An Examination of Artificial Reproduction versus Adoption: Taking on the Test-Tube

Marie Heberger
St. John Fisher College, mheberger_no@sjfc.edu

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Abstract
In lieu of an abstract, below is the first paragraph of the paper.

Human self-knowledge continues to increase monumentally, as well as the accompanying consequences. One aspect of human life that is being conquered is reproduction. While it doesn't take a genius to procreate naturally, technologies to make artificial reproduction possible are becoming more popular. Men and women who cannot conceive children naturally are getting help, and this help is leading to many ethical dilemmas and scientific questions and dilemmas. By being swept away with the abilities to make children in a lab, there are forgotten children born into unfortunate situations that need stable families. People who want babies can not have them, and those that are having them do not want them. Put that way, adoption seems to be the best answer for couples who want children but cannot conceive their own. Adoption costs, risks, and the simple desire to bear one's own flesh and blood are constant road-blocks to adoption. Artificial reproduction, however, does not provide the answers to those road-blocks.
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Marie Heberger

Human self-knowledge continues to increase monumentally, as well as the accompanying consequences. One aspect of human life that is being conquered is reproduction. While it doesn't take a genius to procreate naturally, technologies to make artificial reproduction possible are becoming more popular. Men and women who cannot conceive children naturally are getting help, and this help is leading to many ethical dilemmas and scientific questions and dilemmas. By being swept away with the abilities to make children in a lab, there are forgotten children born into unfortunate situations that need stable families. People who want babies can not have them, and those that are having them do not want them. Put that way, adoption seems to be the best answer for couples who want children but cannot conceive their own. Adoption costs, risks, and the simple desire to bear one's own flesh and blood are constant road-blocks to adoption. Artificial reproduction, however, does not provide the answers to those road-blocks.

One simple way to help a struggling couple conceive is for the woman to take fertility drugs. There are drugs that stimulate egg production and some that regulate ovulation timing (McClure 37). Although this is the basic form of technology interference with reproduction, one of the serious risks includes the development of multiple embryos. When there are several embryos developing in the uterus, complications in development can arise. Also giving birth to babies that come full term is dangerous for both the babies and the mother. Some of the risks involved with multiple births include “a strong increase in obstetric complications, perinatal morbidity, congenital malformations, maternal and fetal mortality and long-term social, psychological and economic difficulties” (Pennings 2466). Not only are there health risks for both the mother and child, but the family may struggle financially with two or three new members, especially if the couple already has other children.

A new method to help male infertility involves increasing the amount of normal sperm. A device is being developed that can potentially increase the amount of healthy sperm from 44% to 98% (Weiss 38). The device involves channeling sperm: “...sperm running within one conduit meets a sperm-free solution from the other conduit. Only active sperm cross the border between the two flows, becoming concentrated in the formerly sperm-free solution” (Weiss 381). While this procedure has been tested on mice, it has not been tested on humans.

Although this procedure increases the chances of a couple to have their own children, it does not provide all of the answers. The children of the couple may also be infertile and require technological assistance to reproduce. Then these children and their children need to invest in the sperm segregator or other means of artificial reproduction. While other means have more serious consequences, this method self-perpetuates in future generations. In addition, because this is a relatively new method, there is not a sufficient amount of literature available on it.

The artificial reproduction technology that most people are familiar with is in vitro fertilization, in which an egg is fertilized outside of the female body. The embryo is then transferred into the woman’s uterus. There are a few variations on this procedure. Gamete intrafallopian transfer involves removing eggs and sperm, processing them to prepare them for fertilization, then implanting them into the woman’s uterus for fertilization (McClure 38-39). Embryos fertilized in vitro can also be frozen and implanted in a woman’s uterus later on (McClure 39). These procedures can be used for infertile women wishing to have children via a surrogate mother’s egg, infertile men wishing to have children via another man’s sperm, or two infertile people borrowing both egg and sperm. These technologies also allow same-sex couples to have children.

There are other procedures in which sperm are injected directly into the egg with a micropipette. These techniques involve weakening the shell of the egg so sperm can penetrate and actually insert a single sperm into an egg (McClure 40-41). The biggest risk involved with these procedures is...
called polyploidy, in which more than sperm has penetrated an egg (McClure 40). An embryo that has been fertilized by many sperm has too many chromosomes and will not develop normally, if at all. If the polyploidy is detected before implantation, then the couple just has to keep trying. If the polyploidy is detected after the embryo has been implanted, then the couple will have to consider abortion (McClure 40).

Another relatively new procedure that is gaining attention is the possibility of creating eggs and sperm from stem cells. Researchers in Japan and the United States have experimented with mouse embryonic stem cells to create eggs and sperm (“Brave new IVF” 3). This technology will allow infertile couples to have their own children with their own genes instead of relying on donated eggs and sperm. Since the stem cells can be developed into either egg or sperm, same-sex couples would also be able to have children with their own genetic material (“Brave new IVF” 3). However, neither the Japanese nor American researchers have created eggs and sperm that developed into a healthy mouse (LePage 17). This new technology as well as the other forms of in vitro fertilization does not come without scientific and ethical repercussion and concerns.

One very prevalent problem with artificial reproduction is the increase in chance of birth defects. Many birth defects are caused by problems with gene imprinting, the process in which genes are turned on or off in the embryo (“Brave new IVF” 3). Beckwith-Wiedemann syndrome occurs because of gene imprinting errors and involves abdomen defects, low blood sugar, kidney defects, and an increased risk of developing tumors (“Beckwith-Wiedemann Syndrome” 10). Researchers have found that “children with the syndrome were four times more likely than the general population to have been conceived by assisted reproduction techniques” (“Beckwith-Wiedemann Syndrome” 10).

Other risks identified with artificial reproduction include having children with low birth weight and having multiple babies. Babies born with low birth weights are at a higher risk for infections, mental and physical disabilities, and even death than babies born with a normal weight (Hechinger B3). According to Dr. Scott D. Berns, vice president for chapter programs of the March of Dimes, “...many of them [premature babies] die in the hospital or suffer lifelong consequences, including cerebral palsy, mental retardation, chronic lung disease, blindness and hearing loss” (“Neonatology” 1097). A series of British studies revealed that “…41% of the extremely premature group have severe or moderate mental impairment at six years of age... Only 20% of the children born extremely premature have no neuromotor or mental disability” (“Neonatology” 1097). Some researchers believe that low birth weights and other abnormalities may be related to the reasons why the couple is infertile to begin with rather than the actual procedures (Hechinger B3). This is only one more reason why couples should not turn to artificial reproduction to get around their natural inability to have children.

Something that many people, especially infertile couples, may find hard to accept is the idea that maybe these people should not be trying to have children at all. While this seems like an insensitive approach, it is still something to consider. There may be underlying reasons why some people can not naturally reproduce. By artificially reproducing, these people are passing on genes that may be harmful to their offspring. For instance, children of an infertile couple may also be infertile and turn to artificial reproduction to have children, and the cycle continues. There could be a million and one reasons why an individual is infertile, and these are things that humans may never understand. Future generations are put at risk by inheriting genes that naturally should not be inherited.

Another scientific caution to artificial reproduction is that it is relatively new. The first “test tube” baby was born in 1978, not even 30 years ago (“Brave new IVF” 3). The long term effects of artificial reproduction are unknown. Maybe children conceived artificially only have a life expectancy of 40 years. There is still a lot that is not known about procedures that are being performed at an increasing rate. New technologies are opening more doors, but what lies beyond those doors is still a mystery.

One of the biggest ethical concerns when discussing artificial reproduction is the destruction of embryos. For those that consider conception to be the beginning of life, destroying embryos is equivalent to murder. During in vitro fertilization, several embryos are created but not all are implanted into the woman’s uterus. These leftover
embryos are destroyed; thus, a potential life is destroyed. Some of the embryos produced that are not implanted into the woman’s uterus can be frozen and saved for a future time when the woman may want to become pregnant again. The act of freezing stops the growth of embryos, suspending them in a state of quasi-existence. They have the ability to become humans, but they are being preserved for a later date.

Other concerns involve incest. Suppose a mother has her eggs fertilized with the sperm of her brother, such a situation occurred at a Los Angeles fertility clinic. A Frenchwoman had an egg fertilized by her brother’s sperm implanted in her uterus, so her child’s father is also the child’s uncle (Winterson 11). Not only will this child grow up in a confusing environment, to say the least, the child may also suffer from disabilities due to the combination of genes received.

Another issue that arises from artificial reproduction is the identity of the parents. Several people may be involved in the creation of one baby, including an egg donor, a sperm donor, a woman who carries the baby, and/or the couple who will raise the child (Stern 1). This leads to disputes over whose name gets on the birth certificate, who has responsibility for the child, possible visitation rights, and questions about inheritance when someone involved in the process dies (Stern 1). When these children become older, they may experience identity problems about where they came from as mentioned earlier.

Other ethical and legal problems occur when a woman decides to have a baby with sperm from her ex-husband. A Massachusetts man’s ex-wife used his sperm to have a third child after the couple was divorced (Ellement and Cambanis B1). According to the man, this third child has destroyed his life because of the child support he must now pay, bouts of depression, and fights over visitation issues (Ellement and Cambanis B1). He said, “I think if it hadn’t happened—who knows—I’d still be a firefighter, I’d still be living in Wayland... It took my family away. It took my life away” (Ellement and Cambanis B1). The man is suing the clinic and the doctor that made this third child possible, claiming the contract the couple made was broken; apparently the man thought the embryos remaining from his second child would be destroyed or donated (Ellement and Cambanis Page Number Needed). Although the man says he loves his third child, he is angered at how the child was brought into the world (Ellement and Cambanis B1).

Not only are there emotional and health costs to consider about artificial reproduction, but the monetary cost is also a concern. According to a recent study of the costs of in vitro fertilization in the United States, “it was estimated that that cost of a couple achieving a successful delivery ranged from $44,000 to $221,940” (McClure 43). The cost is even higher for an older woman trying to give birth. Those figures only represent a successful treatment. The price could be even higher for repeated tries due to repeated failures. Some couples may feel that they will pay any amount of money to be able to have their own child, but each failure is costly, both financially and emotionally.

There are also ethical concerns surrounding artificial reproduction: although we can do it, should we? Are we “playing God” by taking such delicate intricacies into our own hands? Is the miracle of conception, of a sperm actually finding its way to and penetrating an egg, something that we should be playing with? Or should we be using this technology that we have discovered to give hope and life to couples who otherwise would not be able to have children? Many people ask themselves these questions, especially when artificial reproduction technology breakthroughs make the news.

There is another answer for infertile couples looking to have children: adoption. Each year, about 130,000 children are adopted by Americans (Ladika 62). About 58,000 come from foster care, 53,000 come from private adoptions, and 19,000 come from overseas (Ladika 62). While adoption costs may be high and there are certain risks involved with adoption, there are different programs to ease the cost and risk. There are several advantages as well as disadvantages to adopting a child, but the advantages far outweigh the negatives.

Adoption costs include a variety of things that depend on the specific agency used or private adoption. These costs include agency fees, documentation and paperwork fees, attorney fees, birth mother expenses, and trips to visit the birth mother and/or country (Jervey 119). Some agencies’ prices depend on the adopter’s adjusted gross income for the previous year (Jervey 119).
Adoption costs can vary from under $5,000 to over $30,000, depending on the aforementioned fees, the family’s income, and from where the child is to be adopted (Jervey 119). Some agencies provide discounts for families that have previously adopted through them (Jervey 119).

One group of benefits for adoption comes from the workplace. About 20% of companies provide their employees with some kind of adoption benefits according to a survey conducted by the Society for Human Resource Management (Ladika 62). These benefits include a number of weeks of paid leave and usually $3000 to $5000 (Ladika 62). One couple whose adoption was going to cost about $10,000 received $2000 from Dow Jones & Co. (Jervey 119). Another couple’s adoption cost $29,000 and they received $5000 from the husband’s company (Jervey 119). Since less than 1% of employees at companies that offer adoption benefits actually use them, the benefits are a low-cost option for most companies (Ladika 63).

There are also tax breaks offered to couples who adopt. Currently, a couple can receive a $5000 tax credit for adopting one child and $6000 for a child with special needs (Block 3B). These credits depend on a couple’s adjusted gross income; if their income is $75,000 or less, the full credit can be applied (Block 3B). Also, the aforementioned reimbursement some employers provide is not taxed (Block 3B). With these deductions, a couple can save $10,000 through the government and their employer.

Another benefit to adoption is simply knowing a child has a good home. Babies that are given up for adoption often come from women too young to be mothers or other countries not as wealthy as the United States. These children need someone to take care of them, love them, and raise them in a stable home, something that can not be guaranteed until a family takes them in.

There are distinct disadvantages to adoption as well. The costs can be overwhelming, especially for couples who are not able to receive benefits from their employers. The psychological toll on couples trying to adopt can also be devastating. Birth mothers can change their minds and decide not give up the baby. Some adopted babies can become ill and die, just as there are health risks for any baby. Other children in the family might not accept a new addition, especially if the child does not look like them. Some countries have very specific terms that couples need to meet before they can adopt. These terms can prevent single and same-sex parents from adopting children.

There is also the reality that although according to the paperwork an adopted child belongs to a couple, the child is still not their flesh and blood. The mother did not carry the child in her womb for nine months and then bring the child into the world. This may lead the adopted children to wonder about their identity, who their birth parents are, and why they were not wanted by their parents. There can also be health issues if the adopters do not know the child’s medical history.

While technological advances are allowing for more ways to get around infertility, the risks involved are also growing. Health problems, such as birth defects, as well as success rates, incest possibilities, identity confusion, unknown long-term effects, and legal concerns are some of the scientific and ethical repercussions that must be taken into consideration. Adoption provides an alternative to infertile couples, same-sex couples, and single people. While there are also costs and risks associated with adoption, the process provides the best answer to the infertility problem. There are people having children who do not want them and people who want children but cannot have them and thus adoption seems to provide benefits for everyone involved.

Works Cited


