

Human Cloning and Our Sense of Self

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This Viewpoint formulates and responds to three lines of argument concerning human reproductive cloning's potential to undermine our sense of self or identity. First, cloning would undermine our sense of individuality or uniqueness. But it could only undermine our genetic uniqueness, not our full individuality. Second, cloning would undermine the value or worth of human beings. But it would not make individuals replaceable or of any less moral worth. Third, a clone's freedom or autonomy to construct his or her own life would be undermined by the presence of an earlier twin. But only a mistaken belief in genetic determinism supports this feared loss of freedom.

Advances in genetic science and technology hold out the possibility of being able to clone human beings, though whether that technology will be safe and effective, as well as legally permitted, is uncertain. Human reproductive cloning would take the genetic inheritance of some future children out of the genetic lottery and bring it within human control. How would such a seemingly profound change affect our sense of self or identity? Some worry along these lines, often not well articulated, is one source of the widespread public uneasiness and concern about cloning. Here I will attempt to briefly articulate some of these implications and concerns, as well as to assess how well grounded they are. I make no attempt to assess the full range of moral and policy concerns bearing on human cloning.

One philosophical sense of personal identity is a numerical sense, that is, what are the criteria for a person's continuing to exist over time (1). It should be obvious that human cloning represents no threat to personal identity in this numerical sense. Even identical twins (Fig. 1), who begin life nearly simultaneously with the same genetic inheritance, are distinct individuals. If human cloning would have an impact on individuals' identity or self, it must be a different sense of identity or self.

Another relevant sense of identity or self is a psychological, not numerical, sense (2). It consists of the properties or qualities that an individual considers important to who he is, to what kind of person he is, to what properties of himself he identifies with. These will be a variety of different kinds of properties: the son of specific parents, the spouse of a particular person, an American or Nigerian, a Christian or atheist, a biologist or philosopher, a liberal or conservative, honest and trustworthy or dishonest and untrustworthy, and so forth. There is a normative element to this conception of an individual's sense of identity or self in the respect that different

properties will be picked out by the individual as having more or less importance to defining who he uniquely is. For example, to one person, being a Christian may be a central feature of his identity, while to another, being a Christian may be relatively unimportant to his sense of identity or self. Much of what defines our unique individuality concerns our history, the particular relationships with specific others that we have formed, our particular projects and achievements or accomplishments, how we are treated by others, and the times we have lived through.

These properties need not all be properties that the individual values or endorses in the sense of desiring or valuing being a person of that sort—for example, he might recognize that he is untrustworthy and dishonest, though wish he were not, and even have tried and failed to change. Other properties may be important to individuals' sense of self or identity, though they are generally shared by other humans and so serve more to differentiate us from members of other species than from other humans—for example, that we are autonomous or self-determining beings, capable of forming a conception of a good life and of the kind of person we value being, revising that conception over time, and pursuing that plan of life and taking steps to become that kind of person. All of these various properties together will define with more or less precision and detail an individual's sense of identity or self, and in particular his unique sense of identity or self, what makes him qualitatively different from any other individual.

How might human cloning affect individuals' sense of identity or self in this psychological sense? One concern expressed by some opponents of cloning, and I believe intuitively felt by many members of the public, is that human cloning would undermine our individuality or uniqueness. The central feature of cloning is to create an individual with exactly the same genome as that of some other already existing or even dead individual. In assessing this concern that human cloning

would undermine our individuality or uniqueness, it is important to distinguish two versions of the concern. In one version, the concern is that persons' individuality or uniqueness would in fact be lost. In a second version, the concern is that persons' feeling of individuality or uniqueness would be lost. Though related, these are distinct concerns.

In what sense might human cloning undermine individuals' individuality or uniqueness, their unique identity (3)? Cloning could only undermine their genetic individuality or uniqueness. Is this the uniqueness or individuality people value and should be concerned to protect? Our valuable uniqueness is not just genetic, but is the full array of qualitative traits noted above that define an individual's sense of identity. Could that full qualitative uniqueness be undermined by human cloning? Human cloning would produce persons with identical genomes, but we know from experience with homozygous twins, as well as from the science of human development, that possessing identical genomes will not lead to qualitatively identical individuals. Though homozygous twins may begin life with the same genomes, and often have many qualitative similarities, over time differences in their physical, psychological, and personal characteristics will develop together with differences in their life histories, personal relationships, and life choices. Only on the crudest genetic determinism, according to which a person's genome completely and decisively determines everything else about the person—all of the person's traits, character, and complete life history—would this not be so. But there is no reason to believe that any form of genetic determinism is true. Instead, of course, a person's traits, character, and life history are the product not just of his genome, but of his environment and choices as well.

If many human clones were created from a single genetic source, so that a person would be likely to encounter another individual virtually identical in appearance to her around every street corner, her psychological sense of uniqueness and individuality might be undermined, even if in other respects beyond appearance the various clones differed in many ways. This practice would still not in fact undermine people's uniqueness and individuality, only their sense of it. A person's sense of individuality will also be affected by how she is treated by others, and it might be that people would be less likely to be treated as unique if cloning were common. I do not know of any studies of the treatment of identical twins that would help confirm or discon-

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firm this supposition, but if true then cloning could serve to undermine people's sense of their individuality. This would be a bad psychological effect or even perhaps prove harmful to an individual, but whether it would be sufficient to warrant prohibition of cloning is problematic.

So the general point is that having the same genome as another individual is no threat to the fact of human uniqueness or individuality because the full identity, individuality, or self of a person is determined by much more than the person's genome. Sometimes human cloning might be used with the intent of producing similarities in the clone and the source of its genetic material, though we know in advance that those efforts would meet with only limited success. Parents also try to shape the environments of their children in the hope of producing specific outcomes in them, and here too their efforts meet with only limited success. Some rationales for human cloning rely on the false assumption of genetic determinism, as do some criticisms of it. However, were human cloning to become safe and effective, some motives for its use would not involve trying to replicate an earlier individual, but rather, for example, to relieve the infertility some persons now experience or to reproduce without the risk of one party transmitting a serious hereditary disease.

Related to the belief in people's uniqueness and individuality is a normative belief in the intrinsic value of each individual person. One important aspect of people's sense of self is their belief that they have this unique, irreplaceable value, and that their society recognizes and respects that value. Some commentators have thought that human cloning would diminish the value we place on, and our respect for, each human life because it would lead to persons being viewed as replaceable. Since each individual's identity is constituted not only by her genome, but also by the interaction of her genes over time with her environment, including the choices she makes and the important relations she forms with other persons, no individual could be fully replaced by a later clone possessing the same genes. For example, it would be insensitive and ludicrous to tell parents of a 12-year-old child dying of a fatal disease that they should not grieve for their impending loss because it is possible to replace him by cloning; it is their child with whom they have shared 12 years and who is dying whom they love and value, and that child and his importance to them could never be replaced by a cloned later twin.

A different version of this worry is that human cloning would result in persons' worth or value seeming diminished because we would now see humans as able to be manufactured, instead of as the product of sexual reproduction (4). It would be a mistake, however, to conclude that a human be-

ing created by human cloning is of less value or is less worthy of respect than one created by sexual reproduction. It is the nature of a being, not how it is created, that is the source of its value and makes it worthy of respect; children created by assisted reproductive technologies do not have less moral value.

A more subtle route by which the value we place on each individual human life might be diminished could come from the use of human cloning with the aim of creating a child with a particular genome, either the genome of another individual especially meaningful to those doing the cloning or an individual with exceptional talents, abilities, and accomplishments. The child might then be valued only for its genome, or at least for its genome's expected phenotypic expression, and no longer be recognized as having the equal intrinsic moral value of all persons, simply as persons. For the equal moral value and respect due all persons to come to be seen as resting only on the instrumental value of individuals and their particular qualities to others would fundamentally change the moral status society accords to persons. Everyone would lose their moral standing as full and equal members of the moral community, replaced by their different instrumental value to others.

Such a change in the equal moral value and worth accorded to persons should be avoided at all costs, but it is far from clear that human cloning would bring about such a change. The equal moral value and respect due all persons just as persons is not incompatible with the different instrumental value of people's particular qualities or properties; Aristotle and an untalented philosophy graduate student have vastly different value as philosophers, but share and are entitled to equal moral value and respect as persons. It would be a mistake and a confusion to conflate the two kinds of value and respect, but it

is a mistake that is often made. Thus, while human cloning need not undermine the sense of intrinsic moral value or worth, the equal moral status of all persons that is both an important component of individuals' and others' sense of their intrinsic value and status, it could do so if it encourages this confusion of the two senses of respect and value.

Some opponents of human cloning hold that there is a fundamental difference between two individuals with the same genomes beginning their lives at the same time and human cloning that would involve earlier and later twins. Jonas (5) has argued that although contemporaneous twins begin their lives with the same genetic inheritance, they also begin their lives or biographies at the same time, and so in ignorance of what the twin will by her choices make of her life. To whatever extent one's genome determines one's future, each begins ignorant of what that determination will be and so remains as free to construct a particular future from among open alternatives as are individuals who do not have a twin. Ignorance of the effect of one's genome on one's future is necessary, he believed, for the spontaneous, free, and authentic construction of a life and self, that is, for being autonomous and living an autonomous life, and individuals have a right to this ignorance.

A later twin created by human cloning, according to Jonas, would know, or at least believes she knows, too much about herself. For there is already in the world another person, one's earlier twin, who from the same genetic starting point has made the life choices that are still in the later twin's future. It would seem that one's life has already been lived and played out by another, that one's fate is already determined, and so the later twin would lose the spontaneity of authenti-

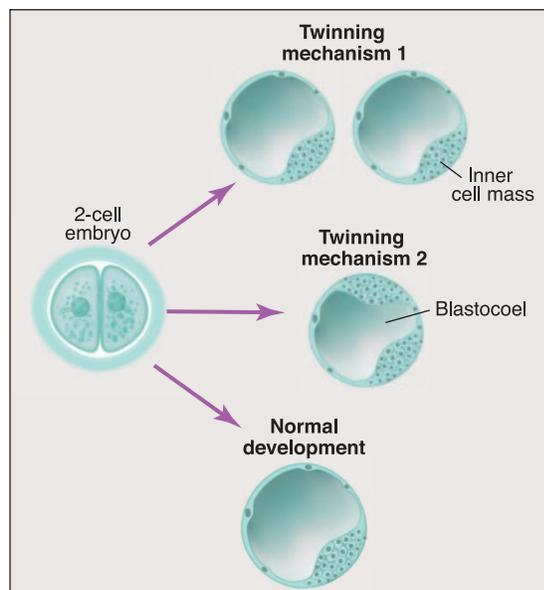


Fig. 1. Spontaneous twins are formed by several mechanisms. Two possible mechanisms are shown. Monozygotic (identical) twins might develop if the separate cells of the two-celled embryo were to dissociate, each continuing on in development (mechanism 1), or if the inner cell mass of a normal blastocyst (normal development), which gives rise to the embryonic axis, were to split into two, instead of one, masses in the blastocoele (twinning mechanism 2).

cally creating her own self. She would lose the sense of human possibility in freely creating her own future. Even if it is a mistake to believe the crude genetic determinism according to which one's genes determine one's fate, what is important for one's experience of freedom and ability to create a life for oneself is whether one thinks one's future is open and undetermined, and so still to be determined by one's own choices. A later twin might even grant that she is not determined to follow in her earlier twin's footsteps, but nevertheless the earlier twin's life might always haunt her, standing as an undue influence on her life, and shaping it in ways to which others' lives are not vulnerable.

Feinberg (6) has argued for a child's right to an open future, though he did not apply the right to human cloning. His idea was that children should not have their future possibilities so closed off as to eliminate a reasonable range of opportunities for them autonomously to choose and construct their own life. This right to an open future would be violated by denying children even a basic education, and perhaps as well by creating them as a later twin by human cloning if they would then believe their future has already been set for them by the choices made and the life lived by their earlier twin.

But a right either to ignorance or to an open future is not violated merely because the later twin believes that his future is already determined, when that belief is false and supported only by the crudest genetic determinism. Everyone constructs their life under the constraints or limits that their genome impos-

es. If the twin's future in reality remains open and his to freely choose, then someone's acting in a way that unintentionally leads him to believe that his future is closed and determined has not violated his right to ignorance or to an open future, any more than I would violate your property right to your car by acting in a way that unintentionally caused you to falsely believe that I had stolen it.

We can only speculate, of course, about how likely a later twin would be to believe that his open future has been taken from him and to experience a felt loss of autonomy and freedom, even though none of these effects would in reality be warranted. Opponents of cloning often believe this a likely effect of cloning. We do know that overly controlling parents can have similar effects in undermining their children's sense of themselves as autonomous individuals free and entitled to forge their own futures. Because of the continuing and overt influence of this control, or at least attempt to control, it would probably have a more debilitating effect on an individual's sense of freedom and autonomy than would the knowledge that one shared a genome with an earlier individual. The different future that would in fact inevitably unfold for the later twin, and the choices that she would necessarily face in that unfolding future, would likely, at least to some degree, force the recognition on her that her future was hers to autonomously construct and create, though within a variety of constraints that include those set by her genome.

I have reviewed several respects in which some believe that human cloning would be

likely to have important effects on people's sense of self or identity: on their sense of individuality and uniqueness; on their intrinsic value as a person; on their sense of freedom or autonomy in constructing their life. Of course, at this point when human cloning is neither possible nor practiced, there are no data on these points, and so we can only speculate. The concerns expressed about these possible effects on people's sense of self or identity are serious concerns. Nevertheless, my general argument has been deflationary about human cloning's likely effects on people's sense of self or identity. Expectations of substantial effects tend to be based on various overestimations or confusions about the effects of genetics on people's lives, but these overestimations and confusions are common and certainly could produce some of the feared effects on individuals' sense of self or identity, even if the beliefs creating those effects are not warranted.

References and Notes

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