

# PROTECTING GOD FROM SCIENCE AND TECHNOLOGY: HOW RELIGIOUS CRITICISMS OF BIOTECHNOLOGIES BACKFIRE

*by Patrick D. Hopkins*

*Abstract.* Many religious critics argue that biotechnology (such as cloning and genetic engineering) intrudes on God's domain, or plays God, or revolts against God. While some of these criticisms are standard complaints about human hubris, I argue that some of the recent criticism represents a "Promethean" concern, in which believers unreflectively seem to fear that science and technology are actually replicating or stealing God's special deity-defining powers. These criticisms backfire theologically, because they diminish God, portraying God as an anthropomorphic superbeing whose relevance and special nature are increasingly rivaled by human power.

*Keywords:* Babel; biotechnology; cloning; genetic engineering; God; God of the Gaps; hubris; Prometheus; religion and science; religion and technology; religious criticism; theology.

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Given the dizzying array of developments in science and biotechnology over the past few years, it is not surprising that people would want to bring their religious convictions and moral frameworks to bear on these phenomena. For some, it is mandatory. They perceive an obligation to influence, and sometimes restrict, new science and technology by their religious ideals. This is especially true as more radical technologies develop and people worry that scientists and technologists are ignoring the social and ethical implications of their work.

The framing story here is generally understood by religious critics—and often by the media—in this way: scientists and technologists constantly

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press into the heart of nature to understand how things work and how they might manipulate those workings. They do this with little regard for what might be done with such knowledge. They challenge every taboo, create dangerous new options, threaten our culture's values and ways of life, and ignore traditional religious guidelines about humanity's proper role. They follow the amoral technocratic principle that whatever can be done should be done. The job, therefore, of "people of faith"<sup>1</sup> is to criticize these actions with their special insight, protect the endangered dignity of human beings, prohibit immoral policies and options, and in general bring in the perspective and wishes of God as a desperately needed restraint. God steps in, through "His"<sup>2</sup> human agents, to restrain technology.

At the heart of this approach is an outside-in perspective in which religion—armed with timeless guides of faith and revelation—observes technoscience, then steps in to curb excesses and impropriety.<sup>3</sup>

Often overlooked in this picture, however, are the inside-out influences. Of course, inside-out influences have not been ignored regarding science and religion. Many religious critics have incorporated science into their theology. For example, claims about the nature and beginnings of the universe and the evolutionary development of species have undermined scriptural literalism, refined intelligent-design theory, and led to various notions of theistic evolution. Scholars recognize that religion's confrontation with science has reflexively transformed religious ideas themselves.

What has received considerably less attention, however, is *technology's* relationship to religion and, in particular, technology's relationship to the concept of God. While science-based claims may conflict with specific doctrines, technology is less about descriptive knowledge and more about action, altering the world, *doing* things that may conflict with our ideas about what God does, or can do, or wants us to do. Here, technology can influence theology. To the extent that our ideas about God are based on what God is able to do, what we are able to do shapes our concepts of what makes God unique, special, Godlike.

When religion criticizes technology, then, it cannot escape some conceptual fallout, some rebound of those criticisms back onto the central concepts that motivate its critique.

There are, as one might imagine, innumerable permutations of the religion-technology relationship. However, what I focus on here are religious criticisms aimed at biotechnology. In particular, I want to highlight a shift in these criticisms from a more traditional type, which I call hubris criticism, to a newer type, which I call Promethean criticism. Though increasingly common, the Promethean approach has yet to be fully recognized or appreciated. It is important to remedy this situation because, as I will argue, Promethean criticisms are theologically tricky, often backfiring and undermining the very concept of God.

## HUBRIS CRITICISM: PRIDE GOETH BEFORE A FALL

Religious criticism of biotechnology takes a wide variety of forms. Concerns include that biotechnology violates divine law by separating marital sexual intercourse from procreation or that it undercuts human dignity by treating human beings as products. Social justice concerns include issues of plutocratic privilege and the inability of the poor to pay for technological advantages. Cloning brought up the novel assertion that humans might have a “God-given right” to genetic uniqueness.<sup>4</sup> In short, a variety of concerns arise, more or less parallel to secular concerns, focusing on how technology affects individuals’ actual lives.

But there is another kind of religious criticism. Whether it dominates religious responses to science and technology is not clear, but it is a recurring, politically motivating, and theologically complicated criticism. It focuses on human pride, or hubris—on the sheer audacity of human beings to go where only God has gone before. Concerned with the respective roles of humans and God, this hubris criticism is the foundation and expression of much of the religious anxiety over technology.

The basic idea of the hubris criticism is that human pride leads to moral and metaphysical overreaching—a sinful attempt to intrude on power and knowledge that belong to God alone, or a pathetic claim to be equal to God. Literature is replete with hubris tales. Writers delight in describing people who are destroyed through overweening self-confidence or arrogant competitiveness with the gods. We are familiar with the Greek stories: Arachne claimed to be as fine a weaver as the god Athene and challenged her to a contest, for which she was punished by being magically driven to suicide, then revived and turned into a spider” (Bulfinch 1979, 107–11). Niobe, queen of Thebes and exceedingly proud of her fourteen children, claimed to be happier than the god Latona, who had only two children. Enraged, Latona sent her children, the gods Apollo and Diana, to slaughter Niobe’s brood (Bulfinch 1979, 111–14). Daedalus and his son Icarus tried to escape their landbound existence by making wings to fly, but audacious Icarus flew too close to the sun. His waxed wings melted, and he plummeted to his death (Bulfinch 1979, 156–57). Scores of contemporary stories and films have similar messages.<sup>5</sup>

But, powerful and longlasting as the Greek stories are, the most influential hubris tales are two grand stories of the Hebrew Bible—the Garden of Eden and the Tower of Babel. These tales, both cautionary and explanatory, have been pivotally interpreted as ones in which human pride and greed led to destruction and death. This is an important part of hubris—it leads to divine retribution and the fall of humanity.

Let us look at the basic narratives and their common interpretation. First, the Eden story:

Now the serpent was more crafty than any other wild animal that the Lord God had made. He said to the woman, "Did God say, 'You shall not eat from any tree in the garden?'" The woman said to the serpent, "We may eat of the fruit of the trees in the garden; but God said, 'You shall not eat of the fruit of the tree that is in the middle of the garden, nor shall you touch it, or you shall die.'" But the serpent said to the woman, "You will not die; for God knows that when you eat of it your eyes will be opened, and you will be like God, knowing good and evil." So when the woman saw that the tree was good for food, and that it was a delight to the eyes, and that the tree was to be desired to make one wise, she took of its fruit and ate; and she also gave some to her husband, who was with her, and he ate. Then the eyes of both were opened, and they knew that they were naked; and they sewed fig leaves together and made loincloths for themselves. They heard the sound of the Lord God walking in the garden at the time of the evening breeze, and the man and his wife hid themselves from the presence of the Lord God among the trees of the garden. But the Lord God called to the man, and said to him, "Where are you?" He said, "I heard the sound of you in the garden, and I was afraid, because I was naked; and I hid myself." He said, "Who told you that you were naked? Have you eaten from the tree of which I commanded you not to eat?" The man said, "The woman whom you gave to be with me, she gave me fruit from the tree, and I ate." Then the Lord God said to the woman, "What is this that you have done?" The woman said, "The serpent tricked me, and I ate." The Lord God said to the serpent, "Because you have done this, cursed are you among all animals and among all wild creatures; upon your belly you shall go, and dust you shall eat all the days of your life. I will put enmity between you and the woman, and between your offspring and hers; he will strike your head, and you will strike his heel." To the woman he said, "I will greatly increase your pangs in childbearing; in pain you shall bring forth children, yet your desire shall be for your husband, and he shall rule over you." And to the man he said, "Because you have listened to the voice of your wife, and have eaten of the tree about which I commanded you, 'You shall not eat of it,' cursed is the ground because of you; in toil you shall eat of it all the days of your life; thorns and thistles it shall bring forth for you; and you shall eat the plants of the field. By the sweat of your face you shall eat bread until you return to the ground, for out of it you were taken; you are dust, and to dust you shall return." The man named his wife Eve, because she was the mother of all living. And the Lord God made garments of skins for the man and for his wife, and clothed them. Then the Lord God said, "See, the man has become like one of us, knowing good and evil; and now, he might reach out his hand and take also from the tree of life, and eat, and live forever"—therefore the Lord God sent him forth from the garden of Eden, to till the ground from which he was taken. He drove out the man; and at the east of the garden of Eden he placed the cherubim, and a sword flaming and turning to guard the way to the tree of life. (Genesis 3, NRSV)

The dominant interpretation of this story within Christianity is that the great sin committed in the Garden of Eden is one of pride. Out of a desire to be something she should not, to avoid the limitations set on her by God, Eve disobeyed God and tempted Adam to do the same. The Fall, therefore, was caused by pride and willful arrogant disobedience. The *Oxford Companion to the Bible* summarizes the traditional interpretation:

The Fall refers to the disobedience and the expulsion of Adam and Eve from the garden of Eden. According to the J account of creation (Gen. 2–3), humanity—

represented by Adam and Eve—initially enjoyed a life of ease and intimacy with God, but their desire to become “like gods” (Gen. 3:5) led them to disobey God’s prohibition against eating from the tree of knowledge. They were punished with expulsion from paradise and condemned to a life of suffering that was passed on to their descendants. The biblical narrative is similar to other legends . . . [but] is unique, however, in implying that humanity’s degradation was indirectly caused by its own free choice. (Metzger and Coogan 1993, 223)

A similar message, one even more single-mindedly interpreted than the Fall story, is found in Genesis 11:

Now the whole earth had one language and the same words. And as they migrated from the east, they came upon a plain in the land of Shinar and settled there. And they said to one another, “Come, let us make bricks, and burn them thoroughly.” And they had brick for stone, and bitumen for mortar. Then they said, “Come, let us build ourselves a city, and a tower with its top in the heavens, and let us make a name for ourselves; otherwise we shall be scattered abroad upon the face of the whole earth.” The Lord came down to see the city and the tower, which mortals had built. And the Lord said, “Look, they are one people, and they have all one language; and this is only the beginning of what they will do; nothing that they propose to do will now be impossible for them. Come, let us go down, and confuse their language there, so that they will not understand one another’s speech.” So the Lord scattered them abroad from there over the face of all the earth, and they left off building the city. Therefore it was called Babel, because there the Lord confused the language of all the earth; and from there the Lord scattered them abroad over the face of all the earth. (NRSV)

According to the *Oxford Companion to the Bible*, “Building the tower is interpreted as an act of arrogance” (Metzger and Coogan 1993, 71). In sermons, the point is often made that humans’ sin was trying to be like God (or trying to get to God under their own power). What is significant in this story, however, is that people tried to be like God specifically through technology, through an engineering feat. As Roger Shattuck puts it, “Genesis and Exodus remain rich in stories related to forbidden knowledge. The familiar verses about the Tower of Babel recount another episode of pride and fall. It is almost impossible to overinterpret them. They raise themes of the city, of overweening ambition, of the dangers of technology” (1996, 16). Unsurprisingly then, the Tower of Babel is especially dear to those who treat technology as the quintessential modern example of human hubris. Religious or secular, Babel presents a succinct example cautioning against stepping over the line (whatever that may locally be) using technology.

Now, if this were the only story here—that religious critics are deploying standard hubris formulas against biotechnology—this would be old hat and not worth writing about. However, this is not the only story. In fact, there are subtle but hugely important changes in recent criticisms of biotechnology.

In common sermonizing (religious or secular), hubris criticism focuses on moral failures of attitude—arrogance, pride, and so on. It does not

worry that hubristic activities actually endanger God. The sin is not in threatening God; the sin is of motivation. Futility, therefore, the pathetic waste of effort, is part and parcel of hubris. God is not actually in any danger from Eve or Babel's engineers, and their futile attempt to become Godlike is essentially a pointless misdirection of human energy and a waste of talent. When we rebel, we hurt ourselves, not God.

But these days, it is no longer so clear what role futility plays. There is a shift in the nature of hubris criticisms. It may be subtle, but it is there. Consider some of the criticisms themselves:

(a) Contraception and abortion have [stripped] life of a . . . dignity . . . it formerly enjoyed. . . . On what was this lost dignity [of life] based? Was it not on the discrete connection of every life, every soul, to the God who created Life itself, and oversaw its purposes, and numbered the hair on every head, and knew when every sparrow fell to earth? Such a God sought—seeks—humility on the part of His creatures, who, after all, are creatures: clay in the potter's strong fingers. "It is He that hath made us and not we ourselves," related the Psalmist, matter-of-factly. (Murchison 1998, 78)

(b) This issue [of biotechnology] is going to dwarf the pro-life debate within a few years. I think we are on the threshold of mind-bending debates about the nature of human life and animal life. We see altering life forms, creating new life forms, as a revolt against the sovereignty of God and an attempt to be God. (quoted in Henahan 1997)

(c) Seeking to clone human beings signifies a spiritual and technological hubris on the part of man which aims to usurp God's prerogatives as Creator. (statement from the Southern Baptist Convention; Land 1997)

(d) The Reverend Albert Moraczewski of the National Conference of Catholic Bishops has announced that cloning is "intrinsically morally wrong" as it is an attempt to "play God" and "exceed the limits of the delegated dominion given to the human race." (Lindsay 1997, 15)

(e) So human cloning is a foregone conclusion. We do not, in our era, have the common accepted philosophical framework for arguing against it. Though most of us still believe in God as individuals, we no longer publicly acknowledge His authority, His right to tell us what to do. (Fielding 1997, 15)

These sorts of comments are remarkably instructive. In (a) we have the common refrain that contraceptive technologies have ground away at the dignity of life. But the salient feature of this passage is that God's distinguishing aspects are all about power and knowledge—God created life, oversaw its purpose, knows the number of our hairs, and knows when each sparrow falls to earth. But wait—power and knowledge are increasing among humans. We, too, can create life,<sup>6</sup> which is the very problem in cloning and genetic engineering. We can certainly number hairs and estimate sparrow-falling rates. So, when we are told that God seeks humility on our part, we are not so much being told we cannot do Godlike things but rather that we should be humble regarding them. This is subtle, but it seems that such a God apparently wants us not to do God-things.

This is conceptually connected to (b), in which debates over abortion are (rightly) expected to pale next to upcoming biotechnology issues. In this passage, however, there is no need for drawing out speculative, subtle comparisons. It is made explicit that humans are creating and altering life forms and that exercising these powers is an attempt to become God and rebel against God. The rhetoric is not that the attempt to create and manipulate life is an attempt to rival God but that actually creating and manipulating life is.

In (c), seeking to clone humans is the important case of hubris, but the seeking here is not simply about research. Because of previous cloning successes, it is assumed that cloning humans is possible. So the “seeking” part is not about the arrogance of futilely pursuing such technology but the arrogance of actually using it. What strikes me as particularly noteworthy in this passage is the use of the word *prerogatives*. A prerogative is an exclusive right or privilege, not a unique ability. The criticism takes for granted that humans can now do things that used to seem impossibly Godlike, so the issue now is what it means for us to do these things. Humanity (at least its scientists and technologists) is not simply rebelling against God in spirit but is actually intruding on what was previously God’s exclusive ability. Now that ability is no longer exclusive and so becomes God’s prerogative. The moral message is not merely that it is sinful to attempt to create life, it is sinful actually to create life, because this violates God’s right to be the singular creator of life.

Passage (d) provides a similar curious example with the word *delegated*. It suggests that the limits to our technological power are not somehow *intrinsic* to our status as mortal human beings, to our lower position on the chain of being, but rather that these limits are set by God in a kind of legislative act. It is not that we cannot do certain things because we are not God but that in doing certain things we simply exceed our authority; we do something we are not authorized to do.

The framework of authorized limits as opposed to intrinsic ability also stands out in (e), where we simply have to give up on the goal of preventing cloning, because the philosophical idea we share no longer includes acknowledging God’s *right* to tell us what to do. So here we have dispensed with the issue (at least in cloning) of whether we are *able* to do Godlike things and are now to the issue of whether we should agree that God has the right (like an organizational superior) to tell us not to do Godlike things. Creating life is something we don’t have the right security clearance or authorization from our boss to do. Hubris comes in refusing to recognize our legislated limits, not in recognizing metaphysical ones.

In short, what seems to be happening in these criticisms (and many others like them<sup>7</sup>) is that the focus is sliding away from the rebellious attitude and vain labor of technologists toward the wrongfulness of technological action. That is, critics move from exposing the futility and arrogance

of trying to do what only God can do to claiming that it is morally wrong to do what God can also do.

As I would put it, then, in these passages the hubris criticism is slowly changing into a Promethean criticism. In Greek myth, when Prometheus stole fire, he actually stole something. He stole a power that previously only the gods had. But what he stole was real, and when he stole it the gods no longer were the only ones to have it (Bulfinch 1979, 13). Concerns about technology have become less about futility and more about actual power.

Very rarely has this shift been acknowledged by religious critics themselves. Consider this singular account:

Some of the voices in this discussion no doubt will come from the Christian church, because so many of the concerns about cloning touch on theological issues. For if there was ever a Tower of Babel—which originally was an attempt to elevate ourselves through human accomplishment to the level of God—surely this is it. On the one hand, the attempt to create human life seems the worst form of pride, and all the more sinful when one attempts to create a more perfect humanity or a human being made in one's own image. And the attempt to create more nearly perfect human beings raises the specter of having a power over human beings that the church ascribes only to God. On the other hand, while issuing this warning against attempting to play God theologians should remind people that even the awesome ability to replicate humans would not actually turn us into gods. The belief that advances in scientific technology decrease the power of God as they proportionately increase human power itself represents hubris and self-deception. No matter how successful we are at putting together the right biological material to replicate life, we do not, as God does, call life into being. (Duff 1997)

#### PROMETHEAN CRITICISM: SNEAKING IN THE BACK DOOR OF HEAVEN

What stands out in the passage just quoted is the felt need to remind people that in all their worries they should not make the mistake that these newfound biotechnological powers actually will make us gods. They will not actually allow us to storm the gates of heaven. But why is this reminder needed? Is it because too many of the concerns voiced seem to be cast in Promethean terms? or because the critics' language implies we are actually approaching godhood? And even in this sole case, where the spiritual dangers of Promethean worries is recognized, how does the author assure readers that God is not, in fact, rivaled? By resorting to yet other abilities God has that we do not. One has to wonder if these powers too might be appropriated. May we not one day call life into being? Whatever the theological wisdom of simply upping the ante on relative power to describe the differences between humans and God, the author is correct that at least some believers need to realize that their worries imply the possibility of actually rivaling God. It is this shift that is at the core of the Promethean criticism, and there is no more illuminating example I have

found than in the concerns about genetic engineering expressed by a former United States senator.

In 1994, Mark Hatfield—then senior senator from Oregon—published an exceptionally telling editorial for the conservative evangelical magazine *Christianity Today* entitled “Stealing God’s Stuff” (Hatfield 1994). The article addressed the human-embryo splitting/cloning experiments at George Washington University. Hatfield writes that this research “reinforced our greatest fears about biomedical research: It can—and will—do anything, regardless of moral or ethical questions.”

What is immediately striking about this article, however, is not what we read but what we see. A large black-and-white cartoon accompanies the editorial. The image is of a shady thief sneaking into an unlit room. The thief carries a flashlight and a large key and is surreptitiously illuminating the keyhole on a huge safe. The safe is labeled PROPERTY OF GOD. What is most notable about this image is that the thief actually possesses the key. He is not pounding at the safe vainly the way the bricklayers of Babel might have stretched hopelessly toward heaven. He is actually going to break in. He is actually going to steal God’s Stuff. This is Prometheanism clear-cut and Christianized.

So, then, we have evidence, both pictorial and verbal, of what these “greatest fears of biomedical research” (and presumably technology as a whole) are. It is about what we do and what God does. As Hatfield later writes, “These issues cut straight to the core of how we as a society perceive the sanctity of life, the limitations of human intervention, and the sovereignty of God.” No doubt these are exactly the issues at hand, but he and other religious critics do not seem to realize that human limits and God’s sovereignty are problematized as much by their own criticisms as they are by any technology or science.

Hatfield continues, “Soon after the United States dropped the first atomic bomb, poet E. B. White wrote, ‘The quest for a substitute for God ended suddenly. The substitute turned up; and who do you suppose it was? It was man himself, stealing God’s stuff.’ If the church remains silent on this issue, we may allow technology once again to steal God’s stuff.”

Hatfield ends his editorial with a biblical admonition favored in this debate: “In Isaiah, we are asked: ‘Will the pot contend with the potter, or the earthenware with the hand that shapes it?’ (Isa. 45:9, NEB) As creations of our Lord, we are contending with the Creator.”

But how instructive is this verse really? After all, the pot cannot make another pot, but now we can make other humans and may soon be able to create biological life from scratch.<sup>8</sup> Our contending has moved from rebellious attitude to competing power.

What does all this worry imply? Is the God of Christianity the kind of being that can have divine stuff stolen? Is God the kind of being that needs human laws and conventions to secure divine stuff? The analogy to

the anthropomorphic religions of ancient Greece and Rome (and a thousand other places) is irresistible—thus my choice of the term *Promethean*.<sup>9</sup> What does it say about the nature of the Divine that God's stuff has been located, deciphered, and duplicated by humans? Have we become rivals to God, not merely in our own minds but in reality?

Like other myths, the Prometheus story has several formulations. For our purposes, it is enough to compare the nature of the gods in the Prometheus story to the nature of God in the religious criticisms examined here and to compare the nature of the formerly divine power achieved by the mortals. The short story of Prometheus (who was not a human but a Titan) is that he and his brother Epimetheus were charged with creating mankind and the animals. Epimetheus did the creating and doled out abilities and faculties. But he had been so generous with all the animals that he had nothing special to give men. So Prometheus went up to heaven, lighted a torch at the chariot of the sun, and brought fire to mankind, which made him superior to all other animals. This angered Zeus, who then created (or ordered created) Pandora, the first woman, and offered her as a temptation to Epimetheus. Pandora, through insatiable curiosity, eventually opened Epimetheus's forbidden jar of plagues and evils, and this was the origin of suffering—a punishment for mankind accepting the stolen fire of heaven (Bulfinch 1979, 12–15). The more complicated (and entertaining) version of the story says that after mankind had been created, Zeus eventually grew worried about their increasing intelligence and abilities and decided to destroy them altogether. Prometheus intervened and begged Zeus to spare them (compare the story of Abraham at Sodom, Genesis 18). Zeus reluctantly agreed but later became angry with Prometheus and deliberately withheld fire from mankind. Prometheus then secured help from Athene, who let him in the back door to Olympus, and he stole a glowing coal from the chariot of the sun and gave fire to mankind. Zeus swore revenge, ordered Pandora to be created from clay, made both beautiful and foolish, and offered her to Epimetheus. He initially refused, having been warned of Zeus' trickery by Prometheus, but after Zeus had Prometheus tortured (by a vulture eating out his regenerating liver daily), Epimetheus gave in and married Pandora. She opened the jar of evil, and thus Zeus got his revenge (Graves 1955, 143–45).

The traditional interpretation of this story is twofold. On the one hand, Prometheus is treated as a benefactor of humanity who stood up to an angry, vengeful, jealous god. On the other hand, he is seen as a prideful creature who rebelled against Zeus and brought damnation and misery down upon humans for his, and their, sin of disobedience and arrogance. These interpretations vie with one another, but seeing Prometheus as an example of pride leading to punishment and suffering is very popular in criticisms of technology.

But here is the problem: What do Promethean criticisms say about God and about power? Is the image of God as Zeuslike lurking in contemporary criticisms? Is God's unique power stolen? Is God worried about this? Is God jealous?

No doubt the religious critics' answers would be No. But that is beside the point. A conceptual image is worth a thousand propositional denials. When the Promethean framework is out there shaping the debate, both believers and observers begin to think of humanity as a rival, competing with God over tangible powers. They begin to think of God as a kind of divine wizard whose magic spells are being deciphered or a divine programmer whose heavenly code is being hacked. And the response? Lock up heaven.<sup>10</sup>

So here we are—from hubris to Promethean worries. No longer worried about people pretending to play God, we are now worried that they will actually play God. But what do these criticisms do to the concept of God?

#### WHAT IS THE EFFECT OF PROMETHEAN ARGUMENTS?

**DIMINISHING GOD.** The immediate effect of the idea that humanity is stealing God's stuff is a host of predictable legal and moral prescriptions. Morally, we are told genetic engineering and cloning are simply wrong. But we are also told people should be *legally* prevented from doing such things. Governments should prevent humans from securing these God-like powers for themselves. While it is true that much of the interest in legal injunctions is to protect us against out-of-control technology, the specifically religious motivations here are also about preventing technologists from usurping God's power.

Is this a case of protecting God? Not in the literal dry sense, of course. No one is explicitly, literally, worried that God is about to be dethroned by technoscience. But religious critics do seem to be genuinely worried about something, so what are they worried about? Not that God will literally be dethroned, certainly; but neither that God will be conceptually dethroned. These critics are not focused on the highly reflective philosophical idea that technology will erode a particular image of God. They are much more concrete and unreflective than that. But the concern is connected to images of God, so perhaps we could say that the worry is about *unreflective* concerns about God's conceptual dethronement. That is, critics seem to experience extreme conceptual dissonance when confronted with both human technological power and a notion of God that is tightly wrapped up in ideas of specific powers and abilities.

We could say, then, that the worry is about an instability in a theological framework. This framework is threatened because things that were not supposed to be possible now are. If we can do what God can do, then what

makes God God? Rather than reevaluate a theological framework that cannot handle these new possibilities, however, the framework itself is protected by calling for new laws that will try to obviate the confrontation altogether—protect the theological framework from science and technology, protect God from science and technology. This move to protect God, however—to secure God's place in our theological vision of the world, our Sacred Organizational Chart—backfires. It ends up diminishing God. The perceived need and move to protect God, to redeclare divine sovereignty (again and again, with every new invention?) makes God seem like something in need of protection—something that seems terribly un-Godlike.

*Diminishing God for Believers.* Consider the response of former U.S. President William J. Clinton, an avowed Christian: "My own view is that human cloning would have to raise deep concerns given our most cherished concepts of faith and humanity. Each human life is unique, born of a miracle that reaches beyond laboratory science. I believe we must respect this profound gift and resist the temptation to replicate ourselves" (in Weiss 1997). Motivated by this belief to propose laws, he also said, "What the legislation will do is to reaffirm our most cherished belief about the miracle of human life and the God-given individuality each person possesses. It will ensure that we do not fall prey to the temptation to replicate ourselves at the expense of those beliefs. . . . Banning human cloning reflects our humanity. It is the right thing to do. Creating a child through this new method calls into question our most fundamental beliefs."<sup>11</sup>

One cannot help but wonder, in the face of these kinds of statements, what exactly is going on in the minds of believers. There seems to be a bizarre juxtaposition of what is believed with what is being outlawed. Why make a law forbidding laboratory research into the nature of human beings if we truly believe that humans are irreducibly mystical and miraculous? What could laboratory research do to that kind of being? What would be the point? Much less, why outlaw the laboratory creation of people? Don't the just-stated beliefs rule this out as a physical possibility? If life is really such a miracle, why would there be any need to make the creation of life illegal? We don't have laws against levitation or raising the dead.<sup>12</sup> It seems that what is going on here is a forthright legislative attempt to protect threatened religious views of ourselves and of God, giving no argument at all for why these beliefs should any longer be considered correct.

I find it amazing that of all the reasons one could give for regulating cloning, this confused, self-contradicting religious rationale is the dominant one given. And by simply outlawing technology that threatens certain beliefs, how are those beliefs being preserved? Just through ignoring problems with them by avoiding certain technologies? By hoping to avoid them? What does this say about the status of these beliefs? They seem to

be at best insecure. We certainly cannot avoid the obvious problem of saying “Only God can do *X*” and at the same time saying “We need to make it illegal for humans to do *X*.”

Imagine talking to a child about God. Previously you could have said “Only God can make a tree.” Now, if you are honest, you are limited to saying, “The United States Government permits only God to make a tree.” This lacks theological punch.

Frederick Ferré tells of a child who experienced cognitive dissonance at just such a theological/technological story. Ferré’s father, while a boy in rural Minnesota, attended regular religious services. One night, the Swedish Baptist preacher gave a hellfire-and-damnation sermon on the community’s recent sin: they had rebelled against God’s will by installing lightning rods. According to the preacher, thunderbolts were “God’s to hurl, not man’s to deflect.” As a result of this rebellion, those who did not take down their lightning rods would burn in hell forever. Even at age 14, and firmly believing in hellfire, Ferré’s father had difficulty in understanding such a doctrine. “Could God’s will be truly foiled by a steel rod and a grounding wire? Was it really wrong to try to protect family and livestock from the storms . . . ?” (Ferré 1993, 27).

Ferré skillfully analyzes the essential issue in the preacher’s anxiety:

Threats to religion, however, are by no means always intellectual ones. This is one of the greatest significances of technology . . . quite apart from science. . . . Technology puts power into humans’ hands. Consider the simple lightning rod as symbol for human empowerment. It is a pretty good symbol for science-led technology: First, it is based on at least partial understanding of what is going on in nature . . . second, while it may not work all the time, such technology attempts to channel vast forces according to our interests. It gives us something intelligent to do about cosmic forces, perceived as natural phenomena, rather than leaving us absolutely helpless and dependent on them. But Friedrich Schleiermacher . . . who is often called the father of modern theology, defined religion itself as “the feeling of absolute dependence.” What could be a more direct challenge to religion, so understood, than implements of human empowerment designed to reduce our state and feelings of dependence? To the extent that our feelings of dependence are reduced by technology, it would seem that religious *attitudes* are undermined, even though religious *ideas* may not be directly challenged. (Ferré 1993, 29–30)

Allen Verhey (among others) describes the concept of a God threatened by technological achievement as a “God of the Gaps.” He writes:

Some [religious people] . . . have raised their voices in protest against almost every new scientific hypothesis (witness Galileo and Darwin) and against almost all technological developments (for example, anaesthesia during childbirth). These evidently regard scientific inquiry as a threat to faith in God and technical innovation as an offense to God. These lament a “humanity come of age” and long to go back to a former time, a time of our childhood. . . . They . . . wish to preserve the necessity of “God” in human ignorance and powerlessness. But such a “God” can only ever be a “God of the Gaps” and can only ever be in retreat to the margins. It is an old and unhappy story in Christian apologetics that locates God’s presence and power where human knowledge and strength have reached their temporary limit.

Newton for instance saw certain irregularities in the motion of the planets, movements which he could not explain by his theory of gravity, and in those irregularities he saw, he said, the direct intervention of God. When later astronomers and physicists provided a natural explanation for what had puzzled Newton, "God" was no longer necessary. . . . In the context of such a piety, when there is a defensive faith in the God of the Gaps, "playing god" means to encroach on those areas of human life where human beings have been ignorant or powerless, for there God rules, there only God has the authority to act. In this context, "playing god" means to seize God's place at the boundaries of human knowledge and power, to usurp God's authority and dominion. (1995, 352–53)

Verhey detects at least two problems with this God-of-the-Gaps approach. For one, he says, it is not scriptural (a claim that may be debated). For another, this perspective gives us no way to discriminate between technological actions we should take and ones that we should not take. I would add a third problem. This understanding of God being at the limits of what humans can do turns God into an anthropomorphic rival. With every new invention, humans intrude on God's most recently established realm; technologists fight for control, religious traditionalists try to push humans back, fail, and then claim that God is God because there are still things God can do that we cannot. But how long does this new defining realm of God last? Dozens of religious thinkers claim that while humans may now be able to manipulate life, they cannot simply create it. Yet even as I am writing this, a story comes across the news that scientists have discovered the minimum number of genes it takes to create a living organism and should someday soon be able to create life "from scratch" (Weiss 1999; Whitehouse 1999). So should we move God's defining power up to creation *ex nihilo* (out of nothing)? But what if our quantum physicists discover a way to control the random popping into existence of odd particles? Will this intrude on the latest defining power of God?

Part of the problem, of course, is the very concept of Godhood as superpower. It is certainly not unreasonable to think that whatever God is, God is more powerful than humans. But there is a real difficulty in trying to decide what kind of power God has that makes God God. For ages it has been superhuman powers of creation and destruction—powers that humans have recently and rather quickly developed on their own. Now, this is not to say that theologians are particularly enamored of this way of thinking of God. As Lisa Cahill writes,

[Another] question about the "playing God" image specifically is whether its public use in the press and in bioethics relies on an understanding of *God* (and humanity and nature in relation to God) which is no longer endorsed by many Jewish and Christian theologians, nor operative in the religious consciousness of the majority of those in modern cultures in which the symbol is used. "Playing God" connotes not only that humans are inclined to immature arrogance and ill-considered or frivolous decisions whose real impact is not appreciated, but also that God exists at the top of a hierarchy of being in which humans have a clearly circumscribed, obediential and relatively static role. (1995, 342)

While Cahill may be correct about theologians, I fear she may be too optimistic about the “majority of those in modern cultures.” In terms of political action, it appears that the dominant religious forces are the ones that perceive God in these traditional, superhuman ways. If we take these powers for ourselves, then we contend with God.

Even those who do not become particularly political about biotechnology may be left with an emptiness about what God is if their belief of God has been centered around power. A medical resident, asked what he thought about the recent cloning announcements, said simply, “What’s left for God to do?” I cannot help but think that if this resident couldn’t come up with something, his idea of God must be quite anemic.

So, whether left with uncertainty or with a motivation to outlaw God-threatening technologies, these religious criticisms seem to expose some strange anthropomorphic vulgarities in the image of God and undercut the very divinity of the being they wish to redeclare as sovereign.

*Diminishing God for Unbelievers.* This diminishment of God is played out not only in the consciousness of believers but also in the minds of unbelievers and skeptics. They view believers’ anxieties over the fate of their superhuman god with reinforced conviction that such a god is mere projection.

Ferré relates that when Russian cosmonaut Uri Gagarin orbited the earth, Nikita Khrushchev proclaimed that they had disproved Christianity, because in none of the orbits had Gagarin encountered God or angels. This seems utterly ridiculous, and, as Ferré points out,

his claims were met with mere amusement from religious believers. Modern religious people had by then so firmly modified their religious ideas, now to include the Copernican Revolution, that Khrushchev’s blustering was no threat at all. Most religious believers found nothing theologically damaging, either, in our American expeditions to the moon, even though they brought back samples of rock and dust that would have driven Galileo’s critics to frenzies of rebuttal. (Ferré 1993, 29)

Of course, even though Khrushchev’s claims may seem silly to most, there are always new technologies and discoveries to assault the image of a God defined by supernatural powers. As William Sweet writes,

... how could technology lead to a change in, or a weakening of, religious belief? ... [I]t does seem plausible to hold that technology has tended to make religious belief unnecessary. As Eric Hoffer once noted, “[w]here there is the necessary technical skill to move mountains, there is no need for the faith that moves mountains.” ... Or consider the following example: upon the birth of a child, a religious believer may say that the child was “a gift from God.” Now it is true that, when we know where children come from—when we understand intercourse, fertilization, the development of the embryo and so on, and particularly when this can take place inside a laboratory—we need not abandon the expression “gift from God.” But clearly, after a couple has “planned” to have a child, after the use of fertility drugs, sexual counseling and artificial insemination, what it means for a

child to be described in this way is at least *different* from what it once meant. (Sweet 1993, 126)

We definitely see this confusion today, particularly in fertility-drug-induced multiple births, where parents still seem compelled to describe their septuplets or octuplets as a “miracle,” while newscasters remind us that the “miracle” was produced by Dr. So-and-so at the So-and-so reproductive clinic. Even many traditional believers had a hard time not sneering at the use of such language by a pious woman sitting near eight disturbingly underweight and intubated babies in incubators.

Comparisons of recent biotechnology with more-accepted medical procedures are also common. If we should not clone or genetically engineer or use fertility drugs because these are “playing God,” then can we use tetracycline? (Lindsay 1997, 16). Can we have heart-lung transplants, vaccinations, any surgery? (Shermer 1998)

It is easy to see how admonitions not to play God can lead to disdain from those who don't share a conservative religious framework. Even when God-as-superbeing is no longer as super as “He” used to be, the old image is still there, restricting those who don't believe as much as those who do. Ronald Lindsay says, “The call by many of the religious for an absolute ban on cloning experiments is a tacit admission that their theological principles are not sufficiently powerful and adaptable to guide us through this challenging future” (1997, 15).

Michael Shermer writes,

To technophobes who resist any venture into forbidden knowledge, such cautious forays into the future are the slippery slope into the scientific hell where vultures will pick at us for eternity. But let's step back for a moment. What do we have to fear? The mass hysteria and moral panic surrounding cloning is nothing more than the historically common rejection of new technologies, coupled to the additional angst produced when medical advances fly too close to religion's sun. “Only God can do that,” say the religious Luddites. “Only Nature can do that,” cry the secular Luddites. (Shermer 1998)

Shermer goes further to make the delectable point that the “Promethean theme” of restricting science and technology to protect a certain image of God has long been a fixture of entertainment censors. He writes,

In the climactic scene of Robert Wise's 1951 science fiction film classic, “The Day the Earth Stood Still,” the space alien Klaatu (who goes by the name “Mr. Carpenter” in this Jesus allegory) is killed by a government agency, then resurrected by his robot charge Gort. Astonished by the power of this foreign technology, Patricia Neal's Mary-Magdalene-like character inquires whether control over life and death is possible. Klaatu assures her that such powers belong only to the “Almighty Spirit” and that his life extension is good only “for a limited period.” . . . [However,] in Edmund North's original script, Gort resurrects Klaatu without limitation. But the movie industry's censors told the producers “Only God can do that.” . . . In 1818, Mary Shelley warned in her novel “Frankenstein” that “supremely frightful would be the effect of any human endeavor to mock the stupendous mechanism of

the Creator of the world.” The censors took her words to heart in the final cut of James Whale’s 1931 film version. . . . In the riveting laboratory scene when the monster is brought to life, Dr. Frankenstein roars “It’s alive. It’s alive. In the name of God . . .” At that moment, his lips keep moving but his voice disappears. The censors deleted the rest of the sentence—the forbidden words that have frightened cultures from ancient Greece to modern America: “. . . now I know what it feels like to be God.” (Shermer 1998)

So this is at least a sliver of our contemporary picture—confused believers who don’t know what God could be other than a superpower, governmental officials restricting science in order to protect their cherished religious beliefs, critics who disdain a religion whose God needs to be protected from technology.

But actually how new are these anxieties? Are we really floundering along in a brave new world we aren’t prepared for theologically? No doubt to some degree yes, but not as much as one might think. In fact, the worries about God’s powers and limitations and human intrusiveness are not new. If we go back to our biblical hubris stories and reread them now with sensitivity to the Promethean concerns being raised today, we find that we are in part simply returning to old anxieties concealed by years of standard interpretation and a relatively primitive technology.

REVISITING EDEN AND BABEL. During the Dolly cloning controversy, newspapers quoted rabbi and theologian Burton Visotsky saying, “. . . it was human hunger and greed for knowledge that led to Adam and Eve’s banishment from the Garden of Eden,” and “God worries that they will eat from the Tree of Life and live forever and be like God. So from our earliest times we have worries about man playing God” (Ribadeneira 1997). But the full import of this infrequently repeated and relevant bit of biblical information is almost always left unrecognized. It was *God* expressing this worry! As Shattuck says, “Despite its familiarity, the creation story from Genesis is as invisible to many of us as air, or as our own personality. It surrounds us too closely. We cannot stand back in order to see it better” (1996, 50).

Look back at the passage in Genesis. Standard Sunday-school interpretations say the serpent tempted Eve, Adam and Eve pridefully disobeyed, and as a result they were cursed and banished from the garden. But this overlooks quite a lot. First, the serpent did tempt Eve, but the serpent only half-lied. After Eve and Adam ate of the fruit, “Then the eyes of both were opened,” which implies that whatever the knowledge of the tree was, they did receive it. Second, although Eve and Adam were cursed to suffer because of their sin (in childbirth and tilling the soil), Genesis does not say they were banished from the Garden for this reason. Instead, it says, “Then the LORD God said, ‘See, the man has become like one of us, knowing good and evil; and now, he might reach out his hand and take also from the tree of life, and eat, and live forever’—therefore the LORD God sent

him forth from the garden of Eden, to till the ground from which he was taken. He drove out the man; and at the east of the garden of Eden he placed the cherubim, and a sword flaming and turning to guard the way to the tree of life" (Genesis 3:22–24 NRSV).

So, God expresses explicit concern that Eve and Adam might eat of the second tree and live forever, and *therefore* God drives them from the garden. It appears for all the world that God is worried that creatures might secure some amazing ability for themselves if not prevented. So God prevents them by expelling them.

At the very least this complicates the story and makes us wonder what the Lord God is worried about. What is the basis of the apparent concern that the Lord God shows about the tree of life? As Jack Miles puts it,

The tenderness [of providing them garments of skin] is disarming but it only makes the inconsistency the more unnerving, for the same Lord God who is tender with his creatures says in the verse immediately following (3:22): "Now that the man has become like one of us, knowing good and bad, what if he should stretch out his hand and take also from the tree of life and eat and live forever!" Proof is given again that the serpent was speaking the truth when he said: "You are not going to die, but God knows that as soon as you eat of [the fruit] . . . your eyes will be opened and you will be like divine beings who know good and bad" (3:4–5). By the Lord God's own testimony, this is just what has happened. But why did the Lord God seek to conceal that this is what would happen? And why does the Lord God want to stop mankind from living forever? (1995, 37)

Others find this a disturbing passage as well. Stephen Mitchell says, "they weren't *created* immortal. God even says, 'What if they eat from the Tree of Life and live forever?' That's why he banishes them from the garden, out of jealousy and fear" (in Moyers 1996, 53–54). Again, the banishment is not punishment for disobedience. That was punished by all the curses. The expulsion follows the Lord's concern about their gaining immortality. When asked what bothers her in this story, Elaine Pagels says, "The limitations of His knowledge and competitiveness with His creatures, and His punitiveness. There's that remarkable statement . . . 'Behold the man is become as one of us to know good and evil; and now, lest he put forth his hand, and take also of the Tree of Life and eat and live forever—' and here the sentence abruptly breaks off. Whatever could happen then we cannot know because the statement is stopped, and they are driven from Eden" (in Moyers 1996, 60).

So even in our earliest characterizations of God, there is anxiety that humans will take some divine property or power. In fact, this is the reason for humans' expulsion from paradise. Reading these passages with this in mind makes it apparent that Promethean worries have been around for a while. As Shattuck puts it, "By planting the Tree of the Knowledge of Good and Evil in the Garden of Eden, the Lord appears to issue to his new creatures a covert invitation to both companionship and rivalry with him. . . . In these early books of Hebrew Scripture, the Lord seems to al-

ternate among the roles of a beneficent Prometheus, a treacherous Pandora, and an awesomely stern Zeus” (1996, 19).

The ancient anxiety does not stop there. It is raised again in the Tower of Babel story—the very story that is supposedly paradigmatic of human technological hubris. In fact, it seems to be paradigmatic of Promethean anxiety! After all, when the Lord God sees the tower the people are building, they are not accused of pride and then punished for their hubris. Instead, the Lord God expresses worry that they will be able to perform even more amazing feats: “The LORD came down to see the city and the tower, which mortals had built. And the LORD said, ‘Look, they are one people, and they have all one language; and this is only the beginning of what they will do; nothing that they propose to do will now be impossible for them. Come, let us go down, and confuse their language there, so that they will not understand one another’s speech’” (Genesis 11:5–7 NRSV). The passage appears to be more about God worrying about a potential human threat than it is about the danger of hubris.

Shattuck characterizes God’s concern this way, paying special attention to the King James Version’s use of the word *imagination*: “United by technology and a universal language, humanity achieves untoward power. Power in itself does not endanger. But imagination linked to power may exceed the limits of the human condition and aspire to godhead” (1996, 17).

Karen Armstrong places the Babel narrative in its cultural context to show how the story expresses the ancient Hebrew idea that civilization and technology were decadent signs of humanity’s separation from God:

. . . in the other Near Eastern epics about the Flood, human beings and the gods decided to go their separate ways after the deluge. Yet mortal men and women were able to console themselves for this loss of divine intimacy by building their magnificent cities. . . . At the end of the Akkadian Atrahasis Epic, the survivors of the Flood built the city of Babylon in an attempt to forge some link with the sacred. Its citizens might not be able to consort with the gods on a daily basis, as before, but they could scale the heavens by climbing their great ziggurats or temple towers. . . . But, as we know, the authors of Genesis had a more jaundiced view of civilization. In the story of the Tower of Babel, Babylon becomes Babel: confusion. Its builders had attempted to create, by means of a new technology, a ladder to the divine. . . . Like Eve, they were attempting to seize enlightenment and god-like powers for themselves. . . . But J, the author of this story, has already made it clear that human beings cannot attain blessing by their own efforts. Civilization was a sign of humanity’s separation from God. . . . Yet again, J’s God is very different from the serene deity described by P in Chapter 1. He is insecure and feels threatened by this human initiative. J tells us that when God saw humanity banding together to form a single community, he was seriously alarmed. “. . . this is only the beginning of what they will do; nothing that they propose to do will now be impossible for them” (11:26). The deity that was once incomparable and omnipotent was now disturbed by mere bricks and mortar. (1996, 51–52).

Are these passages revealing an ancient worry attributed to God that humans could steal divine power or become a rival in a Promethean sense?

It is no interpretive stretch of the imagination to see it this way. And it is not difficult to see that such a worry would be expressed by a deity who reveled in power. Remember the story of the Ten Plagues. Though it too has a inspirational Sunday-school moral, there is much to be rediscovered in actually reading the story. During the first plague (blood) and the second plague (frogs), Pharaoh's heart is hardened, because his own magicians are able to reproduce the plagues—they copy the “miracle.”<sup>13</sup> The plague of hail is sent because God wants Pharaoh and his people to “know that there is no one like me in all the earth. For by now I could have stretched out my hand and struck you and your people with a plague that would have wiped you off the earth. But I have raised you up for this very purpose, that I might show you my power and that my name might be proclaimed in all the earth” (Exodus 9:14–16 NIV). With the plague of locusts, God amazingly instructs Moses, “Go to Pharaoh, for I have hardened his heart and the hearts of his officials so that I may perform these miraculous signs of mine among them that you may tell your children and grandchildren how I dealt harshly with the Egyptians and how I performed my signs among them, and that you may know that I am the Lord” (Exodus 10:1–2 NIV). Clearly, God intends to impress humans with power, and that power is shown through miracles and wonders.<sup>14</sup>

In short, the Promethean criticisms of technology end up diminishing God, but this may be only a matter of revealing a longstanding superpower concept of God. That God of the Gaps is always being pushed around by changing human knowledge and ability, more so today than ever.

**LOBBYISTS FOR GOD.** Related to the diminishment of God is what some call the “God lobby.” While many religious believers maintain that their religion determines their ethical and political beliefs and that therefore it is necessary that they express those beliefs in political dialogue, there is an unwelcome conceptual fallout from the way these beliefs are being expressed in regard to technology.

For example, a wide coalition of religious groups, led by anti-biotechnology activist Jeremy Rifkin, opposes the patenting of life forms because they believe “humans and animals are creations of God, not humans, and as such should not be patented as human inventions”<sup>15</sup> (in Woodward 1995, 68). *Newsweek* reports this under the title “Thou Shalt Not Patent”—a title that both accurately describes and perhaps mocks the sentiments of the signatories. By having to reassert that God creates humans and animals and that therefore humans should not patent the life forms they design, religious leaders seem to represent God's power and ownership of life as endangered. While essentially lauding the debate that the clerics' protest opened up, *Newsweek* unwittingly expresses the very danger I have been discussing. The article ends with, “At the very least, the clergyman's protest should produce an overdue public debate on what is best left to

God and nature, and what is open to human intervention” (Woodward 1995, 69). The very idea that legislators must decide *whether* life should be left up to God or not makes God seem more like an interested party than the Ultimate Being, or Being Itself—in part because of the fact that God has “defenders” running around Washington, D.C. This is only one example. There are many calls for banning this or that technology, and many of them are raised in the name of “reserving” God’s rights.

The problem is that many believers have become self-appointed lobbyists for God (or rather, for their idea of God). They represent God’s interests in Washington the way a lobbyist represents industry. Increasingly, the political debate they produce is not a political discussion about how religious beliefs and values should be represented in the law, or even a theological discussion over how we should understand the nature of God. Rather, it is a sort of divine zoning law debate or theocratic states’-rights contest in which the question is, Which powers of God should humans be restrained from exercising? It turns a theological predicament into a political question over jurisdiction. God becomes a party to a political debate in which religious lawyers argue *ought* questions rather than *is* questions. The more believers rally around God in Washington to pass laws restricting scientists from doing God-things, ironically, the more God is diminished and domesticated.

UNDERCUTTING MIRACLES. Finally, there is the issue of the authority and nature of miracles. Many things considered miraculous because only God could do them have now clearly fallen into human hands. This unsettles those for whom miracles and powers exhibited by God indicated that God was God. Now that these “miracles” are increasingly replicated by human technologists (as Pharaoh’s magicians reproduced some of Moses’ wonders), they seem less astounding and less divine. The attempt to protect the “miraculous” nature of those phenomena by outlawing them only exposes and worsens the problem.

Former President Clinton claimed, “Each human life is unique, born of a miracle that reaches beyond laboratory science,” and banned human cloning. But why ban human “miracles”? Doesn’t the ban itself demonstrate that human life is far less of a miracle than just professed? Clearly, it is the *belief* in the miraculous nature of human life that is being protected.

Ironically, this very act of protection undercuts the impact of miracles. It is perhaps inevitable that the old miracle stories that resonated so strongly with less technologically advanced civilizations will fail to resonate as strongly with us and future civilizations. Maura Anne Ryan writes,

The Evangelist Luke tells us that when Elizabeth conceived John the Baptist very late in her life, all who heard the news responded with joy. Indeed, this improbable pregnancy is recorded as a testament to the fact that “with God nothing will be impossible.” But when sixty-two year old Rossana Dalla Corte gave birth to a son in July, 1994, the announcement generated more heated controversy than

murmured wonder. The “miracle maker” is Italian fertility specialist Severino Antinori. . . . In an editorial in the Vatican newspaper *L’Osservatore Romano*, theologian Gino Concetti denounced the practice as “violating biological rhythms,” accusing participants of “putting [themselves] above laws of nature, . . . replacing God Himself by presuming to be the demiurge[s] of what is to be made.” (1995, 419)<sup>16</sup>

Of course, some will respond here that there are still impressive things we cannot do. But this is a dangerous path. Only a few years ago it was thought to be impossible to clone adult mammals. In one day, that belief fell. How long will it be before humans can do other “miraculous” things? Can we raise the dead? Cryonics already promises such for thousands of people who have had themselves frozen, and the research on deep hypothermia surgery continues with promise. Can we turn water into wine? Engineers studying nanotechnology fully expect this to be possible within their lifetimes.

Perhaps there is some power that only God could exercise and we never could, but this is a tricky way to try to understand God. If people are already aghast at something as simple as cloning, what will happen to miracle-based concepts of God as further technologies develop? Will we not always be asking the “playing God” or “replacing God” questions? Will God not always be retreating into the next gap? In a recent study looking at the minimum number of genes required for life, and the resultant claim that this would allow scientists to create life, a BBC reporter says, “But if we can create life in the lab from scratch, will it alter our view of what we are? Will we, in a sense, have become Gods?” (Whitehouse 1999). These questions seem inevitable provided we define God by what magical things God can do. We will forever be trying to think up new things that God can do that we cannot in order to keep God ahead of us. Is this a task worthy of theology and a religious life?

#### WHAT TO DO?

No doubt there are a number of options, and I don’t want to offer a false dichotomy. However, at least two obvious general alternatives come to mind.

One possibility, of course, is to continue the criticism that uses the law and popular morality to oppose “playing God” or “replacing God” by “reserving” certain powers for God. I suspect that this line of attack will persevere even more furiously as technologies such as nanotechnology, cryonics, and artificial intelligence arise. More and more prerogatives of God will have to be defended and codified and more and more regulations written to prevent science from stealing God’s stuff. Result: the increasing Zeusification of God, in which Promethean theocratic regulatory commissions pick and choose what powers, formerly belonging to God but now in the hands of humans, will be permitted exercise. Raining fire from

heaven—okay. Creating new organisms—not okay. And what enforcement mechanism will be employed? Will the enforcers actually be able to stop technology everywhere?

The problem is that the God of the Gaps will be the focus. God retains political and emotional power for some believers, but God as Grand Concept and Mystery and Ultimacy loses out. God shrinks as we grow. God's evidentiary miracles lose their impressiveness, except as that which might befit any comic-book superhero or supervillain. The diminution of God is even more stark for religious skeptics. The more formerly divine power falls into the sneaky hands of technologists, the more those technologists will fail to be impressed by an increasingly anthropomorphic God and will see themselves as opposed to a primitive and laughable view of God. Believers themselves will have a hand in making God less awesome and increasing the "God-complex" they criticize in scientists by making it so much easier to be Godlike. They will turn the incomprehensibility of God into merely a temporary lack of technical understanding. They will turn God into a rival of technoscience and hope for their judgment day when God will prove through superior firepower that there is "no one like me in all the earth" (Exodus 9:14 NIV). For those believers who do not completely primitivize God, it will be harder and harder to understand what is spiritually compelling about this angry superman.

Another possibility is to abandon the stealing-God's-stuff framework. If genetic engineering is morally problematic, it is because of how it might affect humans and other animals. The concern with God is the concern to treat beings in ways that benefit them. Religious motivations should not center around protecting God but around caring for the creation drawn from God.

This would be in part a move to deanthropomorphize God—not necessarily to depersonalize God, but to stop relying on power and magical ability to define God and to expand the concept of deity beyond that of a supernatural king who is threatened by his own subjects. Some theologians and other spiritual seekers already pursue this option. Unfortunately, the rise of fundamentalism and scriptural literalism and the dependence on easy superman, daddy-in-the-sky, stern-Santa images of God for the rank-and-file believer have largely overwhelmed any theological success in this area. But there is a chance that this approach could eventually hold its own against an increasingly anachronistic fundamentalism.

Result: the increased ultimacy of God, in which God-as-grand-meaning, -purpose, and -transcendence gets emphasized. The vicissitudes of science and technology are not seen as make-or-break phenomena for spiritual living. Some people will pursue this in more traditional ways, emphasizing mystical experience, others in terms of a traditional eighteenth-century style Deism. But, in something of a turnaround, there are wonderful opportunities for pursuing a theistic God *with and through* technology

and science. Philip Hefner (1989; 1993) asks us to think of humans as “created co-creators,” and Ted Peters (1997) emphasizes the importance of this concept, in which we think of ourselves as sharing in God’s creation and plan for the universe. Part of God’s hope might be that we develop our technologies to move beyond human limits and participate in perfecting the universe—making the world a better place on a truly grand scale. In a similar vein, Ronald Cole-Turner beautifully argues that Christianity “need[s] to absorb the insight of our age” without forgetting “its own perennial themes of creation and redemption, sin and grace, incarnation and transfiguration” and “its core claim—that nature is good but disordered. . . . If such a moral disorder exists in nature, and if God is understood to be at work creatively and redemptively resolving that disorder, and if we recognize ourselves as invited by God to participate in that creative and redemptive work, then we can see our technology, especially our genetic engineering, as a partnership with God in the expanding and redeeming of nature” (1993, 11).<sup>17</sup> Such important and far-reaching ideas represent a truly rich, fertile, and complex way of approaching these issues.

These sorts of approaches, however, will repel more literalist and conservative believers. Concepts of God that are not deeply anthropomorphic will not provide the day-to-day father/judge/avenger/king/buddy/superhero image that politicized believers have come to rely on. Making God bigger gives some people less to grab on to. Many have come to rely on a simple and easily understandable God and won’t know what to do with something less tangible.

It may be the great theological task of the coming “biotechnology age” to deal with this Promethean conflict. I, for one, hold out great hope that we can deal with the conflict without demonizing (or deifying) technology. If we are willing to grow beyond an image of God as a superperson defined as divine by superpowers whom we wait upon to finish God’s “great plan” and instead are willing to see ourselves along with technology as part of a creation that takes responsibility for itself and works within a moral vision of universal progress, then perhaps we will discover that technology can be eminently Godly.

## NOTES

I want to thank Vance Cope-Kasten for his thorough reading of this paper and his very helpful comments. I also thank Perry Stevens and David Philip Neri Powell, O.P., for their assistance, as well as the editors and reviewers of *Zygon*.

1. “People of faith” is a relatively recent term that has its own interesting cultural and ideological context. I analyze this term and its political and moral associations in another article (Hopkins 2000, 153–71).

2. Throughout the rest of this article I use inclusive language to refer to God, per the standards of *Zygon*. However, the majority of the religious critics I am citing do conceive of God as a masculine figure—something unlikely to be irrelevant to their legal and moral worldviews.

3. In this paper I focus on the more conservative theologians and religious activists and therefore do not pretend to describe the full array of religious responses to science and technology.

However, I would like to point out two things in defense of this focus: (a) that conservatives seem to have a disproportionately strong influence on government, media, and congregations in contemporary culture, and (b) that many mainstream and even liberal religious groups and individuals share the conservatives' reaction to biotechnology even if they do not share their theology.

4. For an analysis of these concerns about individualism and copying, see Hopkins 1998, 6–13.

5. Examples include many of the novels of Robin Cook and Michael Crichton. Many science fiction films also portray antiscience hubris messages. For the most part, however, science fiction films are not based on good science fiction novels, which long ago (as a rule) dispensed with such simplistic plot devices and morality tales. (Cook and Crichton are not generally regarded as science fiction novelists, by the way; they are writers of “thrillers.”)

6. Though perhaps not yet Life with a capital L—whatever that means.

7. See note 10 for more examples.

8. See the BBC and *Washington Post* reports (Whitehouse 1999; Weiss 1999) on the discovery of the minimum number of genes required for life, leading to the possibility that life could be created from about three hundred genes.

9. This is not to imply that the term “Promethean” is my own. In fact, the New Oxford Annotated Bible uses the term in a footnote about the Tower of Babel incident: “Motivated by a Promethean desire for unity, fame, and security . . . the enterprise ended in misunderstanding” (notes to Genesis 11:8).

10. Perhaps the gist of Promethean criticism is now clear. But to impress on readers its frequency, here are a few other quotes:

a. A journalist summarizes theological responses in this way: “The cloning of a sheep and its possible implications for the cloning of humans have placed humans even closer to the center of creation, usurping a role some theologians say is properly reserved for God” (Ribadeneira 1997). Is there not a theological vastness in moving from the idea that certain powers are intrinsically unavailable to mortals to the idea that certain powers are simply properly reserved for God? Did we use to think these powers were “reserved” or intrinsic? And now, who is to reserve these powers again for God? The state? A regulatory commission?

b. A Protestant theologian says, “I’m not saying technology itself is sinful. . . . But I do think that sometimes our reach goes too far and we claim too much for ourselves, that perhaps ought to be left to what we call divine mystery” (in Ribadeneria 1997). Ought? Claim too much? We should choose to leave some things up to divine mystery even though they are within our power?

c. An ecumenical group of religious leaders resist gene patenting by saying, “We, the undersigned religious leaders, oppose the patenting of human and animal life forms. We are disturbed by the U.S. Patent Office’s recent decision to patent human body parts and several genetically engineered animals. We believe that humans and animals are creations of God, not humans, and as such should not be patented as human inventions” (quoted in Cole-Turner 1995, 52).

d. A religious philosopher writes, “God created human beings in His own image and likeness. He is the author of every life and no scientist has the right to arrogate to himself/herself the power to toy with the life of others” (Babu 1998, 52–53). So scientists do have the ability to arrogate such power to themselves? They just lack the right to do so? God’s power becomes a prerogative, not a singular ability?

e. A science journalist cites an American political response: “The Republican senator John Marchi of Staten Island, NY wanted the cloning of humans to be a felony punishable by a three-to-seven year sentence. ‘We ought not permit a cottage industry in the God business,’ he said” (Radford 1997, 1). The state should not “permit” someone to do God-things? We now have criminal penalties for doing what only God is permitted to do?

f. A spokesperson for the Southern Baptist Convention (SBC) states, “. . . the patenting of human genetic material attempts to wrest ownership from God” (quoted in Hanson 1997, 8). How easily the idea of theft and competition with God now come to mind. How easily human legal apparatuses and politics are brought into the fray to prevent humans from taking something away from God. It seems to show in a dark light how person-al and power-ful God is thought of and thus how, through the accumulation of power, the persons we are can become like him.

g. And for my favorite quotation, we have the report that, “Declaring God sovereign, Southern Baptists on Thursday adopted resolutions urging a legal ban on cloning” (quoted in Holmes 1997). Why exactly do we need to declare God sovereign? Is this in doubt? If so, is this because the attributes we previously thought were constitutionally and singularly God-defining are now endangered by their technological replication? This seems to be a matter of floundering about

what is unique about God and trying to shore up one's belief that God is sovereign much more than merely recognizing it. (Note: After declaring God sovereign and resolving to ban cloning, the SBC also made a resolution asking businesses to refuse to give their gay employees' partners spousal benefits. Quite a combination of theological urgencies.)

11. Quote taken from a Presidential news conference aired on the PBS *NewsHour*, 9 June 1997. For a transcript of the program, see [http://www.pbs.org/newshour/bb/science/jan-june97/cloning\\_6-9.html](http://www.pbs.org/newshour/bb/science/jan-june97/cloning_6-9.html) (accurate as of 12 April 2002).

12. Though undoubtedly there will be calls for such laws as soon as we figure out how to do these things.

13. The New International Version carries a footnote for 7:11, where the magicians also change their staves into snakes (as did Aaron), saying that the magicians were able to do this by either trickery or demonic powers. The concession to the possibility of demonic powers (which accomplished some of the same feats as God) still admits that humans may be able to manipulate magic, which leaves the question one of whether to perform magic, not whether it is possible to perform magic. Interestingly, it is only with the third plague, the plague of gnats, that the Egyptian magicians are not able to copy the miracle, and then they admit that this plague evidences the finger of God. God is found in the gaps, just beyond the limits of human power.

14. It is hard to mention such things without also mentioning the story of Job. Although the Sunday-school version of the story is that Job was tested, remained faithful, and was rewarded by God for his faith, this is blasphemously inaccurate. For poor Job suffers the accusations of those who claim he is being punished for some wrongdoing by declaring his innocence and crying out against God's arbitrariness. When God himself arrives, he merely appeals to his own great power in response to Job's charges of unjust treatment: "Where were you when I laid the earth's foundation? Tell me, if you understand. Who marked off its dimensions? . . . Who shut up the sea behind doors? . . . Have you ever given orders to the morning or shown the dawn its place . . . ? . . . Have you entered the storehouses of the snow or seen the storehouses of the hail, which I reserve for times of trouble . . . ? . . . Can you raise your voice to the clouds and cover yourself with a flood of water? Do you send the lightning bolts on their way?" (Job 38, NIV, *passim*). This, of course, continues on for quite some time until Job acknowledges God's immense and irresistible power and covers before him, repenting in dust and ashes.

15. Indeed, Rifkin voices the following specious dilemma: "It's either God's creation—millions of years of evolution—or it's a human invention. It can't be both" (Stammer and Hotz 1995, A1).

16. The concern that we are replacing God is by now an old one and its problems recognized. The specific problem, though, is that if it is so unexpectedly easy to replicate some of these sorts of "miracles" and our belief in various divine sources and even the nature of God is based on the "evidence" provided by "miracles," where will we be left? Banning human miracles only postpones and perhaps exacerbates the problem. We should not swear by our heads because we cannot change the color of our hair (Matthew 5:36)? Hair color is readily available in any drug store. God is God because he can rain down fire from heaven? We did that in Hiroshima. God is God because he can create life? This is what's being debated (and forbidden) right now. We can tell who are God's messengers because they can heal the sick? We increasingly advance in our own medical technology.

17. Cole-Turner does not accept "created co-creator" as is, however. He makes significant criticisms of and revisions to the term (1993, 98–109).

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