

# CHRISTIANS AND THE GENOME PROJECT

*Scripture Can Help Us Chart a Moral Path through the New Genetic Sciences*

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“**B**ut where shall wisdom be found?” asks Job (Jb 28:12). His question is wonderfully pertinent to the conundrums posed by the new genetic sciences. In this article, I suggest that Scripture offers wisdom to guide Christian discernment concerning the things that should be done—and not done—in genetics so that we human beings might “glorify God in our bodies” (1 Cor 6:20) and in the human genome itself.

## MAPPING THE HGP CULTURALLY GENETIC REDUCTIONISM

Before turning to Scripture, however, I want to consider what sometimes passes for wisdom in our culture. Consider the rhetoric surrounding the Human Genome Project (HGP), for example. Writers frequently describe the HGP as unlocking the “secret of life” or the “code of codes,” suggesting that the mapping of the genome has made human life completely, entirely comprehensible. But this is genetic reductionism. It is the way of folly, not wisdom.

Walter Gilbert, a Nobel laureate in genetics, has plausibly predicted that someday each of us will carry a compact disk containing his or her genetic code.<sup>1</sup> But the HGP’s achievement in mapping and sequencing the genes does *not* give us what Gilbert called “the ultimate answer to the [ancient] commandment ‘know thyself.’”<sup>2</sup> Indeed, not even the body (let alone the mind and spirit) may be reduced to genes; a genotype is not to be confused with a phenotype. Human beings have histories, not just genetic fates.

One need not read Scripture to recognize the folly of reductionism. What is it, after all, that the HGP maps? Not the human person, not the human body, not even “the human genome.” There is no such thing as *the* human genome.

The HGP’s leaders themselves have reminded us that genes differ from person to person. The project’s aim is to publish the average or “consensus” sequence of 200 different people. But that will provide a map neither of everyone nor of anyone in particular. “Variation,” as one writer has noted, “is an inherent and integral part of the human—or indeed any—genome.”<sup>3</sup>

Consider the genetic determinism that accompanies such reductionism. Its folly is displayed in the contradiction such determinism almost always invokes. On one hand, it denies human freedom, insisting that human beings are totally determined by their DNA. On the other hand, it insists that human beings are free—so free they can control their DNA, their own nature, and their evolutionary future.<sup>4</sup>

In rejecting genetic reductionism, we do not reject the study of genetics. What we reject is the claim that the map of the human genome is also a map of human significance. We acknowledge that some *other* map (or maps) is necessary for that. No great wisdom is required for one to reject genetic reductionism and determinism, but we cannot hope for wisdom unless we do reject them.

## THE “BACONIAN PROJECT”

One possible map of human significance can be drawn from the writing of Francis Bacon, the great 17th-century thinker. Bacon agreed with Thomas Aquinas that human knowledge can be divided into the “speculative” and the “practical.” However, he did not agree that both kinds were, as Aquinas said, “good.”<sup>5</sup> Bacon rejected the speculative sciences as the mere “boyhood of knowledge” and “barren of works.”<sup>6</sup> Western culture has followed Bacon in honoring practical knowledge, for which it reserves the term *science*.

Gerald McKenney, discussing what he calls the

"Baconian Project," argues that the HGP is a practical science in that it, like Bacon, is oriented toward "the relief of human subjection to fate or necessity."<sup>7</sup> Such a goal sounds commendable enough, and is surely commonplace in the modern world. But it is the path of folly.

The modern world agrees with Bacon that, for knowledge to be beneficial, humanity must "perfect and govern it in charity."<sup>8</sup> Unfortunately, as Hans Jonas notes, science is "not self-sufficiently the source of that human quality that makes it beneficial."<sup>9</sup> The modern world has forgotten what Aquinas knew: that theory (the speculative sciences) provides the wisdom necessary for using the practical sciences appropriately. Where is one to look for wisdom if the speculative sciences are jettisoned? The compassion that responds viscerally urges us to *do something* in response to suffering, but it will not tell us *what thing* to do. The Baconian confidence in technology says that to relieve suffering we should reach for the nearest tool or the latest technique. The Baconian Project arms compassion with artifice, not with wisdom. For wisdom to guide charity, science must call on something else. But on what? And how, in Bacon's account, can humanity have "knowledge" of it?

Bacon sought "practical" knowledge in the confidence that it would render humanity "capable of overcoming the difficulties and obscurities of nature" and that it would "endow the human family with new mercies."<sup>10</sup> The Baconian Project sets humanity not only over nature but also against it. In the Baconian view, the natural order and natural processes have no value of their own; their value is reduced to their utility to humanity. And nature does not serve humanity "naturally," in the Baconian view. In fact, nature threatens to rule and ruin humanity. The fault that runs through our world and through our lives must finally, in the Baconian view, be located in nature. Nature may be—must be—mastered. Technology will be the faithful savior.

The Baconian Project thus finds an inevitable expression in genetic enhancement. The nature we humans *are* is the nature we suffer from, in the Baconian view. The Baconian Project's ambitions extend to human finitude itself, to human

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nature. In medical science, the Baconian Project will find it increasingly difficult to distinguish (or to make and preserve a distinction) between healing and enhancement. This is ironic, of course. As Mark Hanson has observed, the very success of enhancement technologies "serves to broaden the scope of conditions from which humans can be said to suffer."<sup>11</sup>

The Baconian confidence that technology inevitably brings human well-being with it is a creed ripe for doubt. We Christians must look for wisdom elsewhere.

## THE "LIBERAL SOCIETY PROJECT"

The modern world also tends to share what might be called the "Liberal Society Project"—to keep the peace in the midst of moral diversity.<sup>12</sup> Commendable as it sounds, this project, too, puts us on the path to folly.

Because people disagree widely and deeply about their moral convictions, a liberal society insists on respect for the autonomy of each person and attempts to guarantee a space for each to act in ways that suit his or her moral preferences, as long as such actions do not violate the autonomy of another. It is not folly to attempt to keep the peace in the midst of diversity. Nor is it folly to insist on respect for the moral integrity of each member of a diverse society. But the weakness of the Liberal Society Project is precisely its minimalism, and its folly is its failure (or refusal) to acknowledge this minimalism.

The minimalism shows up in a variety of ways. The Liberal Society Project tells us nothing about what goods to seek—only about the constraints to exercise in seeking them. Moreover, it is attentive to only one constraint, prohibiting any violation of another's freedom. Because it pretends that freedom is a sufficient moral principle, the Liberal Society Project reduces covenantal relationships (e.g., those involving husband and wife or parent and child) to matters of contract. By emphasizing a procedural question—"Who should decide?"—the Liberal Society Project pushes to the margins of public discourse the substantive moral questions of conduct and character "What should be decided?" and "What virtues should characterize the one who decides?"

The Liberal Society Project's minimalism does

not make it wrong. But, if not acknowledged, this minimalism can distort and subvert the moral life, and the moral begetting of life. It is true, for example, that "nonconsensual sex" is wrong—but there is more to say about a good sexual life; and if we deny that there is more to say, we distort and subvert a good sexual life.

When "reproductive liberty" is taken to be a sufficient principle, we publicly reduce the self to capacities for agency and we reduce acts of begetting to mere physiology and matters of contract. Consider the folly of surrogate mothers, who are sometimes alienated from the embodied experience of pregnancy and birth by the contract and sometimes alienated from the contract by their embodied experience of begetting.

Consider also the folly, the apparent incoherence, of our public policy concerning disabled people. On one hand, we support their full inclusion in society and their right to equal freedom. On the other hand, we seem committed to a reproductive liberty that includes the freedom to prevent a child with a disability from being born. It is not easy to see how such a negative judgment on the lives of disabled people vis à vis reproductive freedom can long sustain the social commitment to their full inclusion.<sup>13</sup>

Notice, as well, the folly involved in the pretense that "maximizing freedom" is always morally innocent. "Maximizing freedom" can in fact increase our bondage.

Measures introduced as a means of increasing options can, if socially enforced, become a means of reducing them. It is conceivable, for example, that the genetic technology of prenatal diagnosis, which is offered as way of increasing parents' options, could in fact lead to social sanctions. "What," such parents might be asked, "you knew you were at risk for bearing a child with that disease and you did nothing about it? And now you expect society to help raise the child?" Today, of course, it is possible to claim that prenatal diagnosis is the path of progress. In doing so, however, one shifts the argument from the celebration of options and the maximizing of freedom to something else, the meaning of progress. And that argument requires more substantive moral convictions than the Liberal Society Project is

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prepared to invoke.

When, under cover of "maximizing freedom," we offer the option of physician-assisted suicide, we eliminate the option of staying alive without having to justify one's existence to anyone. When, under cover of "reproductive liberty," we offer the option of preventing birth defects by preventing the birth of children with them, we eliminate the option of bearing and

caring for a child without having to justify the child's existence to anyone. Clearly, "maximizing freedom" should not be regarded as a sufficient justification for changing social practices, especially if such changes leave the weak still more vulnerable.

#### THE "PERFECT CHILD PROJECT"

The Baconian Project and the Liberal Society Project both conspire to distort society's relationship to children. Suspicion of nature, confidence in technology, and the celebration of options combine to nurture a new "wisdom" about parenting, a new project concerning reproduction. Parents, that is, are tempted to view their children as human *achievements*, rather than gifts of God, and as the basis of hope, rather than emblems of our hope in God.

Few contemporary people see children as their parents' property, to be disposed of as the parents happen to choose. Today, indeed, parents are more likely to view themselves as bearing the awesome responsibility of, first, making perfect children, and, second, assuring these perfect children a happy and successful life. But this view, which we might call the "Perfect Child Project," turns children into *products*. To realize it, society allows—and, in time, may come to require—preimplantation genetic diagnosis, abortion of unborn children who do not meet standards of "quality control," and the neglect of newborn children with diminished capacities to achieve our ideal of the "good life." Such a project could finally reduce our reproductive options to two: a perfect child or a dead one.

But children are begotten, not made.<sup>14</sup> They are gifts, not achievements. The language concerning gifts calls on us to relate to our children as the little ones related to God, the God known in the Jesus who blesses little children, the God

invoked as *Abba*. And the Father's uncalculating nurturance is still the best model for those of us who want to learn parenting, to learn how to love the imperfect, the snotty-nosed, and the just plain snotty. It is not accidental that the language of gifts involves acceptance of our children as given. We do not regard them as products, as achievements, and are not permitted to beget them as though they were. Children come to us as given—they are not of our choosing, not under our control, not necessarily the children we want or expect or would choose if we could.<sup>15</sup>

### THE "CAPITALIST PROJECT"

It has become increasingly clear, as the HGP has developed, that it cannot be realistically viewed as separate from the financial incentives that fuel it. For what we might call the "Capitalist Project," the HGP transforms scientific knowledge into a marketable commodity.<sup>16</sup> The HGP's leading investors—the United States, the European nations, and Japan—expect lucrative returns in the form of commercial applications by their biotechnology industries. From the beginning, cost-effectiveness was invoked to justify the cost of this international, coordinated, collaborative effort.<sup>17</sup> Later, as HGP researchers began to match particular diseases with particular gene sequences, the project's leaders, to ensure continued research, allowed the biotechnology companies to patent sequences.<sup>18</sup> Collaboration and cooperation gave way to secrecy and competition because the market demanded them.

The medical advances promised by the HGP are tied to successful (i.e., commercially successful) product development by biotechnology firms. Social benefits depend on the market; medical goals are intimately related to commercial goals. The HGP's chief beneficiaries, both economically and medically, will very likely live in the developed nations; indeed, they will very likely be among the relatively well-off of those populations. It is hardly accidental that the most-studied gene is that for cystic fibrosis; 1 in 25 northern Europeans carry it.

Those scheduled to profit from the Capitalist Project would like the rest of us to believe that some "invisible hand" will guide the genetic products market not only toward efficiency but also toward global equity. Perhaps we are to believe that at least some benefits will "trickle down" to the poor and economically powerless. But what we have seen so far does not bode well for justice, especially global justice. The Capitalist Project—like the Baconian Project, the Liberal Society Project, and the Perfect Child Project—does not appear a promising place to seek wisdom concerning the HGP. We must again look elsewhere.

### "MAPPING" THE HGP BIBLICALLY IN THE BEGINNING

Christians look for wisdom in the Scriptures. In the light of that story, Christians struggle to understand their relationship to God. The story locates and orients us vis à vis life in general. It can do the same in respect to the HGP.

But where shall we pick up the story? Francis Collins, the HGP's U.S. director, consistently picks it up where Jesus undertakes his ministry of healing. The story thus serves to orient us to the HGP as a matter of discipleship, "a natural extension of our commitment to heal the sick."<sup>19</sup> I believe Collins' point is profoundly correct (and will return to it later)—but also incomplete. And, because the notion is incomplete, it is one that is too easily co-opted by partisans of the Baconian Project.<sup>20</sup> We need to be attentive to the whole Gospel story; discernment requires it.

In the beginning is the story of Creation. God is the Creator, "The Maker of Heaven and Earth"—and of the human genome, as well. The story does not permit idolatry. Nothing God made is God—neither the light, nor natural powers of fertility and procreation, nor the human capacity for freedom or mastery of nature, nor even life itself.

We Christians should remember this truth when the Baconian Project tempts us to have extravagant, idolatrous expectations concerning technology, including genetic technology. We should remember it when, following Bacon, we are tempted to make natural processes themselves sacrosanct, as though "Mother Nature" were God. And we should remember it when the Perfect Child Project tempts us to make idols of our own children, making them the basis of our hope for the future, instead of emblems of our hope in God.

"God saw everything that he had made, and indeed, it was very good" (Gn 1:31). All—light, fertility and procreation, the human capacity for freedom and mastery of nature—were *good* gifts of God. And life, in its finitude and its dependence on God, is good. We should remember this truth when the Baconian Project tempts us to regard nature as the enemy and our finitude as a flaw. As Christians, we must affirm the good Creation of God.

We human beings were created in "the image of God" (Gn 1:26-27). In the Babylonian creation epic, Marduk made "man" from the blood of Kingu, a defeated and evil god, for service to the gods (and their representatives in Babylon). However, the Jews told a story in which God made "man" (male and female) in God's own image, not for bondage but for freedom, to be not a slave but a ruler. One is not permitted to

treasure this story and, at the same time, see men as fit for slavery and women as no more than the sum of their biological utility. We Christians must orient ourselves toward respect for the dignity of human beings, refusing to reduce them (including those we create) to their utility, their service to *our* projects, whether the project is parenting or scientific mastery.

The biblical notion of an "image," a *tselem* (statue), was borrowed from the practice of those earthly monarchs who erected images of themselves as signs of their sovereign authority. God made human beings to be "the image of God" and set them in the midst of Creation to be a sign of God's rule. We signal God's rule by ruling—and we rule best by ruling in ways that honor God's cause and reflect God's ways. To be God's "image" is to receive a *vocation* to reflect God's rule.

How shall we reflect God's rule in the HGP?<sup>21</sup>

Some clues may be found in the Creation story itself. "Imaging" God, if I read the story correctly, might mean something neglected in the science formed by the Baconian Project: It might mean responding to God's Creation with wonder, delighting in its elegant structure (including its DNA). It would mean celebrating knowledge that was *not* simple mastery. It would mean appreciating nature (including human nature) as it is, rather than viewing it as a threat requiring mastery.<sup>22</sup> We Christians must orient ourselves not only toward mastery but also, fundamentally, toward wonder and celebration.

"Imaging" God might also mean simply taking a day off, playing, *resting*.<sup>23</sup> The Sabbath is a day of rest and play. On it, we take our repose in a God who can be trusted and should be praised. By marking the Sabbath, we refuse to reduce ourselves to makers and designers. We refuse to reduce our existence to incessant, joyless work. And we refuse to reduce the moral life to utility, to a concern with consequences. We Christians must orient ourselves not only toward the good that we may hope to achieve but also—and fundamentally—toward the good we receive and in which we may simply delight. We should remember this truth when the Perfect Child Project tempts us to design our children.

"Imaging" God also means—something *not* often overlooked in these discussions—being creative. It means that human creativity is given with the Creation. Human beings are created and called to exercise "dominion" in the world. I see no reason to suppose that such creativity and dominion do not extend to the human genome. After all, "Mother Nature" is not God in the Creation story. Nothing God made is God. However, we humans are meant to exercise cre-

ativity and control in response to God and in imitation of God's face. God's dominion is not like that of some tyrant who would "lord it over" his subjects and is not to be such among those who would "image" him (see Mk 10:45-46). We Christians need not disown power or dominion, but we must orient dominion toward service to God, our neighbors, and God's Creation.

We "image" God also as social beings. The God who made us is the triune God, whose own life is a story of communal and eternal self-giving; God made us in and for relationships. "Male and female he created them" (Gn 1:27). We should remember this truth when the Liberal Society Project would teach us to regard ourselves simply as individuals and our relationships simply as contracts. Our relationships with each other are not to be reduced to a set of contractual arrangements between autonomous agents. We "image" God in self-giving, in caring for and affirming the existence of the other. We Christians must orient ourselves toward respect for natural relationships.

God made us not just social but also *embodied* beings. Touched by God's breath, the dust became *nephesh*, "a living being" (Gn 2:7). And precisely as *nephesh*, living beings, humans are "flesh," *basar*. Christianity has no room for a dualism that separates body and soul; they are not two things, but one whole. We should remember this truth when genetic reductionism tempts us to reduce ourselves to our genes and the Baconian Project tempts us to regard our nature as an enemy to be mastered. The story of our Creation fits no reduction of the self to mere body, to biological organism, or to genome. Neither does it fit divorcing the self from the body, and from the genome, as though the self were reducible to capacities for reason and choice. We Christians must orient ourselves to attend to whole selves.

God made us *sexual* beings as well. Creation is the story of an embodied relationship, a "one flesh" union of male and female; begun in vows; carried out in fidelity; involving mutuality and equality; intimacy and continuity; and blessed with children.

Sex is good, but it is not God; nothing God made is God. We Christians should remember this truth when we are tempted with idolatrously extravagant expectations of sexuality and procreation. Remembering it, we will refuse not only to reduce the self to the genome or to disembodied capacities for choice but refuse also to reduce sexual intercourse itself to either a technology of pleasure without fidelity or to mere physiology and matters of contract without a commitment to care for the children it may produce.

We "image" God in self-giving commitments

of fidelity to our partners and our children—even when they turn out not quite as we expected (and they never do). We can learn parenting from the one in the Creation story we call “Abba.” We Christians should remember this truth when the Perfect Child Project tempts us to see parenting in a different light. Parenting involves an uncalculating commitment to nurture. Prenatal diagnosis practices with a view to abortion put that parental commitment at risk.

And, finally, God made us *free*. God is both the source and destiny of human freedom. Freedom is the good gift of God through which God would form humanity for voluntary fellowship with God and with each other. That fact alone should preclude the determinism of genetic reductionism.

We Christians should remember this truth when the Liberal Society Project suggests that freedom can be a *sufficient* moral principle. Freedom is a prerequisite for the moral life, but the moral life should not be reduced to it; and freedom can be deformed. We must orient ourselves to respect freedom. But people are always more than their rational autonomy. We must also respect others as embodied persons, not free individuals alone but “members of one another,” members of communities at least some of which are not of their own choosing. We must not allow autonomy to monopolize our moral attention.

## SIN

Creation is not, of course, the whole story. Indeed, the plot thickens with the advent of human sin. Although Scripture says that “in the beginning” God made all things and made them good, it says, too, that something is *wrong* with our world. A flaw runs through the world and through our lives and selves. The fault is not God’s, as Scripture makes clear. And, Bacon to the contrary, it is not nature’s fault either. The fault, which is ours, can be traced to human sin, to the human refusal to trust God and give thanks to God.

The Protestant theologian Reinhold Niebuhr attributed anxiety to the fact that human beings are both finite and free. At once finite children of nature and free children of spirit, we are always

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tempted to deny one or the other—denying our finitude in pride and our transcendence in sensuality and sloth.<sup>24</sup> Pride and sloth have a variety of forms, of course, always threatening to furnish the orientation for our human projects, including the HGP. Pride is at work whenever we attempt to eliminate anxiety by eliminating the vulnerability that attends our finitude. It can be seen in those

aspects of the HGP that, identifying the fault in the world with human finitude, attempt to provide a technological remedy for it. Sloth is at work whenever we deny our freedom in an effort to escape responsibility. It can be seen in those aspects of the HGP that seem to accept genetic reductionism and determinism.

## JESUS AND THE CROSS

At the center of the story that Scripture tells is Jesus. Jesus was, of course, a *healer*—he taught us that God’s cause is life, not death, and human flourishing, including the flourishing we call health, not disease. Healing “images” God and serves the cause of God. We Christians must be oriented toward ministry to the sick, toward healing.

We may thus celebrate genetic diagnoses that lead to therapy and to genetic therapies themselves. For example, we may celebrate genetic medicine’s ability to help determine the drug that will work best for a particular patient (e.g., Herceptin in the treatment of breast cancer). We may certainly celebrate the success of genetic therapy for some children born with a severe combined immunodeficiency.<sup>25</sup>

However, genetic knowledge and technology must be aimed at health, not enhancement. The distinction may be a slippery one, but if we hope to “image” God and serve God’s cause, we will want to make the distinction and abide by it. Eugenics is not the way to “image” God. The Baconian Project has no way of drawing a line between health and enhancement. In the Baconian view, finite nature itself is the problem; the miseries flowing from it must be overcome by technology. But Scripture tells us two things:

First, the finitude view is not the problem. We Christians should be suspicious of efforts to transcend human finitude—to eliminate suffering and

mortality—through genetic intervention. We are permitted to counter the effects of sin; but our finitude, with its dependency and limits, is good.

Second, the remedy for human suffering is not simply technological. We should not arm compassion with artifice alone; wisdom suggests that the response should sometimes be social. We rush too quickly, for example, to the judgment that preventing the birth of handicapped children is a good thing. We would be better off working to build a society that practices hospitality to those who appear different.

Jesus was not only a healer; he was also one who preached good news to the poor. In reading Scripture, we find wisdom as well as justice. We Christians must be oriented toward a justice that fits good news to the poor.

A justice that fits Scripture will not be confused with the moral minimalism of the Liberal Society Project; it will not be the sort of tight-fisted justice that seeks to protect one's own interests from a neighbor's interference. A vocation to "image" God in the HGP will require us to be attentive not only to intriguing questions about the frontiers of science and technology but also to "mundane" questions concerning fairness: the fairness of the social investment in the HGP and the fairness of the share the poor have in its burdens and benefits. If we truly want to "image" God, we have a model in God's hospitality to the poor and to the stranger, to the powerless and voiceless, to those who differ from the norm, including the genetic norm. If we are to live the Scripture story, we will work for a society in which human beings—even the least of them—are treated as worthy of God's care and affection.

Jesus of Nazareth was a healer and one who preached good news to the poor, but the Gospels firmly tie the stories about him to the story of the cross. Jesus "suffered under Pontius Pilate." He made the human cry of lament his own: "My God, my God, why have you forsaken me?" (Mk 15:34).

Genuine lament contains no pretense, no denial or withdrawal to some otherworldly realities. Lament is no romantic effort to reduce the hurt to some domesticated account of nature. Nor is it a presumptuous claim to secure human

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well-being through mastery of nature. The story of the cross is a corrective both to the kind of religious triumphalism that denies the sadness of this world and to the kind of medical triumphalism that would provide a technological remedy for it.

If we are to come to the HGP oriented by the Gospels, we must be oriented by *compassion*. But we must be careful not to confuse

an ancient virtue with its modern counterfeit. The ancient virtue fit the story of one, God with us, who made the human cry of lament God's own. Modern compassion wants to stop the crying. Rather than being willing to suffer with another, modern compassion wants us to put an end to suffering—by any means necessary. The Baconian Project urges us to trust technology against suffering. And enthusiasm for technology as a response to suffering has indeed blinded many people to the limits of technology.

This blinding is not only, or primarily, medical science's fault. When we who belong to Christian communities forget lament, we marginalize not only suffering but also sufferers. When we leave lament out of our liturgies, we nurture the expectation that humans might somehow be invulnerable to suffering. Then, alone in our anger or sense of absurdity, we begin to believe that we alone suffer. In such moments of desperation, we reach out for technological answers, struggling to lift ourselves to invulnerability to pain.

But if we were to remember and truly live the story of the cross, we would recover the compassion that is ready to *suffer with* another human being. Then we would respond with presence, not just tools. We would cease looking for technological solutions to what are social problems. We would no longer rely on technical "enhancement" as an answer to suffering.

## THE END OF THE STORY

The Scripture concludes, as Jesus promised, with God acting to end the rule of sin and death, establishing God's own good future. We do not yet live in that good future, of course. But the future depends on God, not on us. We are not the Messiah; Jesus is. And our technological powers, although great, cannot build a city—or a

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## AGENDA FOR THE STRONG AT HEART

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- Witnessing to the distinctive character of health care as a social good
- Confronting honestly the tensions arising from being an institutional ministry in today's health care environment
- Preserving our very freedom to serve

I am optimistic that those who gather to celebrate our 300th anniversary in 2027 will be able to recount the stories of how, with God's grace, we turned these opportunities into successes just as those who came before us shaped and sustained not only their destiny, but ours and that of those who will follow us. □

### NOTES

1. Letter from Thomas Jefferson to Sr. Marie Therese Farjon of St. Xavier, May 15, 1804, courtesy The Ursulines of New Orleans.
2. Suzy Farren, *A Call to Care: The Women Who Built Catholic Healthcare in America*, The Catholic Health Association of the United States, St. Louis, 1996, p. 9.
3. Farren, pp. 16-19.
4. Farren, p. 23.
5. Farren, pp. 97-103.
6. Joseph Cardinal Bernardin, "Making the Case for Not-for-Profit Healthcare," in *Celebrating the Ministry of Healing: Joseph Cardinal Bernardin's Reflections of Healthcare*, The Catholic Health Association of the United States, St. Louis, 1999, p. 89.
7. Bernardin, "Making the Case for Not-for-Profit Healthcare," pp. 87-88.
8. Bernardin, "Making the Case for Not-for-Profit Healthcare," pp. 139-140.
9. Joseph Cardinal Bernardin, "The Consistent Ethic of Life and Healthcare Reform," in *Celebrating the Ministry of Healing: Joseph Cardinal Bernardin's Reflections of Healthcare*, The Catholic Health Association of the United States, St. Louis, 1999, p. 78.
10. Bernardin, "The Consistent Ethic of Life and Healthcare Reform," p. 79.
11. Peter F. Drucker, *Managing the Non-Profit Organization: Practices and Principles*, Harper Collins, New York City, 1990, p. xiv.

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medicine—in which "death shall be no more, neither shall there be mourning, nor crying, nor pain anymore" (Rv 21:4).

Meanwhile, physicians, nurses, and researchers can continue their work unburdened by messianic expectations, in carefree response to God's grace and in confident hope of God's future. The Bible offers no ethical code for the practice of genetic medicine. It does offer wisdom, but this wisdom will require discernment. As Christians oriented by Scripture—rather than by the Baconian and other "projects" I have described here—we must exercise discernment concerning the human genome. □

### NOTES

1. Walter Gilbert, "A Vision of the Grail," in Daniel Kevles and Leroy Hood, eds., *The Code of Codes*, Harvard University Press, Cambridge, MA, 1992, p. 96.
2. Gilbert is quoted in Jean Bethke Elstain, *Who Are We? Eerdmans*, Grand Rapids, MI, 2000, p. 90.
3. Matt Ridley, *Genome*, HarperCollins, New York City, 1999, p. 145.
4. See Ted Peters, *Playing God? Genetic Determinism and Human Freedom*, Routledge, New York City, 1997, p. xiii.
5. Thomas Aquinas, *Commentary on Aristotle's "On the Soul,"* 1.3, cited in Hans Jonas, *The Phenomenon of Life: Toward a Philosophical Biology*, Dell, New York City, 1966, p. 188.
6. Francis Bacon, *The New Organon and Related Writings*, Bobbs-Merrill Co., Indianapolis, 1960, p. 8.
7. See Gerald McKenney, *To Relieve the Human Condition: Bioethics, Technology and the Body*, State University of New York Press, Albany, NY, 1997, p. 122.
8. Bacon, p. 15.
9. Jonas, p. 195.
10. Bacon, pp. 19, 29.
11. Mark J. Hanson, "Indulging Anxiety: Human Enhancement from a Protestant Perspective," *Christian Bioethics*, August 1999, p. 125.
12. See the treatment of "the liberal convention" in Hans Reinders, *The Future of the Disabled in Liberal Society: An Ethical Analysis*, University of Notre Dame Press, Notre Dame, IN, 2000, pp. 22-35.
13. Reinders, p. 65. See also pp. 77-78.
14. See Oliver O'Donovan, *Begotten or Made?* Oxford University Press, Oxford, England, 1984.
15. On the relation of parents to children, see Sondra Wheeler, "Contingency, Tragedy, and the Virtues of Parenting," in Ronald Cole-Turner, ed., *Beyond Cloning*, Trinity Press International, Harrisburg, PA, 2001, pp. 111-123.
16. See Julie Clague, "Genetic Knowledge as a Commodity: The Human Genome Project, Markets and Consumers," in Maureen Junker-Kenny and Lisa Sowle Cahill, eds., *The Ethics of Genetic Engineering*, SCM Press, London, 1998, pp. 3-12.
17. Robert Mullan Cook-Deegan, "Genome Mapping and Sequencing," in Warren Reich, ed., *Encyclopedia of Bioethics*, rev. ed., Macmillan, New York City, 1995, pp. 1,014-1,015. See also Karen Lebacqz, "Fair Shares: Is the Genome Project Just?" in Ted Peters, ed., *Genetics: Issues of Social Justice*, Pilgrim Press, Cleveland, 1998, pp. 82-107.
18. See Stephen Sherry, "The Incentive of Patents," in John F. Kilner, Rebecca D. Pentz, and Frank E. Young, eds., *Genetic Ethics*, Eerdmans, Grand Rapids, MI, 1997, pp. 113-123.
19. Francis Collins, "The Human Genome Project," in Kilner, Pentz, and Young, eds., *Genetic Ethics*, pp. 95.
20. See, for example, Francis Collins, "Medical and Societal Consequences of the Human Genome Project," *New England Journal of Medicine*, July 1, 1999, pp. 28: "Scientists wanted to map the human genetic terrain, knowing it would lead them to previously unimaginable insights, and from there to the common good."
21. This topic is much discussed, of course. Some see humans as "stewards," conserving and preserving God's Creation, while others see them as "cocreators," free to correct or "redeem" nature. See the discussion in James J. Walter, "Theological Issues in Genetics," *Theological Studies*, March 1999. Frankly, I do not think much is at stake in the name we give our vocation, as long as we set it in the context of the biblical story.
22. This point was made powerfully a quarter century ago by Bernard Haring in his *Ethics of Manipulation*, Seabury Press, New York City, 1975.
23. Haring, p. 50, suggested this as well.
24. See Mark J. Hanson, "Indulging Anxiety: Human Enhancement from a Protestant Perspective," *Christian Bioethics*, vol. 5, no. 2, pp. 121-138.
25. See the very celebratory survey of some genetic applications in Kenneth W. Culver, "A Christian Physician at the Crossroads of New Genetic Technologies and the Needs of Patients," in Cole-Turner, ed., *Beyond Cloning*, pp. 14-33.