

Keeping Life Human: Science, Religion, and the Soul

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If once Dr. Faustus had sold his soul to the Devil for the promise of success in his search for Truth, he now tried to annul the bargain by turning scientist and insisting that, in his role as a searcher for Truth, he had no soul. Yet the Devil was not to be cheated. When the hour came, he proved that this search, conducted behind the back of the soul, had led to a Truth that was Hell.

—Erich Heller, “Faust’s Damnation: The Morality of Knowledge”.¹

Two old-timers, Max and Jake, spend every hour of their retirement imagining and debating what life is like in the world to come. Eager for the answer, they make a pledge that whoever goes first will somehow find a way to communicate the news to his surviving friend. After several years of such debates, Max dies, and Jake promptly takes up his post next to the phone. A day passes, a week, a month, six months—no Max. But just as Jake is beginning to despair—“perhaps there *is* no world to come”—the phone rings:

“Hello, Jake? It’s Max!”

“Max, where in hell have you been? I’ve been worried sick.”

“I’m really sorry, Jake, but I had a devil of a time getting to a phone.”

“Well, never mind, Max, tell me, what’s it really like?”

“So I’ll tell ya. First of all, I get a good night’s sleep—eleven, twelve hours. I get up at sunrise, I stretch a little, I perform my ablutions, I take a walk, I eat a good breakfast. After breakfast, I relax a little, I take a constitutional, I admire the scenery—before you know it, it’s time for lunch. Lunch is delicious but very filling, so after lunch I take a little nap. I get up refreshed, I wander down to the lake, I take a little dip, I have a little sex, and—before you know it—it’s time for dinner. I have a little dinner, I take a little stroll, I enjoy the sunset, and then I sleep twelve hours.”

“Max, Max, it sounds like Miami. It sure don’t sound like heaven.”

“*Heaven?* Jake, who said heaven? I’m in Montana. I’m a buffalo.”

Keeping life human these days is no laughing matter. Among the contemporary challenges to our humanity, the deepest ones come from a most unlikely quarter: our wonderful and humane biomedical science and technology. The powers they are providing for altering the workings of our bodies and minds are already being used for purposes beyond therapy, and may soon be used to transform human nature itself. In our lifetime, the natural relations between sex and procreation, personal identity and embodiment, and human agency and human achievement have all been profoundly altered by new biomedical technologies. The pill. In vitro fertilization. Surrogate wombs. Cloning. Genetic engineering. Organ swapping. Mechanical spare parts. Performance-enhancing drugs. Computer implants into brains. Ritalin for the young, Viagra for the old, Prozac for everyone. Virtually unnoticed, the train to Huxley’s dehumanized brave new world has already left the station.

But beneath the weighty ethical concerns raised by these new biotechnologies—a subject for a different essay—lies a deeper philosophical

challenge: one that threatens to fundamentally change how we think about who and what we are. Scientific ideas and discoveries about nature and man, perfectly welcome and harmless in themselves, are being enlisted to do battle against our traditional religious and moral teachings and even our self-understanding as creatures with freedom and dignity. A quasi-religious faith has sprung up among us—let me call it “soulless scientism”—which believes that our new biology, eliminating all mystery, can provide a complete account of human life, giving purely scientific explanations for human thought, love, creativity, moral judgment, and even why we believe in God. The threat to our humanity today comes not from the transmigration of souls in the next life but from the denial of soul in this one; not from turning men into buffaloes but from denying that there is any real difference between them.

Make no mistake. The stakes in this contest are high: At issue are the moral and spiritual health of our nation, the continued vitality of science, and our own self-understanding as human beings and as children of the West. All friends of human freedom and dignity—including even the atheists among us—must understand that their own humanity is on the line.

In this essay, I will offer an overview of the danger and suggest several ways of countering it: I will first describe the threats scientism poses both to human self-understanding and to ethics. I will then identify philosophical and religious resources available for meeting the challenge.

II

We need first to distinguish the grandiose faith of contemporary scientism from modern science as such, which began as a more modest venture. Although the founders of modern science sought certain knowledge useful for life, to be gained using new concepts and methods, they understood that science would never offer complete and absolute knowledge

of the whole of human life—for example, of thought, feeling, morality, or faith. They understood, as we tend to forget, that the rationality of science is but a partial and highly specialized rationality, concocted for the purpose of gaining only that kind of knowledge for which it was devised, and applicable to only those aspects of the world that can be captured by science’s abstract notions. The peculiar reason of science is not, nor was meant to be, the natural reason of everyday life and human experience. Neither is it the reason of philosophy or religious thought.

Thus, science does not seek to know beings or their natures, but only the regularities of the changes that they undergo. Science seeks to know only how things work, not what things are and why. Science gives the histories of things, but not their aspirations or purposes. Science quantifies selected external relations of one object to another, but it can say nothing at all about their inner states of being, not only for human beings but for any living creature. Science can often predict what will happen if certain perturbations occur, but it eschews explanations in terms of causes, especially of ultimate causes.

In short, our remarkable science of nature has made enormous progress precisely because of its decision to ignore the larger, perennial questions about being, cause, purpose, inwardness, hierarchy, and the goodness or badness of things—questions that science happily gave over to philosophy, poetry, and religion.

Thus, in cosmology, for example, we have made wonderful progress by characterizing the temporal beginnings of the universe in terms of a “big bang” and by making elaborate calculations to describe what happened next. But science preserves complete silence regarding the status quo ante and the ultimate cause. Unlike a normally curious child, cosmologists do not ask, “What was before the big bang?” or “Why is there something rather than nothing?” because the answer must be an exasperated “God only knows!”

In genetics, we have the complete DNA sequences of several organisms, including man, and we are rapidly learning what many of these genes “do.” But this analytic approach cannot tell us how the life of a buffalo differs

from that of a butterfly, or even what accounts for the special unity and active wholeness of butterflies or buffaloes, or the purposive efforts they make to preserve their own specific integrity.

In neurophysiology, we know an enormous amount about the processing of visual stimuli, their transformation into electrochemical signals, and the mechanisms for transmitting these signals to the brain. But *sight itself* we know not through science but only from the inside, and only because we are not blind. The eyeball and the brain are material objects, they take up space and can be held in the hand; but neither the capacities of sight and intellect nor the activities of seeing and thinking take up space or can be held. Although absolutely dependent on material conditions, they are, in their essence, *immaterial*: They are capacities and activities of soul—hence, they are not objects of knowledge for a materialist science.

III

Among many biologists today, these important limitations of science are largely forgotten, as is the modesty that they should induce. Instead, the bioprophets of scientism, exploiting powerful ideas from genetics, developmental biology, neuroscience, and evolutionary psychology, issue bold challenges to traditional understandings of human nature, human life, and human dignity.

Already Darwinism, in its original version 150 years ago, appeared to challenge our special standing: How could any being descended from sub-human origins, rather than created directly by the hand of God, claim to be a higher animal, never mind a *godlike* one? Indeed, orthodox evolutionary theory even denies that animals should be called “higher” or “lower,” rather than just more or less complex: Since all animals are ultimately in the same business—individual survival, for the sake of perpetuating their genes—the

apparent differences among them are, at bottom, merely more or less complicated ways of getting the same job done.

These new materialistic explanations of vital, even psychic events leave no room for soul, understood as life's animating principle. Genes are said to determine temperament and character. Mechanistic accounts of brain functions seem to do away with the need to speak of human freedom and purposiveness. Brain imaging studies claim to explain how we make moral judgments. A fully exterior account of our behavior—the grail of neuroscience—diminishes the significance of our felt inwardness. Feeling, passion, awareness, imagination, desire, love, hate, and thought are, scientifically speaking, merely “brain events.” There are even reports of a “God module” in the brain, whose activity is thought to explain religious or mystical experiences.

Never mind “created in the image of God”: What elevated, humanistic view of human life or human goodness is defensible against the belief, trumpeted by biology's most public and prophetic voices, that man is just a collection of molecules, an accident on the stage of evolution, a freakish speck of mind in a mindless universe, fundamentally no different from any other living thing? What chance have our treasured ideas of freedom and dignity against the reductive notion of “the selfish gene,” or the belief that DNA is the essence of life, or the teaching that all human behavior and our rich inner life are rendered intelligible only in terms of neurochemistry and their contributions to reproductive success?

Many of our leading scientists and intellectuals, truth to tell, are eager to dethrone traditional understandings of man's special place in the whole and use every available opportunity to do battle. For example, consider how the luminaries of the International Academy of Humanism—including biologists Francis Crick and Edward O. Wilson, and humanists Isaiah Berlin and Kurt Vonnegut—chose to defend human cloning:

What moral issues would human cloning raise? Some world religions teach that human beings are fundamentally different from other mammals—that humans have been imbued by a deity with immortal souls, giving

them a value that cannot be compared to that of other living things. Human nature is held to be unique and sacred. Scientific advances which pose a perceived risk of altering this “nature” are angrily opposed.... As far as the scientific enterprise can determine, [however]... [h]uman capabilities appear to differ in degree, not in kind, from those found among the higher animals. Humanity’s rich repertoire of thoughts, feelings, aspirations, and hopes seems to arise from electrochemical brain processes, not from an immaterial soul that operates in ways no instrument can discover.... Views of human nature rooted in humanity’s tribal past ought not to be our primary criterion for making moral decisions about cloning.... The potential benefits of cloning may be so immense that it would be a tragedy if ancient theological scruples should lead to a Luddite rejection of cloning.²

In order to justify ongoing research, these “humanists” are willing to shed not only traditional religious views but *any* concept of human distinctiveness and special dignity, their own included. They fail to see that the scientific view of man which they celebrate does more than insult our vanity. It undermines our self-conception as free, thoughtful, and responsible beings, worthy of respect because we alone among the animals have minds and hearts that aim far higher than the mere perpetuation of our genes.

The problem, to repeat, lies not so much with the scientific findings themselves but with the shallow philosophy that recognizes no truths but these. Here, for example, is evolutionary psychologist and science popularizer Steven Pinker railing against any appeal to the human soul:

Unfortunately for that theory, brain science has shown that the mind is what the brain does. The supposedly immaterial soul can be bisected with a knife, altered by chemicals, turned on or off by electricity, and extinguished by a sharp blow or a lack of oxygen. Centuries ago it was unwise to ground morality on the dogma that the earth sat at the center of the universe. It is just as unwise today to ground it on dogmas about souls endowed by God.³

Without irony, Pinker, a psychologist, denies the existence of the psyche. Yet he is ignorant of the fact that “soul” need not be conceived as a “ghost

in the machine” or as a separate “thing” that survives the body, but can be understood instead as the integrated powers of the naturally organic body—the ground and source of awareness, appetite, and action. He does not understand that the vital powers of an organism do not reside in its constituting materials as such but emerge only when those materials are *formed* and *organized* in a particular way; he does not understand that the empowering organization of materials—the vital form or soul—is not itself material.

There is, of course, nothing novel about reductionism, materialism, and determinism of the kind displayed here; these are doctrines with which Socrates contended long ago. What is new is that these philosophies seem to be vindicated by scientific advance. Here, in consequence, would be the most pernicious possible result of the new biology—more dehumanizing than any actual technological manipulation, present or future: the erosion, perhaps the final erosion, of the idea of man as noble, dignified, precious, or godlike, and its replacement with a view of man, no less than of nature, as mere raw material for manipulation and homogenization.

IV

The new scientism not only banishes soul from its account of life. It also neglects the ethical and spiritual aspects of the human animal. For we alone among the animals go in for ethicizing, in concerning ourselves with how to live. We alone among the animals ask not only, “What can I know?” but also “What ought I do?” and “What may I hope?” Science, notwithstanding its great gifts to human life in the form of greater comfort and safety, is utterly unhelpful in satisfying these great longings of the human soul.

Science, by design, is notoriously morally neutral. It is silent regarding the distinction between better and worse, right and wrong, the noble and the base. Although scientists hope the uses that will be made of their findings will be, as Francis Bacon prophesied, governed in charity, science can do nothing to insure that result. It can offer no standards to guide the use of the awesome powers it places in human hands. Though it seeks universal knowledge, it has no answer to moral relativism. It knows not what charity is, what charity requires, or even whether and why it is good. What, then, will remain for us, morally and spiritually, should soulless scientism succeed in its efforts to overthrow our traditional religions, our inherited views of human life, and the moral teachings that depend on them?

Nowhere will this deficiency be more readily felt than with regard to the proposed uses of biotechnical power for purposes beyond the cure of disease and the relief of suffering. We are promised better children, superior performance, ageless bodies, and happy souls—all with the help of the biotechnologies of “enhancement.”⁴ The bioprophets tell us that we are en route to a new stage of evolution, to the creation of a post-human society, a society based on science and built by technology, a society in which traditional teachings about human nature will be *passé* and religious teachings about how to live will be irrelevant.

But what will guide this evolution? How will we know whether any of these so-called enhancements is, in fact, an improvement? Why should any human being embrace a post-human future? Scientism has no answers to these critical moral questions. Deaf to nature, to God, and even to moral reason, it can offer no standards for judging change to be progress—or for judging anything else. Instead, it tacitly preaches its own version of faith, hope, and charity: faith in the goodness of scientific progress, hope in the promise of overcoming our biological limitations, charity in assuring everyone ultimate relief from, and transcendence of, the human condition. No religious faith rests on flimsier ground.

So this is our peculiar moral and religious crisis. We are in turbulent seas without a landmark precisely because we adhere more and more to a view of human life that gives us enormous power but, at the same time, denies any possibility of non-arbitrary standards for guiding its use. Though well equipped, we know not who we are or where we are going. Engineering the engineer as well as the engine, we race our train we know not where.

V

Will we be able to combat the dehumanizing teachings and moral bankruptcy of soulless scientism? As a cultural matter, it is difficult to predict. But we are not intellectually or spiritually resourceless. On the contrary, we have good philosophical arguments to rebut the soulless teachings of scientism, and we have ennobling scriptural truths to nourish the human soul. Together, they make possible a human defense of the human. Let me offer a few elements of such a defense, starting on the philosophical side.

First, despite what scientism says, our evolutionary origins do not refute the truth of our human distinctiveness. The history of how we came to be is no substitute for knowing directly the being that has come. To know man, we must study him as he is and through what he does, not how he got to be this way. To understand our nature—*what* we are—or our standing in the world, it matters not whether our origin was from the primordial slime or from the hand of a creator God: Even with monkeys for ancestors, what has emerged is more than monkey business.

Second, regarding our inwardness, freedom, and purposiveness, we must repair to our inside knowledge. Even if scientists were to “prove” to their satisfaction that inwardness, consciousness, and human will or intention were all illusory—at best, epiphenomena of brain events—or that

what we call loving and wishing and thinking are merely electrochemical transformations of brain substance, we should proceed to ignore them. And for good reason. Life's self-revelatory testimony to the living regarding its own vital activity is more immediate, compelling, and trustworthy than are the abstracted explanations that evaporate lived experience by identifying it with some correlated bodily event. The most unsophisticated child knows red and blue more reliably than a blind physicist with his spectrometers. And anyone who has ever loved knows that love cannot be reduced to neurotransmitters.

Third, truth and error, no less than human freedom and dignity, become empty notions when the soul is reduced to chemicals. The very possibility of science depends on the *immateriality* of thought and on the mind's independence from the bombardment of matter. If what each person believes is merely the verbalized expression of his "electrochemical brain processes," there is no independent truth, there is only "it seems to me." Not only the possibility for recognizing truth and error, but also the *reasons* for doing science rest on a picture of human freedom and dignity that science itself cannot recognize. Wonder, curiosity, a wish not to be self-deceived, and a spirit of philanthropy are the *sine qua non* of the modern scientific enterprise. They are hallmarks of the living human soul, not of the anatomized brain.

A philosophical critique of scientism may give us back our souls and restore human distinctiveness. But philosophy alone cannot answer the longings of our soul or supply its quest for meaning. For such nourishment, we must turn to other sources, most especially the Bible.

VI

The Bible offers a profound teaching on human nature, but, unlike science, it places that teaching in relation to the deepest human longings and concerns. For various reasons, we should turn first to the Bible's majestic beginning, the story of creation in the Book of Genesis—which, not surprisingly, is the chief target of our soulless scientism. Elsewhere, I have argued that the teachings of Genesis 1 are, in fact, untouched by the scientific findings that allegedly make them “plumb unbelievable.”⁵ The reason is that Genesis' account of creation is not a freestanding historical or scientific account of what happened and how, but rather an awe-inspiring prelude to a lengthy and comprehensive teaching about how we are to live. The Bible addresses us not as detached, rational observers moved primarily by curiosity, but as existentially engaged human beings who need first and foremost to make sense of their world and their task within it. The first human question is not “How did this come into being?” or “How does it work?” The first human question is “What does all this mean?” and, especially, “What am I to do here?”

The specific claims of the biblical account of creation begin to nourish the soul's deep longings for answers to these questions. The world that you see around you, you human being, is orderly and intelligible, an articulated whole comprising distinct kinds. The order of the world is as rational as the speech that you use to describe it and that, right before your (reading) eyes, summoned it into being. Most importantly, this intelligible order of creatures means mainly to demonstrate that, contrary to the belief of uninstructed human experience, the sun, the moon, and the stars are not divine, despite their sempiternal eternal beauty and power and their majestic, perfect motion. Moreover, being is hierarchic, and man is the highest of the creatures, higher than the heavens. Man alone is a being that is in the image of God.

What does this mean? And can it be true? In the course of recounting His creation, Genesis 1 introduces us to God's *activities* and *powers*: (1) God speaks, commands, names, blesses, and hallows; (2) God makes and makes freely; (3) God looks at and beholds the world; (4) God is concerned with the goodness of things; (5) God addresses solicitously other living creatures and provides for their sustenance. In short, God exercises speech and reason, freedom in doing and making, and the powers of contemplation, judgment, and care.

Doubters may wonder whether this is truly the case about God—after all, it is only on biblical authority that we regard God as possessing these powers and activities. But it is indubitably clear—even to atheists—that we human beings have them and that they lift us above the plane of a merely animal existence. Human beings, alone among the creatures, speak, plan, create, contemplate, and judge. Human beings, alone among the creatures, can articulate a future goal and use that plan to guide them in bringing it into being. Human beings, alone among the creatures, can think about the whole, marvel at its many-splendored forms, wonder about its beginning, and feel awe in beholding its grandeur and in pondering the mystery of its source.

Please note: These self-evident truths do *not* rest on biblical authority. Rather, the biblical text enables us to confirm them by an act of self-reflection. Our reading of this text, addressable and intelligible only to us human beings, and our responses to it, possible only for us human beings, provide all the proof we need to confirm the text's assertion of our superior standing. This is not anthropocentric prejudice, but cosmological truth. And nothing we shall ever learn from science about how we came to be this way could ever make it false.

In addition to holding up a mirror in which we see reflected our special standing in the world, Genesis 1 teaches truly the bounty of the universe and its hospitality in supporting terrestrial life. Moreover, we have it on the highest authority that the whole—the being of all that is—is “very good”: “And God saw everything that He had made, and, behold, it was very good.”⁶

The Bible here teaches a truth that cannot be known by science, even as it is the basis of the very possibility of science—and of everything else we esteem. For it truly *is* very good that there is something rather than nothing. It truly is very good that this something is intelligibly ordered rather than dark and chaotic. It truly is very good that the whole contains a being who can not only discern the intelligible order but who can recognize that “it is very good”—who can appreciate that there is something rather than nothing and that he exists with the reflexive capacity to celebrate these facts with the mysterious source of being itself. As Abraham Joshua Heschel put it:

The biblical words about the genesis of heaven and earth are not words of information but words of appreciation. The story of creation is not a description of how the world came into being but a song about the glory of the world’s having come into being. “And God saw that it was good.”⁷

There is more. The purpose of the song is not only to celebrate. It is also to summon us to awe and attention. Just as the created world is a world summoned into existence under command, to be a human being in that world is to live in search of a summons. It is to recognize, first of all, that we are here not by choice or on account of merit, but as an undeserved gift from powers not at our disposal. It is to feel the need to justify that gift, to make something out of our indebtedness for the opportunity of existence. It is to stand in the world not only in awe of the world’s existence but under an obligation to answer a call to a worthy life, a life of meaning, a life that does honor to the divine likeness with which our otherwise animal being has been—no thanks to us—endowed. It is to feel the explicit need to find a way of life for which we should be pleased to answer at the bar of justice when our course is run, in order to vindicate the blessed opportunity and the moral-spiritual challenge that is the true essence of being human.

The first chapter of Genesis—like no work of science, no matter how elegant or profound—invites us to hearken to a transcendent voice. It answers the human need to know not only how the world works but also what we are to do here. It is the beginning of a Bible-length response to the human

longing for meaning and wholehearted existence. The truths it bespeaks are more than cognitive. They point away from mere truths of belief to the truths of life in action—of song and praise and ritual, of love and procreation and civic life, of responsible deeds in answering the call to righteousness, holiness, and love of neighbor. Such truths speak more deeply and permanently to the souls of men than any mere doctrine, whether of science or even of faith. As long as we understand our great religions as the embodiments of such truths, we friends of religion will have nothing to fear from science, and we friends of science who are still in touch with our humanity will have nothing to fear from religion.

Like Max and Jake, I have no knowledge about the world to come. Unlike Max and Jake, I have never given it more than a moment's thought. For whatever might be the fate of our souls when act five is over, it is the pursuit of their well-being here and now, while the show is still running, that is in my opinion *the* crucial human task—yesterday, today, always. Regarding this truth and this work, no soulless teachings of science or scientism should ever leave us buffaloed.

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Notes

1. Erich Heller, "Faust's Damnation: The Morality of Knowledge," in Heller, *The Artist's Journey into the Interior and Other Essays* (New York: Harcourt Brace Jovanovich, 1976), p. 18.

2. International Academy of Humanism, "Statement in Defense of Cloning and the Integrity of Scientific Research," May 16, 1997, reprinted in *Free Inquiry* 17:3 (Summer 1997), and available online at www.secularhumanism.org/library/fi/cloning_declaration_17_3.html.

3. Steven Pinker, "A Matter of Soul," *The Weekly Standard*, February 2, 1998, p. 6.

4. For a thorough examination of these prospects and the attendant ethical and social issues, see *Beyond Therapy: Biotechnology and the Pursuit of Happiness*, a report by the President's Council on Bioethics (Washington, D.C.: Government Printing Office, 2003), available online at www.bioethics.gov. Commercial additions are available from Judith Regan Books and Dana Press.

5. See Leon R. Kass, "Awesome Beginnings," in Kass, *The Beginning of Wisdom: Reading Genesis* (New York: Free Press, 2003). See also Leon R. Kass, "Evolution and the Bible: Genesis I Revisited," *Commentary*, November 1988, pp. 29-39.

6. Genesis 1:31.

7. Abraham J. Heschel, *Who Is Man?* (Stanford: Stanford, 1965), p. 115.