Embryonic Stem Cell Research Is Immoral Because Embryos Have Moral Status


"If, as we believe, human embryos are human beings ... then research that involves deliberately dismembering embryonic humans ... is inherently wrong."

Robert P. George is the director of the James Madison Program in American Ideals and Institutions at Princeton University. Patrick Lee is the director of the Institute of Bioethics at the Franciscan University in Steubenville, Ohio. In the following viewpoint, George and Lee argue that embryos are human beings and have the same intrinsic worth as babies, children, and adults; therefore, they say, embryonic stem cell research that destroys embryos is immoral. George and Lee refute arguments that contend that embryos are not yet human or that embryos' lack of self awareness diminishes their moral standing. Whatever it is that gives each human being intrinsic moral worth, contend George and Lee, is present in an embryo just as it is in a child or an adult. Regardless of the manner in which they are brought into existence, whether naturally, by in-vitro fertilization, or by cloning, embryos are human beings with full moral status, the authors maintain.

As you read, consider the following questions:

1. What does science writer Ronald Bailey compare embryos to, according to George and Lee?
2. According to the authors, the "sorites fallacy" assumes what?
3. According to George and Lee, who said that having a rational nature is a "status-conferring intrinsic property?

If, as we believe, human embryos are human beings who deserve the same basic respect we accord to human beings at later developmental stages, then research that involves deliberately dismembering embryonic humans in order to use their cells for the benefit of others is inherently wrong. Just as harvesting the organs of a living child for the benefit of others is immoral and illegal, so 'disaggregating' embryonic human beings would also be immoral and should be illegal—of course governments should therefore not fund such procedures. In this article, we provide some of the evidence that human embryos are indeed human beings and, as such, deserve a level of respect that is incompatible with treating them as disposable research material. We also consider two recent objections to our position.

The Same as a Baby or Adult

In sexual reproduction, conception occurs when a sperm cell unites with an oocyte, the two cease to be, and their constituents successfully enter into the makeup of a new and distinct organism, which is called a zygote in its original one-celled stage. This new organism begins to grow by the normal process of differentiated cell division into an embryo, dividing into two cells, then four, eight and so on, although some divisions are asynchronous [not at the
same time]. Its cells constitute a human organism, for they form a stable body and act together in a coordinated manner, which contributes to regular, predictable and determinate development toward the mature stage of a human being. That is, from the zygote stage onward, the human embryo has within it all of the internal information needed—including chiefly its genetic and epigenetic constitution—and the active disposition to develop itself to the mature stage of a human organism. As long as the embryo is reasonably healthy and is not denied or deprived of a suitable environment and adequate nutrition, it will actively develop itself along the species-specific trajectory of development. This means that the embryo has the same nature—in other words, it is the same kind of entity—from fertilization onward; there is only a difference in degree of maturation, not in kind, between any of the stages from embryo, to fetus, infant and so on. What exists in the early stages of development is not a mere bundle of homogeneous cells. Scientific evidence shows that already at the two-cell stage, and even more so at the four-cell stage and thereafter, there is a difference in the internal structure of the embryonic cells; although they have the same DNA, each has a distinct pattern of gene expression.

The human embryo is the same individual as the human organism at subsequent stages of development. The evidence for this is the genetic and epigenetic composition of this being—that is, the embryo's molecular composition is such that he or she has the internal resources to develop actively himself or herself to the next mature stage—and the typical embryo's regular, predictable and observable behaviour—that is, the embryo's actual progression through an internally coordinated and complex sequence of development to his or her mature stage.

It is important to note that embryological evidence shows that the human embryo is a whole, although obviously immature, human being; it is not a mere part. This is a crucial point: human tissues or human cells, whether body cells or gametes [reproductive cells] are indeed human—that is, genetically human—but are not whole human organisms. Neither of these has the active disposition to develop itself to the mature stage of a human being. By contrast, the human embryo, from fertilization onward, is fully programmed to actively develop himself or herself to the next mature stage along the path of human development.

More than Just Cells

One objection against this position is based on a comparison of human embryos to somatic cells [nonreproductive cells] given that producing humans by cloning is a possibility. Ronald Bailey, a science writer for Reason magazine, observes that each cell in the human body possesses the entire DNA code, but that each has become specialized as a muscle or skin cell, for example, by most of that code being turned off. During cloning, previously deactivated parts of the genome are reactivated. Bailey therefore argues that if human embryos are human beings with moral worth because of their potential to become adult humans, the same must be said of somatic cells, which is absurd.

However, Bailey's argument is based on a false analogy. The somatic cell is something from which a new organism can be generated; it is certainly not, however, a distinct organism. A human embryo, by contrast, is already a distinct, self-developing and complete human organism.
Moreover, the type of 'potentiality' possessed by somatic cells differs profoundly from the potentiality of the embryo. A somatic cell has a potential only in the sense that something can be done to it so that its constituents—its DNA molecules—enter into a distinct whole human organism, which is a human being, a person. In the case of the embryo, by contrast, he or she is already actively—indeed dynamically—developing himself or herself to the further stages of maturity of the human being he or she already is.

True, the whole genetic code is present in each somatic cell. However, this point fails to show that its potentiality is the same as that of a human embryo. When the nucleus of a somatic cell is inserted into an enucleated ovum [an egg cell with its nucleus removed] and given an electric stimulus, this is not merely the placing of the somatic cell into an environment hospitable to its continuing maturation and development. Rather, it generates a wholly distinct, self-integrating and entirely new organism—it generates an embryo. The entity—the embryo—brought into being by this process is radically different from the constituents that entered into its generation....

**Embryos Are Human Beings**

Others have denied that human embryos are human beings, arguing that human beings come to be only gradually: human embryos are therefore on their way to becoming, but are not yet, human beings. This objection was advanced by Michael Sandel at Harvard University in his book The Case Against Perfection. According to Sandel, human organisms come to be gradually rather than at a determinate time, and a human organism is not fully present until some time after the embryonic stage. He states that this idea defeats the pro-human-embryo argument, which he recounts as follows: "the development of the embryo from the zygote stage on through the embryonic, fetal and infant stages is continuous, without any abrupt changes in direction of growth; therefore, one can conclude that there is no change in identity during that time, and, since a human infant is a human organism, so is a human zygote".

Sandel contends that this argument commits what philosophers know as the sorites fallacy; it illicitly assumes that one can never produce a radical change by the addition of several small changes. For example, suppose one reasoned as follows about grains of sand: "[w]e can never get a heap of sand from adding grains of sand to each other. For if I add just one grain to another that will not make a heap, and if I add another, that also will not produce a heap, since a tiny addition cannot change a few grains of sand into a heap. But the same point will be true for each grain of sand added, therefore I can never arrive at a heap of sand, by the repeated addition of a grain of sand to others." That is the sorites fallacy.

According to Sandel, the pro-human-embryo argument is therefore fallacious. From the fact that one cannot designate an instant or moment in which there is a radical change in the developmental process from a human embryo to a mature human being, it does not follow that there is no significant and radical difference between them. Consequently, Sandel argues, it does not follow that a human embryo is a human being. Rather, just as adding grains of sand to each other gradually produces something radically different, namely, a heap of sand, the process of development of the embryo and fetus in the womb gradually produces a human organism—but only gradually, not all at once.

Contrary to what Sandel assumes, however, the argument we presented above does not begin merely from the continuity of embryonic development. Sandel is of course right that the
sorites fallacy is a fallacy—but he is mistaken in thinking that the basic pro-human-embryo argument commits it. The argument is not that an adult must be the same individual who was once an embryo simply because there is no significant difference between any two adjacent stages in the development from embryo to adult. Rather, the argument is that the adult is identical to the embryo he or she once was because there are no essential differences in the kind of being one is between any two stages—whether the two stages are adjacent to each other or not—in the development of a human individual from embryo to fetus, infant, child, adolescent and adult. There are of course several significant differences between an embryo, an infant and an adult—such as size and degree of development. But there is no difference in the kind—that is, there is no difference in the fundamental nature of the entity—between any two stages of the developing living being—whether those stages are adjacent to each other or are several months apart in his or her life cycle.

Again, the human embryo, from fertilization forward, develops in a single direction by an internally directed process: the developmental trajectory of this entity is determined from within, not by extrinsic factors, and always toward the same mature state, from the earliest stage of embryonic development onward. This means that the embryo has the same nature—it is the same kind of entity, a whole human organism—from fertilization forward; there is only a difference in degree of maturation between any of the stages in the development of the living being....

**All Human Beings Deserve Respect**

Some grant that the human embryo is a human organism, but deny that this means it is a being deserving of full moral respect. They claim that in order to have dignity and a right to life, a human being must have additional characteristics such as self-awareness. Often this view is expressed along the following lines: "[w]hile human embryos are human organisms, they are not persons, and it is persons who deserve full moral respect, not necessarily human organisms."

We believe that this view, which relegates some living human beings to the status of 'non-persons', is profoundly mistaken. It is clear that one need not be actually or immediately conscious, reasoning, deliberating or making choices, in order to be a human being who deserves full moral respect, for plainly people who are asleep or in reversible comas deserve such respect. Thus, if one denies that human beings are intrinsically valuable by virtue of what they are, one requires an additional attribute, which must be a capacity of some type and, obviously, a capacity for certain mental functions.

Of course, human beings in the embryonic, fetal and early infant stages cannot yet exercise mental functions characteristically carried out by most human beings at later stages of maturity. Still, they have in radical—that is, root form—these very capacities. Precisely by virtue of the kind of entity they are, they are, from the beginning, actively developing themselves to the stages at which these capacities will—if all goes well—be immediately exercisable. Although, similar to infants, they have not yet developed themselves to the stage at which they are self-aware, it is clear that they are rational animal organisms. Having a rational nature is, in the words of Jeff McMahan at Rutgers University a "status-conferring intrinsic property". The argument is not that every member of the human species should be accorded full moral respect because the more mature members of the species have a status-conferring intrinsic property, as McMahan mistakenly interprets the nature-of-the-kind argument. Instead, we contend that each member of the human species has a rational nature.
It is obvious in practical deliberation that one's own well-being and fulfilment—such as one's own health and understanding—is worth pursuing and promoting. It is also obvious that the well-being and fulfilment of others is worth pursuing or at least respecting. However, the well-being and fulfilment of others is worthy of respect even at times when they are unconscious—when they are asleep, comatose or at any time that they exist, including those times during which they are developing to the stage at which they will be actually exercising the basic natural capacity for agency. We contend that these other entities are bearers of rights—their fulfilment is worthy of pursuit and respect, they should not be intentionally harmed, and they should be treated as we would have others treat us—because of the kind of entity they are, namely a creature with a rational nature, not in virtue of certain accidental characteristics such as age, size, location or stage of development. Briefly, we can advance two arguments to show that the substantial nature of the individual, and not accidental characteristics, should be recognized as the basis for having dignity and basic rights.

First, the developing human being does not reach a level of maturity at which he or she performs a type of mental act that other animals do not perform—even animals such as dogs and cats—until at least several months after birth. A 6-week-old baby cannot immediately perform characteristically human mental functions. However, if full moral respect were due only to those who have immediately exercisable capacities for characteristically human mental functions, it would follow that 6-week-old infants do not deserve full moral respect—some philosophers have actually claimed that infants do not deserve the moral respect of basic human rights. Thus, if human embryos might legitimately be destroyed to advance biomedical science, then it follows logically that, subject to parental approval, the body parts of human infants should be fair game for scientific experimentation.

Second, one might at first think that there are two types of capacity for consciousness or other mental functions: an immediately exercisable capacity for consciousness; and another, basic natural capacity that requires time and internal development in the organism before it can be actualized. One has this basic natural capacity for consciousness from the time that one comes to be—a human being has this capacity or potentiality from the embryonic stage forward by virtue of the fact that he or she has a disposition to actively develop to the stage where he or she will be conscious.

However, in reality, there is just one capacity for consciousness and just one capacity for each distinct type of living act. What is referred to as 'the immediately exercisable capacity' for consciousness is the development of that single capacity. A capacity such as that for consciousness is a power to perform a specific type of action. The capacity develops and comes closer to being the performance of that action, with the development of the constitution of the organism; however, in a living being, the transition from the basic natural capacity to perform an action characteristic of living beings on the one hand, to the performance of that action on the other hand, is just the development of the basic power that the organism has from its beginning. The capacity for consciousness is gradually developed or brought towards maturation, through gestation, childhood, adolescence and so on.

Proponents of an immediately exercisable capacity for mental functions as a criterion for having dignity and a right to life do not select one property or feature rather than another as a criterion for dignity and rights. Instead, they select a certain degree of a property. However, such a selection is inevitably arbitrary. For why should the nth degree of that property qualify one as having rights? Why not the nth + 1 degree or the nth + 2 degrees and so on? The difference between a being that deserves full moral respect and a being that does not—and
might therefore legitimately be killed to benefit others—cannot consist only of the fact that, while both have some feature, one has more of it than the other—one has some arbitrarily selected degree of the development of some feature or property, whereas the other does not. This conclusion would follow no matter which of the acquired qualities proposed as qualifying some human beings or human beings at some developmental stages for full respect were selected.

**Embryos Are Worthy of Respect**

The criterion we propose—that of a creature being an individual with a rational nature—does not suffer from this problem of arbitrariness. There is a radical difference between individuals with a rational nature and other entities, and that difference is morally relevant—rational creatures, at all times that they exist, should be treated as we would have others treat us.

It follows that it cannot be the case that some human beings and not others are intrinsically valuable, by virtue of a certain degree of development. Rather, human beings are intrinsically valuable in the way that allows us to ascribe to them equality and basic rights in virtue of what they are; and all human beings are intrinsically valuable.

As human beings are intrinsically valuable and deserve full moral respect in virtue of what they are, it follows that they are intrinsically and equally valuable from the point at which they come into being. Even in the embryonic stage of our lives, each of us was a human being and, as such, worthy of concern and protection. Embryonic human beings, whether brought into existence by the union of gametes, somatic-cell nuclear transfer or other cloning technologies, should be accorded the respect given to human beings in other developmental stages. Their right to life should be acknowledged and respected.

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