Designer Babies: A Proposal to Apply Best Interests of the Child to Designer Babies

by Jessica B. Fry*

A young mother lost custody of her six-year-old son when she allowed him to get a tattoo on his arm memorializing his lost brother.¹ The parents of three children lost custody of their children in part because of the names the parents chose their children.² Child Services removed an eight-year old daughter from her family because her mother injected her with botox to make her "pretty."³ All of these parents lost custody of their children because their actions harmed the children and were found to not be in the best interests of the children. Though parents have the constitutional freedom to direct the upbringing of their children, they cannot do whatever they want. They must consider what is best. The numerous laws in place are designed to protect children and demonstrate the profound importance of good parenting and family. Our courts apply these laws to protect children from devastating choices that could negatively impact them for the rest of their lives.

By contrast, some parents can make their children look the way the parents want while the child is in utero without being held to any standard. If the child fails to display the traits the parents want, the failure is grounds for the child's termination through abortion. These children are designer babies, babies modified while in their mothers' wombs. Today the subject of baby design receives little consideration compared to other topics. Even the outcry against targeted abortions in China and India to ensure that families have sons rather than daughters focuses only on the gender bias demonstrated in the abortions.⁴

No laws actually restrict the practice of designing babies because the pre-viable infant is not considered a true person and the parents can grant consent for all alterations and
experimentations on the infant. Legislators avoid making laws to restrict this practice for fear that it will encroach on the right to abortion. As science continues to progress, designer babies will continue to become a greater issue. While scientists' and doctors' abilities are limited at this point, they will not be limited forever, and laws must be implemented to ensure appropriate regulation. This article will look at the development of designer babies, the process of pregenetic implantation diagnosis, why laws must be created, and a proposal to implement the best interests of the child standard to start protecting children in an age of parental autonomy which permits them to design children.

What Are Designer Babies

Designer babies are babies whom doctors and scientists genetically alter while the babies are still in their mothers' wombs. Genetic modifications range from the often touted removal of diseases to purely physical changes including hair, eye, and skin color. The child's genes and physical appearance are modified so that the child looks more like the parents want the child to look with doctors removing or attempting to remove whatever is considered undesirable. The most popular method to accomplish this goal is through pregenetic implantation diagnosis.

The concept of designer babies is nothing new. As early as Plato in *The Republic*, scholars and academics alike have postulated on the possibility of creating the "perfect race." Traditionally, dreams of controlling and creating the perfect race was pursued through selective execution. Before *Roe v. Wade*, physicians and scientists who supported the legalization of abortion referred to abortion's bright point as removing the "unwanted defects of society." Scientific ability did not allow true genetic alteration, though scientists and doctors tried a
variety of methods from herbs to surgery to ensure the perfect race. But what has changed is that the focus has shifted from creating the perfect society to the perfect child.\textsuperscript{12}

**Pregenetic Implantation Diagnosis**

Pregenetic implantation diagnosis, the most popular form of scientific baby design, involves taking a three-day-old embryo and marking both desired and undesired genes.\textsuperscript{13} Another three-day-old embryo sample may be used from a frozen embryo to supply additional genes. The technician then removes the undesired genes and injects the desired genes into several embryos.\textsuperscript{14} The strongest embryo is then placed back inside the mother. The other embryos are frozen.\textsuperscript{15} Doctors frequently check the strongest embryo's status to ensure the embryonic infant complies with the parents' specifications.\textsuperscript{16} If the child's development complies, the pregnancy continues. If the child's development does not, then the child may be aborted, which is what many physicians recommend. Genetic alteration is successful only 24\% of the time for physical traits.\textsuperscript{17} Genetic alteration for "intelligence" and "athletic" traits is unknown.\textsuperscript{18}

At this point, the focus is on the exploration of the genetic structure in search of the "perfect" genes, with cancer being the most common justification for such exploration. Genetic alteration for removal of diseases falls into the same category as research for physical traits.\textsuperscript{19} Typically, doctors prepare fifteen to sixty embryos. To remove disease trending or triggering genes, each embryo is screened for disease markers. Embryos which have the markers are discarded immediately.\textsuperscript{20} Embryos without the markers are saved for further genetic modification.\textsuperscript{21} If the parents' medical history demonstrates that they are at risk for more than one disease, a common occurrence, then the embryos are screened first to see if any one embryo
lacks all the disease markers. If not, then each embryo which lacks a particular gene marker is set apart. When all of the embryos have been sorted, the appropriate genes are removed and blended with another embryo to create an embryo without any of the disease markers.\textsuperscript{22} Such a process can easily require dozens of embryos for a single attempt.

The procedure does not always require multiple embryos. The disease markers could be modified and removed within the single embryo without using other embryos for spare parts, but this process would take longer and not permit doctors as much discretion in alteration.\textsuperscript{23} In removing diseases, the process is more straightforward than in altering physical appearances. In physical appearance modifications, the calculations, removal, and insertions must be precise or else the desired result is not obtained and many more embryonic infants are sacrificed to create only the potential for the perfect child.\textsuperscript{24}

**The Need for Law**

No laws restrict pregenetic implantation diagnosis or any form of baby design so long as at least the mother consents. Baby design in all its forms is considered a sub set of assisted reproduction because it requires either in vitro fertilization or similar treatments such as a fertility expert to determine the viability of the embryonic combinations and bring about successful pregnancies.\textsuperscript{25} Most state laws simply restrict assisted reproduction to in matters related to contractual enforcement or sales involving surrogate mothers and children.\textsuperscript{26} Past proposals to regulate designer babies over the past decade have met with failure on the grounds that it might reduce the right to abortion.

In an interview with CBS, Dr. Caplan, a doctor and a geneticist, stated that the only thing limiting the medical and scientific community is "good will."\textsuperscript{27} Even proponents for designer
babies without limitations recognize that pursuing designer babies could lead to atrocities. Dr. James Hughes, a geneticist and self described transhumanist, said in an interview at the opening of the Fertility Clinic in California, that "No act should be outlawed, even if it results in what might otherwise be considered an atrocity because the right to change our children is absolutely ours." Hughes' argument leads into the additional grounds for no regulation, society's greater good. The greater good is promoted purportedly because the research could lead to the elimination of disease and cancer.

The problem here exists because embryonic babies are not protected by law if the parents consent. Thus these babies do not receive protection of any kind from their parents' wills. At various points throughout the world's long history, groups of people or types of people have been described as not being human or at least not deserving of human rights but being used to pursue the greater good. Slaves throughout the world have been without rights. A free person who committed a crime against a slave often suffered no repercussions, depending on the country and the time. Jews under Nazi Germany likewise were deemed not human, and the Jews had no recourse for the violations which they suffered. The untouchables in India have no rights and may not beg relief from Indian courts because they are not persons under the law as other members of society are. Similarly, the disabled in Romania have no one to speak on their behalf. They can be raped, robbed, and killed without repercussion because the law is not enforced against their attackers as the victims are seen as "less than human." There is no question that an embryonic baby will become a human child if allowed to live just as every slave, Jew, and untouchable. The lawmakers, scientists, governments, and doctors involved in the decisions which led to all of these policies were likewise constrained merely by good will and a desire to create "a better tomorrow." But in the quest for that "better tomorrow" people often
forget the violations of today. The mere fact that the parents of these infants consent to such procedures and experiments does not make it more morally permissible.

In 2011, a young mother was charged with attempted murder and child abuse after feeding her two young children spoiled food and chemicals to make them sick. Another mother drugged her son to cultivate extreme weight gain so that he could not walk, and a different mother injected her daughter with bacteria to cultivate allergic reactions that could be triggered as desired. These cases were identified as Munchausen Syndrome by Proxy, a form of abuse where the parent abuses the child to gain sympathy. Such parents cultivate illnesses and disabilities in their children for attention. This form of abuse is rare, but it is not limited to any race or socioeconomic status. What makes it even trickier is that it is difficult to identify until the child is harmed or, in the most tragic cases, killed. Geneticists and doctors do not prohibit parents from designing children with disabilities or diseases. No inquiry is made into why the parents want the traits they want. No law would prevent a mother from designing a tragically disabled child to gain sympathy. If she had the money, she could do it.

That the law would permit such an atrocity is horrifying, but it is well within the realm of possibility, even if the parents' goals are not to create outright sympathy. Some parents have expressed interest in having children who are near sighted or who have a stigmatism because it makes them appear smarter. Other parents have expressed interest in having children with attenuated joints, despite the risks of arthritis and crippling later in life, because it may permit the children to perform better in ballet or gymnastics early in life. And the list continues as parents consider what might make their children more competitive in fulfilling the parents' dreams for the child. Sometimes the chosen traits might be good or neutral for the child, but there is no guarantee, and nothing stops the worst possibilities from melding with the best.
A Proposal

Parents have a constitutional right to direct the upbringing of their children. This parental autonomy is not without limits as seen in a myriad of cases. Long gone are the days when children were considered the chattel of their parents. Now in conflict is parental autonomy and children's rights. The concept of children's rights is a tremulous one, but regardless, most would agree that children are not the property of their parents and the parents cannot do with them whatever they want.

The typical protections for children against parents who might make bad decisions that will affect the children for the rest of their lives do not apply for designer babies because they are not recognized as being children in the same way that other children are. While all of the parents mentioned in the introduction were arrested and prosecuted, parents of designer babies would not be at the current time because nothing restricts what they do to the children because they are in the mother's womb. When the child is born, the child cannot be murdered or even experimented on without criminal action. When the child is born, the child will have to deal with whatever has been done to her, and she will have no cause of action against her parents and no remedy for whatever she might suffer.

All states have instituted protection for children in an analysis known as "the best interests of the child." This test is factor based and varies from state to state. The most common factors include the child's physical, emotional, and mental well-being as well as the impact on emotional ties both present and future. At its core, this analysis regards the child's entire situation and seeks to provide the child with a healthy environment so that the child may grow into an individual person, not just a plaything or a design for someone else's pleasure.
The best interests of the child has been criticized for considering the child as a separate individual from the family unit and scrutinizing parents in situations other than clear abuse.\textsuperscript{42} However, the best interests of the child could be used to supplement the law until better laws could be established. It would require that whatever is done to the child while the child is in the womb which might alter the child must be in the child's best interests. Using pregenetic implantation diagnosis to pursue the elimination of "true diseases" does not require that doctors and scientists offer what could be described as build-a-bear babies or "ordering dinner."\textsuperscript{43} Thus the removal of true diseases would be permitted but harmful traits would not be. An even better standard might require that all of the alterations to the child must be in the actual best interests and will not pass muster for simply being neutral. Physical changes to the eye color or hair color have tremendous social implications as it might lead to the weeding out of certain ethnic traits and identities, and they do not offer benefits to the child. However, curing the child of blindness or cancer would be in the child's actual best interests.

Applying best interests of the child or a similar standard would require that doctors, scientists, and parents justify the alterations to the child while the child is in the womb, just as they would be required when the child is outside the womb. This need not be seen as infringing upon the right to procreate or right to bring up a child. Various states including, most notably Louisiana, have found that embryos left from in vitro fertilizations are to be dealt with in a manner which represents the best interests of the child.\textsuperscript{44} Additionally, even in assisted reproduction and surrogacy court hearings, the courts have started trending toward determining the best interests of the child, though perhaps not explicitly saying as much because, when the child is born, the child will be a person.\textsuperscript{45} Though scientifically the designer baby embryo is substantially different from the standard in vitro embryo, they need not be treated differently
under the law. Applying this standard to designer babies merely requires that the parents of designer babies be held accountable as all other parents are. The fact that the child is in the womb should not make her vulnerable to her parents' wills for her future any more than another child would be. Additionally, requiring that the embryonic infants be given protection with the best interests of the child standard would actually "simplify the disposition," because courts would not have to determine repeatedly whether the embryonic infant is property or a child and what may be done. 46 This would create a standard that would bring clarity to parents, doctors, and scientists in terms of what would be allowed. While some grey areas will need to be sorted through, at least the worst possible grievances would not be as likely to occur.

Additionally, application of the best interests of the child need not be read as restricting the mother's ability to abort the child. The decision to apply best interests of the child to leftover and abandoned embryonic infants has not been read to hinder this ability, nor has the prohibition of embryo murder in any situation other than abortion. 47 Abortion in the United States has fewer regulations than any other First World country, and the laws discussed above have not restricted its access. 48 The only distinction is that when the parents who are responsible for the child consent to the procedure, the law does not challenge them so long as the child is in the womb. It would not be acceptable for a scientist or a doctor to otherwise take an embryonic baby and design the baby to her specifications, and the fact that the parent consents should not make it acceptable either. The child is the one who will have to live with the long term effects of those decisions, and the child will have no say in the matter while others decide.
Conclusion

The purpose of the law is to protect the vulnerable as well as the powerful. In dealing with designer babies, the law is silent, offering no protection to the children whose lives will be forever changed based on their parents' whims, regardless of whether the parents even have the babies' best interests in mind. Babies are not intended for their parents' pleasure. They are the beginning of a new generation. What is done to them while they are in the womb will affect them for the rest of their lives. Science need not be halted, but it cannot advance without guides or boundaries.

In the vacuum which the absence of law creates, tyranny and abuse may prevail without challenge. The best interests of the child may not resolve all of the issues with designer babies, but such a standard will at least set the stage for additional necessary laws. It is essential that the laws are set in place now while the process is still in its early stages. Requiring that the best interests of the child be applied to designer babies will not throw the baby out with the bath water as an outright ban on pregenetic implantation diagnosis might, but it will help save the baby from being thrown out with the trash.

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1 Christina Ng, Georgia Mom Arrested for Letting 10 Year Old Son Get Tattoo, WCTI 12 NEWS, Jan. 20, 2012, at 3.
3 Michael Winter, Botox Mom Loses Custody; Not Who She Claims To Be, USA TODAY, May 16, 2011, at 14.
4 Tom Campbell, Euthanasia as a Human Right, in FIRST DO NO HARM, 447, 447 – 445 (Sheila M. McLean ed., 2006).
5 Thomas Douglas & Julian Savulescu, Destroying Unwanted Embryos in Research: Talking Point on Morality and Human Embryo Research, EMBO REPORTS (European Molecular Biology Organization Research) 2009 at 307 – 312. In the United Kingdom, parents cannot consent to scientific experimentation on their embryos though legislators seek to change that. In recent years, the typical release form at a United States fertility clinic will often include an abandonment or failure to specify clause which permits scientists and doctors to experiment on embryos which have not been claimed after a specific period. Id. at 310.
Id. at 307. The authors note that in the United Kingdom, legislators admire the great protection offered to abortion in the United States as the United Kingdom requires that any abortion must be necessary for either the health and safety of the mother or the child and certified by two physicians. Id.

7 This paper will not address whose right it is to choose what genes the child has, who decides who chooses in the event of disagreement, legal processes, duties, and rights if the baby design is botched, what is a true disease, and can the government intervene in selection of societally desirable traits. These issues and a myriad of others wait for us in Pandora's Box of Designer Babies.


12 Dr. James Hughes states that if fertility clinics and scientists were trying to create the perfect race like Nazi Germany, then it would be wrong and they should be stopped. He argues instead that they are trying to create the perfect child, which in turn will make society better. Brandon Keim, Designer Babies: A Right to Choose, WIRED SCIENCE (Mar. 9, 2009), http://www.wired.com/wiredscience/2009/03/designerdebate/ (interviewing Dr. James Hughes & March Darnovsky, associate executive directors for Genetics and Society). Though not stated in the article, it appears that the main distinction is in who designs the perfect race, the parents or the government. Yet even that distinction is tenuous as Hughes describes parents' ability to design their children as being their duty to society as a whole. Id.


15 Unlike snowflake babies, the frozen embryos cannot be adopted or used for anything but further experiments because of the drastic changes to the embryo's genetic structure. However, physicians use the term "perish" or "disposed" rather than kill. See Pre-Implantation Genetic Diagnosis (PGD), supra note 13.

16 Id.

17 CBS: Healthwatch Designer Babies, supra note 12. Dr. Arthur Caplan describes how genetic modifications fail far more times than they succeed.

18 Id. Dr. Arthur Caplan also notes that it is difficult to determine whether non physical traits such as intelligence or athletic ability have been successfully modified until the child is older.

19 Pre-Implantation Genetic Diagnosis (PGD), supra note 14.

20 Id.

21 Id. These embryos are saved for an unspecified period of time, but they too may be allowed to "perish" if the parents choose not to bear them to term.

22 Id. The One Minute Case Defenders argue that this is merely genetic optimization and the necessary progression of human evolution, going so far as to say that it does not matter how many embryos are dissected to create the healthy and best children parents would obviously want. One Minute Case for Designer Babies, ONE MINUTE CASE (Apr. 2, 2009) http://oneminute.rationalmind.net/designer-babies/.

23 Pre-Implantation Genetic Diagnosis (PGD), supra note 14.

24 Id. The author does not state how many embryonic infants are used to create the one perfect child but does admit that success on the first designer infant is very rare with any parent.

25 JESSICA ARONS, GUIDE TO STATE SURROGACY LAWS 14, 26 (2007).

26 Id. at 1 – 14.

27 CBS: Healthwatch Designer Babies, supra note 12.

28 Laura Bauer, California Fertility Doctor's Offer of Trait Selection Stirs Ethical Questions, Kansas Star, Mar. 3, 2009, at C.

29 Keim, supra note 12 (interviewing Dr. James Hughes & March Darnovsky, associate executive directors for Genetics and Society).

30 See MILTON MELTZER, SLAVERY A WORLD HISTORY (1993).


Id.

Id.

Often times the parents exhibit tremendous concern for their children's ailments so that physicians and doctors do not even consider that the possibility of abuse until a repetitive pattern develops. See Munchausen Syndrome by Proxy, CLEVELAND CLINIC (Dec. 22, 2010), http://my.clevelandclinic.org/disorders/factitious_disorders/hic_munchausen_syndrome_by_proxy.aspx.

Keim, supra note 12. Though the author mentions counseling might be in order, the purpose of the counseling is to advise the parents not to become attached to the embryonic infant until the parents know that the infant will turn out the way the parents want. See also Celizic, supra note 28.

See CBS: Healthwatch Designer Babies, supra note 12; Celizic, supra note 28; Bauer, supra note 25. Psychologically, some doctors theorize that designer babies allow a stronger "second hand fulfillment" than the standard child, allowing a mother or father to create the person he or she wanted to be, thus treating the child's life as the vessel of their own dreams. BOB RECCORD, MADE TO COUNT: DISCOVERING WHAT TO DO WITH YOUR LIFE 57 (2004).


Id.


Mike Celizic, Special Deliveries: Are Designer Babies Arriving (Mar. 3, 2009, 9:42 AM), http://today.msnbc.msn.com/id/29478274/ns/today-parenting_and_family/t/special-deliveries-are-designer-babies-arriving/#.T4EABNkye-V. Celizic describes ordering a baby much as one would order dinner, "the Greek god model 6'4" with blue eyes and blond hair on the side."


Brakman, supra note 44 at 287.


Id. at 1.