The ethics of human reproductive cloning

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Abstract

This article addresses the question of whether human reproductive cloning could be ethically justifiable in at least some cases involving infertile couples who would choose cloning as a way to have a genetically related child. At present, the risk of congenital anomalies constitutes a compelling argument against human reproductive cloning. The article explores whether reproductive cloning could be ethically justifiable if, at some future time, cloning becomes possible without an elevated risk of anomalies. It is argued that freedom to use cloning is a form of procreative freedom and, as such, deserves respect. All of the objections that have been raised against human reproductive cloning fall under three main categories: those that appeal to the interests of the child, those based on consequences for society, and those arising from teleological views. Objections that appeal to the child's interests are, in turn, of two main kinds: consequentialist and deontological. All of these types of objections are examined, and it is found that each involves serious problems that prevent it from being a reasonable objection in the context of the infertility cases considered. It is concluded that human reproductive cloning would be ethically justifiable in at least some cases involving infertile couples, provided that it could be performed without an elevated risk of anomalies.

Keywords: deontological, genetic offspring, harm to offspring, procreative freedom, reproductive cloning, teleological

Introduction

Many hold that human reproductive cloning would be wrong under any circumstances. Others have maintained that in certain situations reproductive cloning would be ethically permissible. One type of case in which it has been claimed that it would be permissible involves infertile couples. This paper focuses on infertility cases in order to address the question of whether human reproductive cloning could at least sometimes be ethically justifiable.

A caveat should be stated at the outset. The risk of congenital anomalies in the offspring makes it reasonable to hold that it would be wrong to attempt human reproductive cloning at this time (National Academy of Sciences, 2002). In the future, however, it might be possible to carry out cloning with no more risk of anomalies than the background risk in procreation by sexual intercourse. Let us assume, in other words, that cloning using a cell nucleus from one member of the couple is the only way they could have a child genetically related to one of them. Here is another scenario: there are family members who could be asked to donate gametes, but the couple wants to avoid the social complications associated with gamete donation by family members. Yet another scenario is the following: only one member of the couple lacks gametes, and the couple could have a child using gametes from an anonymous donor; however, the couple prefers cloning because it avoids the social complications associated with third party collaborative reproduction. In each of these scenarios, the couple's purpose in using cloning is not to have a child who duplicates someone else, but to have a genetically related child.

An example of the type of case in question is a scenario in which the woman is unable to produce ova and the man is unable to produce spermatozoa. Like many couples, they want to have a child genetically related to at least one of them. One approach to having a child genetically related to at least one of them. One approach to having genetically related children would involve using sperm and ova donated by family members, but suppose that no family members are available in this case. Let us assume, in other words, that cloning using a cell nucleus from one member of the couple is the only way they could have a child genetically related to one of them. Here is another version: there are family members who could be asked to donate gametes, but the couple wants to avoid the social complications associated with gamete donation by family members. Yet another scenario is the following: only one member of the couple lacks gametes, and the couple could have a child using gametes from an anonymous donor; however, the couple prefers cloning because it avoids the social complications associated with third party collaborative reproduction. In each of these scenarios, the couple's purpose in using cloning is not to have a child who duplicates someone else, but to have a genetically related child.
Whether cloning in such scenarios is ethically justifiable rests on the following question: which should be considered weightier, infertile couples’ freedom to use cloning or the arguments against human reproductive cloning? To address this question, let us begin with the importance of the freedom of infertile couples to use cloning.

**Cloning and procreative freedom**

Some have claimed that cloning is not procreation because it does not involve the joining of male and female gametes (Massey et al., 2001; Shuster, 2003). In reply, to assess whether cloning in the infertility cases is procreation, we should compare it to the paradigm of procreation—what I shall call ‘ordinary procreation’. I refer to the type of procreation in which a couple begets, by sexual intercourse, a child whom they then rear. In making this comparison, we need to look not only at the differences but also at the similarities, and it turns out that a number of similarities can be identified (Robertson, 1998). First, in both types of situation there is a genetic connection between the child and at least one member of the couple. Second, assuming that a woman can gestate, there is gestating and childbirth. Third, the child is raised by the couple. Fourth, in both types of case, the overall purpose is to create a family or add a child to the family. So, the similarities between the two situations are quite substantial. They both involve central features of the project of having children: genetic connection, gestation, childbirth, and rearing. Because of these similarities, it is reasonable to regard the use of cloning by infertile couples as procreation, even though it does not consist of the union of male and female gametes.

Based on these considerations, it is reasonable to hold that the freedom of infertile couples to use cloning is a form of procreative freedom. Procreative freedom is worthy of respect in part because freedom in general is worthy of respect. But more than this, procreative freedom is an especially important freedom because of the significance that procreative decisions have for persons’ lives (Strong, 1997). For these reasons, the freedom of infertile couples to use cloning is worthy of respect.

It might be objected that the desire to have genetically related children should be given relatively little weight. One might argue that this desire is a mere expression of vanity and is too frivolous to outweigh the objections to reproductive cloning, given that there are other options such as adoption or donor pre-embryos. In reply, it should be acknowledged that some reasons for wanting genetic children seem selfish or confused. For example, sometimes a person desires genetic children in order to save a shaky marriage. This reason is subject to criticism; it fails to address the sources of the marital problems, and the added stress of raising the child might make the marital relationship even more difficult. Some commentators seem to think that the desire for genetic offspring is always subject to easy criticism, as in this example (Kahn, 1997). Rather than make this assumption, let us consider whether there are reasons for desiring genetically related children that are not easy to dismiss.

To explore this, one strategy is to try to understand why having genetic children might be meaningful to people in ‘ordinary procreation’, and then use this understanding in addressing reproductive cloning. It turns out that there are a number of reasons why people might find it meaningful to have genetic offspring in the ordinary type of procreation (Strong, 1997). It will suffice to discuss two of these reasons. First, having a genetic child might be valued because it involves participation in the creation of a person. When one has a child in ordinary procreation, a normal outcome is the creation of an individual with self-consciousness. Philosophers have regarded the phenomenon of self-consciousness with wonder, noting that it raises perplexing questions: what is the relationship between body and mind; how can the physical matter of the brain give rise to consciousness? It is ironic that although we have difficulty giving satisfactory answers to these questions, we can create self-consciousness with relative ease. Each of us who begets or gestates a child who becomes self-conscious participates in the creation of a person. One might say that in having children we participate in the mystery of the creation of self-consciousness. For this reason, some might regard creating a person as an important event, perhaps one with spiritual overtones.

Others might find it meaningful to create a person for different reasons. For some, it might have religious significance. Some might regard creating a person as a fulfilment of religious duty. Others might see it as acting as an instrument of God’s will. Thus, the idea of creating a person can have different types of special meaning. Perhaps not all who have children think about it in terms of creating a person, but this is a reason that can be given for wanting genetic offspring that does not appear to be frivolous.

Turning to the second reason, having genetic children in the ordinary situation might be valued as an affirmation of a couple’s mutual love and acceptance. It can be a deep expression of acceptance to say to another, in effect, ‘I want your genes to contribute to the genetic makeup of my children’. Moreover, in such a context there might be an anticipation that the emotional bond between the couple will grow stronger because of common children to whom each has a biological relationship. To intentionally seek the strengthening of their personal bond in this manner can be a further affirmation of mutual love and acceptance. In stating these two reasons, I do not mean to imply that one ought to desire to have genetic offspring, but only that the desire can be defended. These are examples of reasons that are not silly or confused. Rather, they are reasons that deserve consideration.

Now let us consider the applicability of these reasons to cloning. Would it be reasonable for the infertile couple to want to use cloning in part because it would enable them to participate in the creation of a person? It can be argued that it would be. The member of the couple who provides a somatic cell nucleus for cloning would participate by providing the nuclear genetic material for the new person, and regardless of who provides the cell nucleus, if the woman is capable of gestating, then she could participate by gestating and giving birth to the child. If she has ova, then she could participate genetically by providing mitochondrial DNA. In addition, the couple might value cloning because they interpret it as an affirmation of mutual love and acceptance. A biological partnership in creating the child is possible if a cell nucleus from the man is used and the woman is the gestational mother. In that situation, the child comes forth from their two bodies.
Assuming mutual love, the woman bears a child having the genes of the man who loves her and is loved by her. Alternatively, suppose that a cell nucleus from the woman is used. The man then can become the social father of a child having the genes of the woman who loves him and is loved by him. To seek to become social parents in this manner can be an affirmation of mutual acceptance. These considerations show that some of the important reasons for valuing the having of genetic children in the ordinary scenario also apply when cloning is used. Although not everyone in the infertile couple’s situation would want to use cloning in order to have a genetically related child, some might.

**Objections to human reproductive cloning**

A number of objections have been raised against human reproductive cloning, and they generally fall into three main categories — those that appeal to the interests of the child, those based on consequences for society, and those arising from teleological views. First we shall consider objections that focus on the child’s interests. The main ones are of two kinds, consequentialist and deontological. Let us begin with the consequentialist type.

**Harm to the child**

Consequentialist child-centred objections claim that cloning will harm the child. An example is the ‘life in the shadow’ argument (Holm, 1998). It claims that people will expect the child to lead a life that follows in the footsteps of the older person who has the same DNA. These expectations will pressure her to follow in that person’s footsteps, and this will be harmful because it will prevent her from following a different path that might be more conducive to her wellbeing. Another example is the argument that there will be confusion over family lineage and kinship (President’s Council on Bioethics, 2002). The nucleus donor will be both the social parent and the twin sibling of the child. This unusual relationship could result in some type of family turmoil that is harmful to the child, so the argument goes.

These consequentialist objections sometimes rest on the belief that persons with identical nuclear DNA will be identical. This belief is mistaken. For one thing, the imprinting of the DNA of parent and child might differ, resulting in phenotypic differences even though they have the same DNA (Simpson, 2003). Even if the imprinting is the same, the parent and child will be exposed to different environments *in utero* and will be raised in different social environments. Different environments can result in different outlooks, ambitions, and life choices. In addition, cloning does not duplicate the brain. As a child’s brain develops, neural connections are made in response to environmental stimuli. Different stimuli result in different patterns of connections (Eisenberg, 2000). The child’s brain will differ in many ways from the parent’s.

Some authors who put forward these consequentialist objections acknowledge that the parent and child will not be identical (Holm, 1998). However, they hold that there will be a widespread perception that the parent and child are identical, based on the mistaken belief that people with identical nuclear DNA are identical, and that this perception will cause the harm in question. In reply, it is difficult to predict what people’s perceptions will be when and if reproductive cloning becomes safe and feasible. That might be some distance into the future. Perhaps by then many people will have come to understand that genes alone do not determine who one is. If there is a concern that some infertile couples who use cloning might expect the child to follow in the footsteps of the parent, this concern could be addressed by means of prepregnancy counselling. Psychological counselling is already widely used in preparing infertile couples for various methods of assisted reproduction. Couples planning to use cloning could be counselled about the psychosocial dimensions of this method of procreation, including a possible tendency to assume, erroneously, that genetics determine who the child will be.

There is an even more serious problem with this objection, a problem that all versions of the objection that have been put forward share in common. Namely, the objection focuses exclusively on harms to the child, without consideration of benefits to the child. It makes this mistake precisely because it overlooks the fact that without the cloning the child in question would not exist. If one holds that bringing a child into existence through cloning can result in harms to her, then one must also hold that bringing a child into existence through cloning can result in benefits to her. It would be arbitrary to make one claim but deny the other. In assessing the objection, we need to consider the benefits as well as the harms and there would be benefits in the infertility cases. After all, cloning gives the child a life. Life generally is a good thing. It is expected that the child will experience pleasures associated with being alive and that she will have many good experiences. Moreover, what counts in a consequentialist argument is the overall balance of harms and benefits, and it is reasonable to expect that the benefits are going to outweigh the harms — that the child is going to have a good life on balance. If the child benefits on balance, then no wrong is done in creating her, at least as far as harms and benefits are concerned.

Perhaps the opponents of cloning will claim that cloning is wrong because some harms will occur, although admittedly not a net harm. However, the claim that it is wrong to create children who will experience some harms, although not a net harm, leads to unacceptable conclusions. We would have to say, for example, that it is wrong for minorities who are subject to discrimination to have children because the children would experience harms caused by discrimination. Surely, this would be an incorrect conclusion. The objection amounts to saying that it is wrong to procreate when some ideal involving freedom from harm cannot be met (Pennings, 1999). But there is no obligation to have children only if their lives will be free from harm, as this counterexample illustrates.

**Deontological objections**

Deontological child-centred objections hold that creating a child through cloning amounts to treating her with insufficient respect. This might be expressed in various ways. Some claim that the child has a *right* to a unique genetic make-up (National Bioethics Advisory Commission, 1997, p. 67; Williamson, 1999), or a *right* to ignorance of the effect of one’s genome on one’s future (Jonas, 1974). Others assert that cloning violates the Kantian categorical imperative by treating the child as a
mere means (Kahn, 1997; Shuster, 2003). In reply, several points can be made. First, merely asserting that there is a right to a unique genetic make-up does not make it convincing, much less true, that there is such a right. An argument is needed supporting the claim that there is such a right, but opponents of reproductive cloning have not provided a successful argument for this. In the absence of a justification for the claim that there is such a right, the claim should be rejected. Second, to create a child through cloning can be consistent with respect for persons. It can be an instance of treating another as an end in herself and not as a mere means. We may imagine that the couple has purposes such that, in creating the child, they are not using her as a mere means but are acting, in part at least, in order to give her a life that will be her own. Third, in making a judgement about whether a child is treated with disrespect, it is not enough to look only at the technique of creation. It is also necessary to look at how the child is treated after she is born. Suppose she is brought into a loving family, with parents who nurture her, foster her discovery of her own interests and talents, and help her develop her autonomy as she grows older. In that scenario, the child is treated with respect. To put it differently, the problem with the objections that appeal to the categorical imperative is that they commit the fallacy of assuming that every case would be an instance of the worst case scenario – that every case would involve using the child as a mere means. This assumption seems rather extreme, and it is not reasonable.

Consequences for society

Let us consider the objections that focus on adverse consequences for society. These too are expressed in various ways. It is argued that cloning and designing our children will transform procreation into a process similar to manufacturing, thereby altering the attitudes of parents toward their children and harming society (National Bioethics Advisory Commission, 1997, pp. 69–70). Another version is the argument that abuses might occur if cloning is used by totalitarian regimes or other unscrupulous persons (Massey et al., 2001). In reply, when these various objections are applied to the specific context of helping infertile couples, they lose whatever persuasiveness they might initially have had (Strong, 1998). The purpose of cloning in these cases is not to choose the characteristics of the child, but to have a genetically related child. There is no generic manipulation to make the child ‘better’ in some sense. In this context, cloning is not about designing the child. It is about helping the couple experience the personal meaning that procreation can have when it involves having genetically related children. If there were a plausible concern that a widespread practice of cloning would be harmful to society, there would be a middle ground that we could take. Cloning could be restricted to a relatively small number of cases, such as cases involving infertile couples. In that event it would be doubtful that the particular adverse consequences in question would occur.

Teleological arguments

Finally, there are teleological objections (Häyry, 2003). These too can be expressed in several ways. It is claimed that cloning is contrary to human dignity or contrary to the essence of being human. These objections are based on the view that humans have a natural essence or telos which they are meant to fulfill or strive for in order to be genuinely human. It is claimed that cloning prevents a human from achieving that essence and therefore it is contrary to human dignity.

In reply, several points are worth noting. First, within secular bioethics, teleological theories have become suspect, and for good reason. Teleological worlds views have been replaced by our scientific understanding of the world (Munson, 1979). Science gives us ways of understanding the workings of living organisms without appeal to a telos. One can see the consequences of this when one looks at secular bioethics. Approaches such as casuistry and principialism are widely discussed, and teleology is rarely mentioned. Second, even if one accepts a teleological world view, there are serious problems in specifying what the essence of a human is and in achieving a consensus on this matter.

Conclusion

None of the objections to human reproductive cloning discussed above appear to provide good reasons for claiming that cloning is wrong in the cases considered. The objections fail and therefore do not outweigh the procreative freedom of infertile couples to use cloning in the cases considered. Assuming these are the main objections, it appears that reproductive cloning would be ethically justifiable in at least some cases involving infertile couples.

References and further reading


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