Bioethics and the Constitution

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HEN I mentioned the topic of my essay to a man well-versed in these matters, he suggested that I respond to the question of the relation between bioethics and the Constitution as Justice Antonin Scalia might. As Supreme Court watchers know, Scalia is famous for his scathing dissents in which he chastises his fellow judges for sounding off on any and all subjects without any constitutional warrant for doing so. Scalia's complaint is that judges regularly issue opinions untethered from the text of the Constitution, despite their clear obligation to remain tied to the document. One of my favorite of Scalia's tongue-lashings comes from *Hodgson v. Minnesota*, an abortion case from 1990, in which Scalia declared:

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One will search in vain the document we are supposed to be construing for text that provides the basis for the argument over these distinctions.... The tools for this job are not to be found in the lawyer's—and hence not in the judge's—workbox. I continue to dissent from this enterprise of devising an Abortion Code, and from the illusion that we have authority to do so.

If I take my cue from Scalia, the most straightforward answer I could give would be that we can't know how to think about bioethics and the Constitution since there is nothing there to think about. The Constitution is silent on such matters, whether it be the most dramatic, but still unrealized, biotech possibilities like human cloning or increasingly routine options like in vitro fertilization (IVF), embryo screening, and drugs to alter mood, enhance performance, and prolong life.

The silence of the Constitution is not a fault, nor a cause for distress. When the Constitution is silent, it simply means that the matter is one for the current generation to address. We will, of course, do so through the political structures established by the Constitution. Accordingly, the silence of the Constitution might best be understood as an invitation to practice self-government as the Founders understood it. Their great achievement was to draft a fundamental charter that leaves each generation largely free to direct its own affairs.

This is a tremendously important constitutional lesson. There is a marked tendency among Americans to venerate the Constitution and to turn to it for answers. At the very least, we scour the Constitution for evidence in support of the answers we happen to favor. These habits speak well of us, inasmuch as they demonstrate filial piety. However, we should remember that the Constitution is not like the Bible: It does not offer a moral code, rules for living, or even maxims of government. The Constitution never sought to provide answers for the dilemmas of future generations. After all, those dilemmas were quite literally unimaginable at the time. What it did do, though, was establish a framework to work through those dilemmas. In the words of political scientist Herbert Storing, "The substance [of the Constitution] is a design of government with powers to act and a structure arranged to make it act wisely and responsibly. It is in that design ... that the security of American civil and political liberty lies."

The Constitution, by its silence, instructs us to meet the public policy challenge of biotechnology through the political branches of our government. There are a few hopeful signs that we are up to the challenge. President Bush formed the President's Council on Bioethics in 2001. According to Executive Order 13237, the council's mission is "to undertake fundamental inquiry into the human and moral significance" of biomedical developments and "to explore specific ethical and policy questions related to these developments." The council has so far issued four reports: the first on human cloning; the second on the whole panoply of so-called "enhancement" technologies, which hold out the promise of making human beings stronger, smarter, and longer-lived; the third on the current state of stem cell research; and the fourth on the current state of assisted reproduction. These are truly remarkable documents, capable of focusing the attention of citizens on the crucial questions and informing public debate and reflection. This is a matter of some moment since the Constitution lodges final authority not with the experts or the scientists, but with the people and the people's representatives.

In the *Politics*, Aristotle defends a regime in which the multitude has a share in the highest offices: the offices of deliberation and judgment. The heart of his defense is an argument on behalf of the educated layman. There can be individuals who, while they "do not possess the art" (or science) in question, nonetheless "have some knowledge of its works." The reports issued by the President's Council on Bioethics enable each of us to become an educated layman in Aristotle's sense. Reading them does not make us either geneticists or bioethicists, but it does outfit us with the competence of the nonprofessional.

Moreover, Aristotle argues that, in some cases at least, it is the users of an art (which is to say, its beneficiaries) who are the appropriate judges. It is the diners, not the cook, whose verdict on the meal matters. Similarly, it is the citizens, not the scientists, who must determine what items to select from the biotech banquet, and what items to decline or even ban. This is perhaps not an altogether reassuring metaphor, for most of us behave badly at smorgasbords. We overindulge, and the art of cooking is complicit in our overindulgence because it caters to our tastes more often than it contributes to our health. For this reason, Socrates suggested that cooking is not a true art, but a form of flattery and demagoguery.

We know that the art of medicine, too, can have a flattering side. In place of its traditional end of health, medicine can substitute new and more expansive ends that appeal to us because they flatter our vanity. Think of the television show "Extreme Makeover," one of the recent entries into the field of reality programming. In this show, ordinary Americans-with bulbous noses and wrinkles on their brows, with weak jaws and chins that double over, with small breasts and thighs that bulge-seek to feel better about themselves through cosmetic surgery. The show makes the not-too-subtle claim that liposuction will bring you love, a nose job will get you that promotion, and more fundamentally, that the transfiguration of your body will make your soul happy. So far, we have no psychotropic drug to induce wisdom and no gene for prudence or moderation that can be spliced into our DNA. It seems that we will have to summon what virtues of character we have of our own to meet the delights and temptations of the biotech banquet. Much will depend on whether Americans, as citizens and as consumers, can bridge the distance that separates the "extreme makeover" phenomenon from the spirit of inquiry expressed in the council's reports. Can we move from superficiality to moral seriousness?

Blessings of liberty

Although I have argued that one must be cautious in trying to glean public policy from the Constitution, I can't resist the urge to find some phrases to interpret, some hook on which to hang my exegetical shingle. In a moment, I will mention some clauses that might have some bearing on bioethics, but before doing so, let me try to distinguish the spirit of my endeavor from that of those activist judges of whom Scalia is so rightly critical. Whereas they have created new rights by judicial fiat, on the basis (in their own words) of "penumbras, formed by emanations" from the specific guarantees of the Bill of Rights, my own approach, while it might be equally nebulous, is directed only toward furthering our deliberations as citizens. My judgments, unlike the Court's, are entirely nonbinding.

Four passages are of particular importance: the Preamble, especially the aim to "secure the Blessings of Liberty to ourselves and our Posterity"; Article I, section 8, granting Congress the power "to promote the Progress of Science and useful Arts"; Article I, section 9, prohibiting titles of nobility; and the Thirteenth Amendment, forbidding slavery and involuntary servitude.

Let's start with the Preamble: What does it mean to secure the blessings of liberty not simply for one's self but for posterity? A fascinating exchange between Thomas Jefferson and James Madison on the topic of intergenerational rights and obligations may help us think about this question and about its contemporary relevance to such possibilities as human cloning, the genetic engineering of "designer babies," and the already existing practice of both prenatal and pre-implantation genetic screening, which can be used for the purpose of avoiding giving birth to children with certain genetic disorders or children of the "wrong" sex.

In 1789, Jefferson wrote a letter to Madison, raising the theoretical question "whether one generation of men has a right to bind another." To answer the question, Jefferson assumes that generations are like individuals, by nature free and equal. He asserts that "each generation is as independent of the one preceding, as that was of all which had gone before." Jefferson was particularly interested in what this generational independence meant for the obligation of debts. He concluded that "no generation can contract debts greater than may be paid during the course of its own existence." It is wrong to saddle your posterity with the consequences of your own selfish profligacy or foolish mismanagement. Using the mortality tables of the day, Jefferson calculated that

a generation spanned 19 years. Determined to grant no authority to the dead hand of the past, even if that hand was wise and just, Jefferson goes on to argue that law (including the fundamental law of the Constitution) carries no obligation beyond the term of a generation. As he says, "every constitution then, and every law, naturally expires at the end of 19 years. If it be enforced longer, it is an act of force, and not of right."

By the application of this radical, state-of-nature reasoning to the generations of man, Jefferson seeks to make each generation assume greater responsibility for itself and itself alone. To remain within its proper bounds, each generation must rule itself, but not its posterity. One glimpses in Jefferson's ruminations the democratic dream of escaping history. With his call for a constitutional convention every 19 years, he envisions the institutionalization of permanent revolution, with its promise of a fresh start in every age. Indeed, every day will present democratic citizens with the need to reconsider, redraft, or reinstate laws that have expired. This is a perpetual springtime of self-government.

Madison's reply is interesting. In very respectful and friendly fashion, Madison says he doubts whether Jefferson's idea "can be received in the extent to which [his] reasonings carry it," pointing out that the doctrine is "not *in all respects*, compatible with the course of human affairs." In the matter of debts for instance, Madison argues:

Debts may be incurred with a direct view to the interest of the unborn as well as of the living: Such are debts for repelling a conquest, the evils of which descend through many generations. Debts may even be incurred principally for the benefit of posterity: Such perhaps is the debt incurred by the United States. In these instances the debts might not be dischargeable within the term of 19 years.

There seems then to be some foundation in the nature of things; in the relation which one generation bears to another, for the *descent* of obligations from one to another. Equity may require it. Mutual good may be promoted by it.

In place of Jefferson's view of generational independence,

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Madison argues for generational linkage. As a result, he believes it is permissible to extend one's will into the future—collectively via a lasting Constitution and individually via a last will and testament. He acknowledges the binding character of those wills on the inheritors. There can be an obligation of obedience in the beneficiaries. Moreover, Madison hopes the Constitution will come to be supported not just out of a sense of duty but by the people's time-drenched veneration of it. Veneration, in his view, is a wholesome public prejudice. Despite his reservations about Jefferson's idea, both in principle and in practice, Madison concludes with praise for it and a wish that it might be "always kept in view as a salutary restraint on living generations from unjust and unnecessary burdens on their successors." Like Jefferson, Madison wants to ensure that the entailments of the present on the future remain within reasonable bounds.

The biotech revolution raises the stakes of the debate between Jefferson and Madison. The question of the binding of generations is no longer just about financial impositions or the duration and obligation of law, but about control of the human genome. Decisions made by one generation (say, to attempt germline manipulation or to pursue human cloning) might transform what it means to be human for the next generation. In choosing a post-human future for our posterity, will we have secured for them the blessings of liberty, or will we have sentenced them to being animate instruments of our own vastly enhanced wills? It simply isn't sufficient to talk in the abstract about the expansion of human power and choice brought by these new discoveriesfor it may be that the expansion of someone's power and choice entails the lessening of someone else's. What would the reproductive liberty of parents to select a child's genetic endowment, with a view to his being more in line with their hopes and expectations, do to the child's ability to find his own life and be his own man? At the extreme, we might wonder whether you can be your own man if you have, in effect, been manufactured by others to satisfy their desires. The temptation to tyranny that is ever present in parental aspirations for their children is greatly augmented by these new technologies.

Even some of the less radical methods of increasing parental power that are already in use, such as genetic screening and behavior-modifying drugs, threaten a profound recasting of human relations, both in the family and in society. Take the growing practice of choosing the sex of a child. There are three methods available at present. The most common is prenatal diagnosis (often by means of a sonogram) followed by abortion if the fetus is not of the desired sex. If the parents are instead using IVF, the diagnosis can be made before implantation, in which case only those embryos of the desired sex are transferred to the mother's womb. The third and newest method, sperm sorting, takes place before fertilization. By separating the X-bearing sperm from the Y-bearing sperm, and then conceiving via either artificial insemination or IVF, parents could guarantee the sex of their child. Eventually, it might be possible to produce a sex-selecting spermicide that would enable parents to determine the sex of their child via normal intercourse, without the invasive procedures of existing methods.

The advent of sex selection has significantly altered the male-female ratio in many nations (although not in the United States). The natural sex ratio at birth is around 105 boys to 100 girls. The ratio in India and China is now 117 to 100; in Cuba, 118 to 100; and in Azerbaijan, and Armenia, 120 to 100. The preference for male offspring is deeply ingrained in many traditional societies. However, the newfound ability of such societies to carry out their preferences is, in the long run, not good for anyone concerned. When the natural sex ratio is skewed, serious disruptions follow. It does not require much imagination to foresee the sort of social disorders that are spawned when one-sixth of the adult male population is excluded from marriage.

Even in countries, like the United States perhaps, where the practice of sex selection will not lead to a gender imbalance, there may be other equally deleterious effects effects that are less obvious but more insidious. Natural human procreation operates by the luck of the draw. What happens when parents' gracious acceptance of whatever gift arrives is replaced by parental dictation of a child's sexual identity? What happens when the parental attitude shifts from unconditional love to a feeling of vindication at having gotten what one ordered? Consumer choice in the economic marketplace of goods and services is all well and good, but is the advent of choice in the reproductive realm so unambiguously good?

To bring this discussion back round to the Constitution let me just note that the Preamble speaks of securing "the blessings of liberty" rather than simply securing liberty. Perhaps there is an acknowledgment in that locution that liberty may have its abuses and profanations, and that what "We the People" want to secure are the unambiguously good things coincident with liberty. It may be that to secure the blessings of liberty for our posterity we must secure ourselves against the abuses of liberty.

Patents, science, and the useful arts

The next clause that offers material for bioethical speculation is what is known as the patent clause. Article I, section 8 grants Congress the power "to promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries." Of the 18 paragraphs in section 8, each one specifying a particular power of Congress, this one is unique. All of the other paragraphs simply state what power is being granted-for instance, Congress shall have power "to borrow money," "to coin money," "to declare War," and "to establish Post Offices and post Roads." No explanation is offered as to why Congress is granted those particular powers. In the case of the patent clause, however, there is a preamble of sorts, spelling out the reason why Congress is vested with the power to grant copyrights to authors and patents to inventors. The reason is "to promote the Progress of Science and useful Arts."

We might wonder why it was necessary to justify patents, but not post offices. Patents began in England as monopoly privileges granted by the Crown to merchants who garnered royal favor. The drafters of the Constitution probably wanted to make clear that their reason for securing exclusive rights to authors and inventors was for the limited purpose of promoting scientific progress and not in order to provide a blanket congressional authorization to set up commercial monopolies or allocate economic privileges, as the Crown had routinely done in eras past. Indeed, the Constitutional Convention rejected wording that would have granted Congress the power to charter corporations.

So, if the aim was the encouragement of science, we might wonder why they didn't just leave it at saying "the Congress shall have power to promote the Progress of Science and useful Arts." That wording, too, would have made this clause parallel in structure to the other grants of power. Instead, the Founders specified the sole constitutional means by which the promotion of science could be pursued. Again, what could have been a very far-ranging grant of power became instead a fairly narrow one. Congress's role as a promoter of scientific progress is restricted to this one mode of encouragement. The Constitutional Convention rejected language that would have allowed Congress to found a national university or to award prizes for scientific discoveries.

There is one other unique feature of the patent clause that is worth mentioning. As political scientist Larry Arnhart has noted, this is the "only place in the original [unamended] Constitution ... where the word 'right' is used." What are we to make of that? Arnhart suggests that "the language of 'securing' a 'right' that is implied to be inherent echoes the language of the Declaration of Independence." I am not persuaded that the right referred to in the patent clause-the right to one's writings and discoveries-is meant to be understood as inalienable or inherent, since it is explicitly declared to be a right of limited duration. It is alienable, not inalienable. It is a civilly granted privilege, not a natural right. Congress is not required by the Constitution to grant authors and inventors copyrights and patents. Congress could have allowed this power to lie fallow, without violating anyone's inalienable rights. Furthermore, it is left entirely up to

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Congress to decide the duration of the patent right: It could have limited that period of time to one year instead of allowing 20 years as it has done. Note also that, in saying that the right is to be secured "for limited Times," it is strongly implied that the right is not to be lifelong. The way in which intellectual property rights are handled leaving them subject to Congress's statutory determination—stands in sharp contrast with the treatment of the rights contained in the Bill of Rights. There, when the fundamental rights of conscience, speech, and personal security are at stake, Congress is simply forbidden from abridging or violating such rights.

While it is true that one has an inviolable right to think one's own thoughts, once you write them down and publish them, or once you design a better mousetrap and make it public, the ideas expressed cease to be yours and become the shared possession of all who comprehend them. By nature, the realm of ideas is pure communism. What the patent clause does is say that in the hopes of encouraging more folks to think original thoughts and design better mousetraps, society will forgo its communal claims for a certain amount of time and create instead an artificial right in the first thinker. The notion of intellectual property rights is itself a human invention for the encouragement of human invention. But that also means that intellectual property rights can be changed and redefined should we decide that they no longer fulfill their purpose, or that the purpose itself is in need of rethinking.

Lincoln and "Young America"

Although limited in the ways outlined above, the patent clause is not inconsiderable. As Abraham Lincoln so vividly described in his 1859 "Lecture on Discoveries and Inventions," what it does is add "the fuel of *interest* to the *fire* of genius." That is a pretty combustible combination—one that has certainly furthered the Promethean achievements of modern science and technology. The underlying assumptions of the patent provision are that scientific advances will redound to the public good and that the public good can be achieved by rewarding private enterprise. The individual gets the patent and the profits from it (for a certain space of time), but in exchange the individual must disclose his discovery to society at large. Rights of intellectual ownership are secured only for those who share the fruits of their intellection—the first meaning of patent is "open to public inspection." The bargain proposed is as follows: If you want us to respect something as yours, you first have to explain to us what it is. Show us how you built it, and then we'll let you build it for us, for a while. Society gets both access to the knowledge and an increased likelihood that the patent holder will market his invention. James Madison discusses the patent clause in Federalist 43, where he declares that in this matter of extending copyrights and patents to authors and inventors, "The public good fully coincides ... with the claims of individuals."

Lincoln, however, was notably less sanguine about the harmony of science and society. His "Lecture on Discoveries and Inventions" shows him to be worried that the fire of genius, particularly when fueled by interest, could get out of hand, starting a humanity-threatening conflagration. Although there are scholars who regard Lincoln as an unabashed booster of the Baconian project to master nature, this is a serious misreading of Lincoln's position. I don't mean to suggest he was hostile to technological advance, for he certainly was not. After all, he was himself the holder of a patent for a mechanical device that would lift boats over shoals. (Lincoln is, by the way, the only American president to have obtained a patent.) He was, however, aware that not every invention or discovery is a boon for mankind. Lincoln's reservations are grounded ultimately in his recognition of the morally dubious character of the human quest for mastery.

Lincoln's lecture appears to be a celebration of human achievement and inventiveness, particularly American achievement and inventiveness. Yet in the central section of the speech, where Lincoln sketches a portrait of "Young America," the praise rings increasingly hollow and, indeed, pretty quickly reveals itself as mockery. Lincoln satirizes Young America's hubris and hypocrisy, its greed for land and its habit of self-congratulation. An extended

quotation will help convey the flavor:

We have all heard of Young America.... Is he not the inventor and owner of the present He owns a large part of the world, by right of possessing it; and all the rest by right of wanting it, and intending to have it. As Plato had for the immortality of the soul, so Young America has "a pleasing hope-a fond desire-a longing after" territory. He has a great passion—a perfect rage—for the "new".... He is a great friend of humanity; and his desire for land is not selfish, but merely an impulse to extend the area of freedom. He is very anxious to fight for the liberation of enslaved nations and colonies, provided, always, they have land, and have not any liking for his interference. As to those who have no land, and would be glad of help from any quarter, he considers they can afford to wait a few hundred years longer. In knowledge he is particularly rich. He knows all that can possibly be known; inclines to believe in spiritual rappings, and is the unquestioned inventor of "Manifest Destiny." His horror is for all that is old, particularly "Old Fogy"; and if there be any thing old which he can endure, it is only old whiskey and old tobacco.

The satirical import of the passage seems plain enough on its face, particularly since Lincoln's opposition to the Mexican War and "Manifest Destiny" were, and are still, well-known. What clinches it is a lesser-known historical detail. Political scientist Eugene Miller, in an article about Lincoln's view of technology and democracy, points out that "Young America' had served as a political slogan and rallying cry since early 1852" for the supporters of Stephen A. Douglas, Lincoln's arch-rival. While Lincoln's parody thus has a partisan bite, the larger issue for Lincoln was the perversion not of the Democrats but of American democracy, as its citizens increasingly pursued selfaggrandizement rather than self-government.

It should come as no surprise that this talk of Lincoln's, which he delivered half a dozen times around Illinois, was not popular. He chastened us in the hour of our pride, and Young America didn't much care to be chastened. After this sketch, Lincoln draws a contrast between Young America and "the first of all fogies, father Adam" who was responsible for "the first of all inventions ... the fig-leaf apron." With this biblical reference, Lincoln reminds us that the useful arts began in human sinfulness and pride. Adam and Eve, joint participants in what Lincoln calls "the mother of all 'Sewing societies,'" rejected God's provision for them. They covered over their newly discovered nakedness. As he goes on to consider speech and writing, Lincoln again reminds us of things we might prefer to forget and points to the need for greater humility. Speech, says Lincoln, does not appear to be "an invention of man, but rather the direct gift of his Creator." Even writing, which he calls "the great invention of the world," is only possible because of "the wonderful powers of the eye," which, of course, are not of human making. Throughout, he stresses the manifold ways in which we, as human beings, are beholden to our natural endowment and the extent to which we, as Americans, are beholden to the advances made by "very old fogies." Along with Adam, Lincoln mentions Moses by name, and alludes to God's employment of writing in the Ten Commandments and the Holy Scriptures.

The final section of the speech addresses modern inventions. The three he singles out are printing, the discovery of America, and the patent laws. These three have vastly accelerated the overall rate of discovery and invention. Printing in particular expands the field for invention because it awakens in men the thought of "rising to equality." Printing is the emancipation proclamation of the mind. Lincoln suggests that, in breaking the shackles of ignorance and low expectations, printing not only transforms minds but conditions as well. Printing is an invention that furthers political liberty.

In the midst of this appreciative account of printing, Lincoln stops suddenly and injects an attention-arresting, one-sentence digression:

Though not apposite to my present purpose, it is but justice to the fruitfulness of that period, to mention two other important events—the Lutheran Reformation in 1517, and, still earlier, the invention of negroes, or, of the present mode of using them, in 1434.

The date Lincoln gives for "the invention of negroes" is the date when Portuguese explorers first rounded the treacherous Cape Bojador on the western coast of Africa, a feat of navigational expertise and daring that led almost immediately to the start of the African slave trade in 1441. Not all discoveries advance the cause of civilization. The discovery of America in 1492 opened new fields for slavery, and greatly increased the fruitfulness or profitability of the original invention of negroes. Eli Whitney's patent on the cotton gin similarly enhanced the value of the invention of negroes.

The five events mentioned by Lincoln culminate in the American Civil War, which the nation was just on the cusp of as Lincoln delivered this speech. The two seminal inventions of modernity presaged the conflict: the invention of printing in 1436 pointed man towards freedom; the invention of negroes in 1434 pointed him towards slavery. The discovery of America in 1492 provided the ground on which both forces eventually converged. The Reformation in 1517 added religious support for the cause of liberty. Patent law in 1624, like the discovery of America, is double-edged, capable of working mischief as well as marvels. I already mentioned the patenting of the cotton gin. Even more significant (especially since Lincoln refers to the seventeenth-century English origin of patent law), was the patent granted by the British Crown to the Royal African Company in 1672, giving the company exclusive rights to the slave trade-in essence, a patent on negroes, or on "the present mode of using them." We might with justice say that Lincoln's entire public career was devoted to disinventing the negro, or disinventing the present mode of using him. He sought to move the negro from his status as an invention to his rightful status as a human being.

It turns out that our contemporary dilemmas and debates are not entirely novel. Lincoln anticipates our concerns about the patentability of human life and the uneasiness, among some of us at least, occasioned by the discovery of new modes of using human beings—this time around, though, it is not Africans but embryos. In 1980, the Supreme Court ruled that living organisms are patentable. At issue in that ruling were laboratory-engineered, oil-eating bacteria. Since then, genetically altered mammals have

become patentable. Although the Patent Board in Ex Parte Allen (1987) declared that human beings were off-limits because of the Thirteenth Amendment, there are many who doubt that the prohibition will hold, particularly if the issue involves parts of people rather than whole beings. It would certainly be desirable for Congress to act to specify what is not patentable and to codify the boundaries of ownership. Indeed, the most recent report of the President's Council on Bioethics, Reproduction and Responsibility, unanimously recommends that Congress "prohibit the issuing of patents on claims directed to or encompassing human embryos or fetuses at any stage of development; and amend Title 35, United States Code, section 271(g) (which extends patent protections to products resulting from a patented process) to exclude these items from patentability."

Nonetheless, in the end, patentability is a side issue, since failure to secure a patent does not mean one cannot continue research or pursue commercial development. Remember, slavery continued unabated after the Royal African Company's patent lapsed. The real issue is whether certain types of research and certain modes of using men will be allowed. These decisions will be up to us to make, whether through legislation, executive order, or by the self-regulation of various governing bodies, from university committees that oversee research involving human subjects to Olympic and sports officials who rule on the acceptability of performance-enhancing interventions.

Aristocracy and slavery-then and now

The Constitution does, I would argue, set certain ultimate limits to our experimentation upon ourselves. The Thirteenth Amendment bans slavery and involuntary servitude, and Article 1, section 9 contains an absolute prohibition of titles of nobility. Alexander Hamilton said in *Federalist* 84 that the prohibition of titles of nobility "may truly be denominated the cornerstone of republican government." Both provisions point to the natural law background of the Constitution and remind us of the selfevident truths of the Declaration of Independence. The principle of natural equality condemns any and all caste systems. It is impermissible to set up some few to rule over others by inherited right rather than by consent consent being the only legitimate basis of rule among individuals who are, by nature, equal.

Today, we are forced to wonder whether mastery and slavery might not assume new incarnations as science extends its reach. If so, republican government will need to defend itself against any such mutations. The American Revolution set itself against artificial aristocracy-what Jefferson called "the tinsel aristocracy" based on the inherited privileges of a master class. The biotech revolution opens up possibilities for a reinstitution of aristocracy. This time, however, it would not be a matter of external tinsel, like wealth, skin color, or status, but an aristocracy achieved through the alteration of natural human capacities. We face the prospect of humanly manufactured superiority. The science fiction movie Gattaca shows a society divided into the genetically engineered and perfected class of "valids" versus the natural-born class of "in-valids." It may not be science fiction forever. There have already been suggestions that, in addition to the regular Olympics and the Special Olympics, we institute a "Bio-Olympics" for biologically enhanced athletes. At the other end of the spectrum, consider the repudiation of equality-in the sense of equal rights to life and respect-involved in prenatal screening for genetic disorders. The strong implication, sometimes spoken, sometimes unspoken, is that the defective should not be born. How far are we from the day in which invalids become in-valid? It is ironic that in a time when dog breeders no longer routinely drown weak puppies, breeders of human beings are more and more inclined to a ruthless culling of the imperfect.

Finally, there is on the distant horizon not only the specter of a biologically enhanced aristocracy but a novel form of slavery. A certain subset of the unborn could be transformed into a class of beings who exist as animate instruments of our scientific advancement. We can now create new life not to succeed old life but to serve and sustain old life; the new life is not meant to outlive us but is designed to allow us to live longer and more comfortably. We might one day be able to farm and harvest human embryos to feed our needs—the needs of the sick and dying. To describe this situation as slavery or involuntary servitude depends, of course, on granting that an embryo is a human being and, as such, encompassed within the "all men are created equal" principle of the Declaration.

We have had contentious debates before in our history about precisely who is included within the Declaration's broad language. Chief Justice Roger Taney, in his opinion in the *Dred Scott* case, claimed that negroes were not included, for the reason that they were, in his words, "regarded as beings of an inferior order ... and so far inferior, that they had no rights which the white man was bound to respect." The question for us is: Does the embryo—either cloned or conceived—have any rights that those of us who are "of woman born" must respect? I think yes, but just as in Lincoln's day, there are those with more restrictive definitions of humanity who look upon such an expansion of the human family as absurd.

What were the obstacles in the way of full recognition of the humanity of blacks? And how do they compare to the obstacles in the way of full recognition of the humanity of the human embryo? In some respects the case for the embryo is easier to make. It is undeniable that every post-natal human being has passed through the identical stages of embryonic and fetal development. We were all blastocysts once. That clump of cells is us at that stage of our life. Knowledge of our earliest beginnings can awaken a sense of awe and respect. By contrast, the condition of black slaves was such that many whites managed to deny the essential human similarity. No white, prideful of his liberty, wished to recognize himself in the degraded and debased condition of a black slave, particularly if he as the master was responsible for that degraded condition. Were blacks human? The response was: Yes, maybe, and sort of, but not fully human, not human to the extent that they possessed rights worthy of respect. This psychologically based refusal to admit human connection was, of course, compounded by weighty economic considerations.

Moral obtuseness was profitable (as it can be today).

Yet as Lincoln pointed out, slaveholders themselves had trouble believing that slaves had no status other than as property. Their own behavior often gave the lie to their bold pronouncements of exclusion and black inferiority. Among other things, there was the phenomenon of free blacks, many of them free by virtue of the guilty conscience of slaveholders. In many Southern states, moreover, there were laws that upheld the status of slaves as moral agents, capable of committing crimes and also eligible for protection against crimes committed against them. There was the social fact that slaveholders disdained the society of slave-dealers, though not the society of other tradesmen. And finally, there were all those mulattos on the plantations. The enslaved sons and daughters of the masters were a powerful and painful testimony to the species similarity of whites and blacks.

We can see some rough parallels today. We have "free embryos," secure in their mothers' wombs, recognized already as beings in their own right, having their sonogram pictures taken and sent out by e-mail to friends and family under the heading "Baby's First Picture." We have laws on the books, both state and federal, protecting prenatal life against crimes of assault and murder that are committed against persons. The repugnance against the slavedealers' trade in human flesh is felt today against the abortionists' trade, the underground dealers in human organs and babies, and to a more limited degree, against those scientists and ideologues (Peter Singer springs to mind) who take a radically reductionist view of human life. Finally, every embryo used for purposes of research is someone's blood relative. It is certainly the case that our discomfort with embryo research grows as the embryo grows. However, there is also a time during which the new life is so tiny, so seemingly negligible (those blastocysts are brainless, after all), and so hidden from view (stacked up in those petri dishes in those freezers), that it requires a leap of the imagination to acknowledge human identity. Would it really be wrong to allow a window of 10 to 14 days during which experimentation is permitted

upon these beings of seemingly indeterminate or intermediate status?

Interests of the unborn

In dwelling on the comparison to the debate over slavery, I want mainly to remind us that many Americans were wrong once before to constrict membership in the human family on the basis of their own sentiments and self-interest. That does not prove we would be wrong this time around, but I think it does suggest the need for extreme caution, especially since our use of the blastocyst is always fatal to it. In the absence of certain knowledge one way or the other about its human status, wouldn't restraint be the wiser course?

In the last letter written by Thomas Jefferson, he expressed the conviction that it is "the unbounded exercise of reason" and "the general spread of the light of science" that will open men's eyes to the truths of the Declaration. Let's hope he is right. It might well be that the knowledge uncovered by the science of embryology will itself provide evidence that will lead us to question the moral legitimacy of some of our scientific undertakings. The "scientific" racism of the nineteenth and twentieth centuries was eventually refuted by better science, although not before it had done immeasurable damage.

Owing to the rapid pace of our scientific discoveries and technological inventions, and the power they grant us, almost every decision now becomes more freighted with consequences for us and our posterity. There is such a thing, to use Madison's phrase, as "the interests of the unborn," and so we must live up to our responsibility not to tamper with the next generation's natural endowment.