

"The End of Knowledge"

A Sermon by The Rev. Jeffrey A. Vamos
Hebrews 11:1-3
Luke 1:26-38
The Presbyterian Church of Lawrenceville, NJ
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My wife Catherine keeps a journal of notable things Will says as he grows up, questions he asks. And I wanted to share a few of those notable questions with you this morning, from that journal.

"Did we hang out when we were babies?" he asked one day, looking up at his mom.

"What do clouds taste like? I'd like to know."

"Where does the sky end?"

Actually, that is in a way the question I'd like to reflect with you about today, on this fourth Sunday in Advent. Where does the sky end? Today, I'd like to explore with you some of the bigger questions about our existence as human beings, in reflecting on the relationship between faith and science. So—again, a little light conversation for this morning.

And of course, as we do that, we might also hear the echoes of Mary's question, on hearing Gabriel's incredible news: "How can this be?"

How can this be?

Where does the sky end?

Recently I read an article by Gary Greenburg, in which he recalls sitting with his seven-year-old son, marveling at the beauty of a giant Ichneumon [IckNOOman] fly, which is a huge wasp-like insect. And as

they consult the encyclopedia about the mysterious creature, they learn about the amazingly intricate and bloody process by which it reproduces, and in their amazement and wonder, ask the same question as Mary: “How can this be?”

“Isn’t it amazing,” he asks his son, “that all of this could happen by accident?”¹ His own question then sends him on a quest to consider, as a long-lapsed Jew, whether there might be not only a design to the universe, but also a designer.

I realize that that touches upon perhaps one of the hottest of cultural hot potatoes folks are tossing about these days: the battle over Intelligent Design, whether it does pass as science, and should be taught in the public schools as science. Or whether, as some assert, it is an attempt to bring a politically motivated religious agenda into the public school curriculum.

And of course, at the heart of that debate is the question: is there a way we can reconcile faith and science? Do their truth claims compete with one another? Let’s look at that question.

Stephen Jay Gould, who has written extensively about religion and science, offers a fairly simple answer to this complex question that reflects the thinking of many scientists and theologians—and is, in my mind, a good place to start. His answer (like mine) would be that, no, there is not, and need not be, a conflict between religion and science. Religion and science represent two different and distinct ways of

¹ Gary Greenburg, “Intelligent Designs.” *Brain, Child*; Winter, 2006.

approaching reality.² Put perhaps too simply, science covers the “how”; religion covers the “why” and the “ought” of our existence.

This is how he puts it in his very clever way of writing: “To cite the old clichés, science gets the age of rocks, and religion the rock of ages; science studies how the heavens go, religion how to go to heaven.”³

To put it another way; and here’s how I would put it: science, by definition, is trying to use what can be seen and known by our human faculties to gain knowledge about our natural world. It uses the scientific method—experimentation—to verify theories about how nature works, based on the evidence we can *see*.

And, in the province of religion, faith works in just the opposite way. Faith, in order to be faith, *seeks knowledge based on what cannot be seen*. In fact, if faith is based on what is seen, based on evidence, it ceases to be faith. Listen to that standard definition of faith we so often use from Hebrews 11: “Now faith is the assurance of things hoped for, *the conviction of things not seen*.” The problem is, if we start mixing the provinces of faith and science, faith ceases to be faith, and science ceases to be science.

That, it seems to me, is the main criticism of the theory of Intelligent Design (well, actually, we should say *theories*, since there are more than one, and there are some aspects of Intelligent Design I find helpful)—but this is a criticism I happen to agree with. Intelligent Design, in general, uses the fact that gaps exist in our scientific knowledge of the

² Stephen Jay Gould, *Rocks of Ages; Science and Religion in the Fullness of Life*. 1999, Ballantine. Gould’s approach is based on the principle of “NOMA, or Non-Overlapping Magisteria,” demarcating the separate domains of authority for science and religion. See p. 5ff.

³ Gould, p. 6.

physical world, gaps, specifically, in the theory of evolution (and many refer to it not as a theory, but as fact, insofar as the theory of evolution has been borne out by thorough scientific evidence)⁴. For those who support the theory of Intelligent Design, the explanation for these “gaps” is a supernatural one—namely, God. Only God could have brought about this unexplained leap in the complexity of organisms in this particular evolutionary chain, and so on.

The problem here is that, in that way of thinking—God ceases to be God; God ceases to be a mystery, but instead becomes an *explanation*, an idol to please our human need for evidence (in that scientific sense) of God’s existence. And, to quote my friend John Timpane, who lives in Lawrenceville and is the editor of the Op Ed page of the Philly Enquirer, and whose area of expertise is science and religion: if your god is a god of the gaps, your god will get smaller as the gaps get smaller. (John Timpane, by the way, will be joining us on January 15, to continue this conversation on faith and science after worship during adult education).

Soren Kierkegaard, the 19th Century Christian Existentialist, used to write about those in his day trying to reconcile the Bible, and certain miracles in the Bible, with science. What people were doing, for example, was taking the story of the Exodus from Egypt—Moses parting the Red Sea—and seeking to explain that miracle with reference to some of the new understandings in meteorological science—there could have been certain weather conditions that produced something like the parting of

⁴ There is, of course, much controversy even among scientists over the broad area of inquiry referred to as “the theory of evolution.” In my own admittedly limited understanding, much is still under debate about the details of this theory, although most scientists understand that the general theory upon which it is based has been thoroughly tested and borne out by scientific evidence.

the seas, dry land for the Israelites to cross over, and so on. And Kierkegaard railed against people doing that kind of theology. That's not *faith*. Faith, in order to be faith, can't be based on the evidence. It requires of us a *leap*; a leap into the unknown, which changes us, which places ultimate demands on us—and if it doesn't change us, or place demands on us, what good is it? A leap of faith that does give us knowledge—but a different *kind* of knowledge than what we can gain through rational and scientific inquiry. Knowledge of the mysteries of our existence that science cannot verify. Mysteries that tell us that there is more to this existence than what we can pinch between our fingers and stick under a microscope and analyze. *That* is faith.

Think of it this way: You could say that you, your life, the fact that you are here sitting in that pew there...all that is the product of random forces that have brought about certain conditions and causes—millennia of natural selection and the mutation of cell life, the birth of your parents, the condition of your parents being in a certain place and time...we won't go into it in detail. And a sperm met an egg, and mitosis occurred. And the weather was nice today. And boom. Here you are, sitting in church.

And you are quite an accident.

But if you place your existence in another sphere, you could say that the entire universe conspired—every condition was exactly perfect, a billion billionth of a chance—such that the miracle, the child of God that is you, was born. Not by accident, but on purpose. And every molecule of you was exquisitely designed by that presence of love that governs the universe.

And you cannot prove either statement wrong with human reason!
Both are right. (Although I believe the second more right than the first.)

I think we get into a problem, and conflict arises between science and religion—and this is really the chief problem of the human condition itself—the problem comes when in either realm you lose a sense of *humility*; when either realm gives one a sense of self-certainty. And therefore self-righteousness. That, in my mind, seems to be the perennial human problem.

For religious people, the problem comes when we homogenize faith into a series of propositions and easily digestible dogmas: God created it, the Bible says it, I believe it, and that’s the way it is. Period, end of story. And that’s not faith either. That is belief; that is ideology. That’s why I think Intelligent Design shouldn’t be taught in schools.

And on the other hand, one of the problems of our post-modern world-view is that many have come to believe in science and technology as our modern savior; it’s become our latter day golden calf. So: we’ve solved all the major mysteries of life with science, and we can even manipulate and control it—there’s nothing left to believe in. And therefore God is an option reserved only for the weak-minded, or the childish.

T. S. Eliot describes well what we lose in this post-modern world-view in that poem that’s printed in your Order of Worship today:

“Where is the Life we have lost in living? Where is the wisdom we have lost in knowledge? Where is the knowledge we have lost in information?”⁵

⁵ T. S. Eliot. *Choruses from the Rock*.

Such a world-view denudes human life of that essential quality that gives it meaning: and, you know what that is? Here's what I'd call it; and here's what religion aims to lead us to: *wonder*.

Ah, you were wondering if I was going to circle 'round to Advent. Mary. Christmas. All that stuff. That's *is* what this time of year is about: wonder. That's what religion is meant to lead us to: wonder. And if that's the case, then science, far from being the enemy of faith, actually ought to be our chief partner in that aim, to lead us to *wonder*. Because, the end of knowledge, whether religious or scientific, is not certainty: it is wonder.

In some ways, as I speak on this topic, I feel like a kid with his first telescope: I recently completed a course on physics for non-scientists—on Einstein's theories of relativity, and quantum physics. (Don't worry, I won't go into the details!) And I thought it wouldn't have much to do with my work, with theology—and yet, it's been incredibly stimulating of my theological reflection, and far from being anything that might cast doubt on my faith, it has enriched and enlivened and engaged my faith. Because, what I discovered in that study is that modern science has revealed a universe that is far more mysterious and paradoxical and strange than one might imagine, one that goes against our ordinary, human and common-sense ways of thinking. Einstein discovered, for example, that you cannot move through space without moving through *time*; and that time travel is not only possible, it is a fact of our existence.⁶

⁶ To be technically correct: Einstein's theory of special relativity holds that you move through time relative to other observers that are in relative motion to you.

Quantum physics, for example, has run experiments in which particles seem to exist in two places at once—a complete paradox.

Isaac Newton saw a clockwork universe, in which every cause had an exact and definite effect, and so the universe was seen as completely deterministic, like a clock. But newer discoveries in quantum physics have revealed a universe that is in no way deterministic, but is random. Probabilistic. One might say: free.

The other day, I was watching a show about Fractal Geometry⁷, this branch of math in which very simple equations give rise to infinitely complex expressions—like the way DNA works: simple instructions that create incredibly intricate organisms. And it was amazing to see these hard-core mathematicians talk about God, almost in a state of mystic ecstasy; and how—based on math!—God has created the world a paradox, according to deterministic principles (you might say: governed by predestination), and yet it is completely governed by freedom. Mathematicians arriving at Calvinism. Amazing!

Incredible. Wonderful!

We can imagine not just Mary, but Einstein, contemplating his theories, asking the same question: “How can this be?” It’s too wonderful to be imagined. And yet, we imagine it; we seek to understand it; or rather, to stand under it.

Most of the time this effect is unnoticed, e.g. at small speeds, but is pronounced at great speeds, especially those approaching the speed of light.

⁷ After the sermon, several asked me about the program cited here: *Colours of Infinity*, a documentary which aired on NJN. For those interested, it’s available on Amazon.

Where does the sky end? I hope we will never find the definitive answer to that question. And I hope we will never cease in our quest to find one.

Amen.