not only whether the children who owe their lives to that technology have lives worth living, but also whether happier, healthier children would be born if these technologies were used differently or not at all.

Treating the failure to maximize child welfare as harmful conduct is consistent with our moral barometers. It provides us with a more robust conception of the interests of future children. Consequently, it offers an important additional perspective for evaluating not only new reproductive technologies like cloning and genetic manipulation, but also older ones, like surrogacy, in vitro fertilization, and fertility drugs. In the current debate over cloning, furthermore, it provides a coherent basis for the NBAC’s consideration of potential harms to cloned children.

At the same time, this model requires close attention to the reproductive options that are actually available to specific individuals. Only after those alternatives are compared can conclusions be reached about the harmfulness of the chosen course of action. In this respect, the NBAC’s call for a blanket moratorium is too blunt and non-contextual. The propriety of running the risks associated with cloning will turn on the circumstances.

This unconventional approach does not dictate or even support state intervention every time that a harmful choice is made. Before a decision about regulation can be reached, lawmakers must also consider the interests of parents, providers, and others who may be affected by the regulation. The significance of this new methodology
is not that it requires intervention, but that it requires justification in cases overlooked by more conventional notions of harm.\textsuperscript{84}

\textsuperscript{84} This approach also raises some intriguing second-generation questions, such as whether adoption should sometimes count as an available option and how uncertainty about risks and about the odds of a live birth should factor into this analysis. For a preliminary assessment of the role of uncertainty, see \textit{supra} note 53. On the relevance of adoption, see Peter Singer & Deane Wells, \textit{Making Babies: The New Science and Ethics of Conception} 44-46 (1985) (forcing adoption not likely to be successful; but no right to genetic offspring); Jan Narveson, \textit{Future People and Us, in Obligations to Future Generations} 49 (1978). The adoption option is not strictly analogous to the conception choices previously examined because it does not offer the parents the option of bringing into the world a genetically related child. However, similarities between the two choices exist. In adoption, as with other cases of substitution, needless suffering can be avoided by not conceiving the would-be affected child and by rearing another available child. In fact, the case for intervention is arguably stronger here because the children who will benefit are actually living, unlike Parfit's unconceived healthy child.