



Faith engaging
SCIENCE | RELIGION

**A NEW VOICE ARISING:
A PASTORAL LETTER ON FAITH
ENGAGING SCIENCE AND
TECHNOLOGY**

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I.

Through the scientific advances of our time, we are seeing nature with new eyes, and what we see fills us with wonder and praise. Stunning images of deep space are like new windows on creation. Microscopic details of living cells show us the unexpected intricacies of our biology. Mathematical equations unravel the secrets of the first seconds following the birth of the universe. Through these gifts of science, we look across ever-expanding vistas of cosmic beauty, almost to the beginning of time itself. What we see evokes wonder and humility, and we hear within ourselves a new voice arising and singing an anthem of praise that reverberates through the whole creation.

Science shows us a cosmos that gives birth to stars, galaxies, planets, life, mind, and self-consciousness, all emerging one after the other, each stage giving birth to what follows, each playing its part in the interactive dance of cosmic self-generation. Through these discoveries, science reveals a new picture of human beings as tiny creatures in a vast cosmic sea. We are filled with amazement and awe, and we are brought face to face with new questions about ourselves and our place in the universe. Are we alone? Does the universe have a purpose? What does it mean to be human?

Questions like these are as old as scripture and as new as the latest discoveries of physics and biology. For many people today, old answers to these questions are no longer credible. Science is sometimes unsettling because it destroys old foundations without providing new ones. Yet because of science, many today are on a new search for meaning. Can our church address the seekers of today? Can we offer a word for our time, one full of hope and encouragement, one taken seriously for its keen insight and honest comprehension? Can we dare to seek, to wonder, and if necessary to doubt until we believe anew, confident that in the end we will be filled with a fresh faith that engages the hunger in so many hearts and minds?

II.

When we behold the depths of space, we hear the words of Genesis and of a God who creates by speaking the universe into existence. But we are filled with new questions about a God who is still creating a universe that is still unfolding. We wonder, for instance, whether other intelligent creatures might exist somewhere in the vast cosmic expanse. There are good reasons to think that life, even intelligent life,

exists throughout the universe. We know that other stars have their planets. We simply do not know yet whether life in the universe is common or rare. Before too long, however, evidence of life out there beyond our solar system might be discovered.

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When we compare ourselves with other creatures who share our planet, we hear echoes of Genesis and of a God who creates us to be unique creatures in God's own image. But we ponder new questions. We see that we alone possess the highest level capacities for language, culture, and technology. But we also are coming to see that other species possess some of these capacities in their own way, probably to an extent

greater than we realize. We largely share their DNA and the functions of their brains. They communicate with each other, make tools, and form strong social bonds. Even on earth, intelligent life is not limited to human beings.

When we hear the cosmologists speak of how our universe seems finely tuned in its fundamental properties for the possibility of life, defying all the odds by being the one universe capable of an earth full of living creatures, we hear echoes of Genesis and of a universe created with a purpose. Behind it all is a God who seeks our companionship. Some look at this evidence of cosmic fine tuning and say that there are many universes and that of course, we live on the one that has life. Others see cosmic fine-tuning as a hint that there is some sort of creator behind it all.

For this reason, the word that we speak to this searching and restless culture must be informed by science but grounded deeply in faith. We believe in God, not in some cosmic force or impersonal designer. We trust in a loving Creator who is personal and relational, who seeks our companionship, who comes as Christ incarnate in the thick of things, and whose life-giving power permeates the whole cosmos as the creative Spirit, calling us to lives of gratitude in communities of justice. This great and bounteous God has created us in the image of God's own inexhaustible mystery.

Confident in such unfailing goodness, we know we can open ourselves and our theology to the momentous conceptual changes of our times, finding in them new occasions, new duties, and new language of praise. The transformations of today's scientific vision enrich our faith, and our church honors our members who answer God's calling with careers in medicine, science, and engineering. And we find ourselves strangely compelled

to explore the mysteries of the cosmos and unravel its secrets, to dream of comprehending the whole, to ponder its source and destiny and ultimate meaning, and by our technology to transform nature itself. We are insatiably curious, and our profound curiosity fuels equally the venture of science and the quest of faith.

As a result, our universe has expanded and so has our understanding of God. Our faith has nothing to do with clinging to ancient misconceptions. Our faith is not in the worldviews of ancient theologians or the cosmologies of biblical texts, as majestic as these might have been. Our faith is in the living God, who always goes ahead of us, speaking, calling, and creating. Gone is the old view of a small, static universe, with fixed species dwelling on a fixed earth. Gone is the old view of a small, static God. We believe that God yearns for us to understand nature more fully and to love it more deeply. God speaks in many ways and through many voices. Today, one of God's most provocative voices is science. We listen and respond, grateful that our theology is enriched by new ideas.

III.

Evolution helps us see our faithful God in a new way. Our creator works patiently, calling forth life through complex processes spanning billions of years and waiting for us to awaken and respond in conscious participation in God's own overarching dream for all living things. Evolution also helps us see ourselves anew, as creatures who share a common origin with other species. Today we know that human bodies and brains share the same genetic and biochemical processes with other creatures, not just mammals but insects, plants, and bacteria. How then should we understand ourselves as evolved creatures, sharing much of our DNA with other species, and at the same time as distinct creatures in the image of God?

We think about the human brain, noting that through imaging technologies, we can observe the brain in meditation or prayer. Does this reduce "God" to a mere part of the brain? Is it evidence that we are made for God, hard-wired as it were for transcendence? Or is it merely a provocative confirmation of the profoundly biblical view that we are psychosomatic beings and that all our thinking, including our consciousness of God, is a function of the embodied self? As this research advances, our challenge is to demonstrate, by our practice as much as by our ideas, that human beings are such complex biological systems that we are capable of genuine acts of freedom, creativity, passion, and prayer.

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Each one of us is the result of an incredibly complex process of biological development from the single cell of the embryo to the trillions of cells of the adult body. Advances in biology in the past decade have shed new light on this deeply mysterious process that is compared in Psalm 139 to God knitting us together, secretly and tenderly creating each one of us. Our task today is to speak again with the intimate language of Psalm 139 and, at the same time, the intricate language of developmental biology. As we explore the wonders of embryo development, literally watching the fertilized egg divide and develop its simple but elegant structures of nascent human life, what are we to make of the meaning of humanity at each stage of life?

IV.

As we unravel these mysteries of developmental biology, we are creating new technologies and perhaps new forms of medicine, tapping the regenerative potential of stem cells. Here perhaps more than anywhere else, we come face to face with a central fact about science in our own time. Almost every science is accompanied by technology, and technology raises new questions of its own, conceptual and moral.

Through science we understand nature. Through technology, however, we act on it, changing it even to the point of creating new forms of nature and new kinds of life. For example, researchers are now creating entities that resemble embryos in some ways but not others. By creating new things that have never before existed, technology confounds any moral or theological vision that only knows how to think about what already exists.

The most obvious and perplexing question posed by technology, however, is the question of justice. Precisely because technology is powerful and so often beneficial, we must speak against policies that deny access to health care or that allow such things as a "digital divide." Technology also imposes burdens that are often borne unfairly. The United Church of Christ was the first to speak publicly of "environmental racism," the tendency to locate known environmental risks near the homes of racial minorities and the poor.

Whether because of technology's rich benefits or its painful costs, our uses of technology must be subjected to an uncompromising expectation of social, environmental, and economic justice. For this reason we lament the fact that as medicine becomes more effective and beneficial, it also becomes more expensive and more unjust in the

pattern of its distribution, both within our own nation and on a global scale. If injustice in medicine is any indication of future injustice in the allocation of technology, we can only worry that technology is unwittingly moving us further along the wrong path socially and economically.

Another question posed by technology has to do with our relationship with nature. Too slowly we have become aware of our effects on the ecosystem of the planet, the purity of its water, the diversity of its species, and the process of global warming. Years of over-consumption and waste have set in motion a process that at best can be slowed, not stopped, and only if we repent of our excessive use of energy. The warming of the global climate and the rise of the oceans will threaten many habitats and homes, especially for those already most at risk. Old technologies must be replaced, and sometimes new technologies may play a helpful role, but the key to ecological change is a moral and spiritual change.

Technology also prompts us to ponder the ways in which we are using its powers to change ourselves as human beings. Some now talk of a trans-human phase of human evolution. They dream of using technology to push against the limits that constrain our lives. They envision a new era of enhanced brains, youthful bodies, disease-resisting genes, and longer life spans, all imaginable through technologies already in development. While few object to new technologies that heal our diseases and repair our bodies after injuries, some are profoundly troubled by the technologies of human enhancement. As never before, the perspectives of faith and the powers of technology need to be brought together in a new, critical dialogue about the human future. Is a technologically modified human being still human?

In the end, the ultimate question posed by technology is how it changes our outlook on life. Are we becoming technological creatures, for whom life is nothing more than a series of engineering problems to be solved? Do we embrace technology too glibly, taking at face value its promise of control? Have we made it a new kind of savior, a form of managed grace, a genie by which we think we control the future? Or is it possible for us to use technology, indeed to give thanks to God for its rich benefits, and at the same time to remain clear about the

human mystery at the core of our being and the divine mystery that lies behind it all? Can we be technological and theological at the same time?

V.

Many today are hungering for an authentic spirituality that is intellectually honest and at home in a scientific era. They are searching for a new kind of wisdom to live by, one that is scientifically sophisticated, technologically advanced, morally just, ecologically sustainable, and spiritually alive.

The changes that lie ahead of us can scarcely be imagined. Science and technology are not about to come to a standstill, and neither should we. As we respond to the sciences and the technologies of today, we are aware that we will have to expand and modify our responses whenever we are met by new concepts and unexpected possibilities.

We know that the challenges of science and technology are not easy. We also know they are not optional, as if we could be a faithful church while ignoring our context. But as we look across the United Church of Christ, wherever we gather or wherever we serve, we are met by signs of hope. Our congregations and our gatherings are becoming centers of exploration. As pilgrim people, we share our fears and dreams for the future of our world. Side by side we listen for the God who is speaking to our time, to this culture, and to our heart's deepest questions.

God speaks and the Word becomes flesh, local, in a particular time and place. God is still speaking, and the words of the living God become enfleshed here, now, in our own time and place. What joy is ours when we hear the new word of the living God speaking to us today!

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