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Addresses

Alpha and Omega: Reconciling Science and Faith

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I. THE VOICE FROM THE WHIRLWIND

First of all, I want to thank you for having me as your guest tonight. I've admired the Fellowship of Catholic Scholars for many years. I know many of you personally and consider you friends, so this isn't a routine official welcome. I want you to know you're most welcome here in Denver, and you have my best wishes and prayers for a very fruitful conference.

So far today we've heard three outstanding presentations on cosmology and biology. Now, to quote the great English theologian John Cleese, it's time for something completely different. By training, I'm neither a scholar nor a scientist. But I am a pastor. As a pastor, I deal with the practical effects of this theme — faith and science — every day. My job is to preach and teach the truth about the human person.

The United States in the late 1990s is the premier scientific power in the world. American culture is dominated by technology — the child of science — in a way which is unparalleled in history. And Americans are the greatest pragmatists and toolmakers in human experience. That's part of our national personality. We're inquisitive. We're innovative. We like results, and science is a profoundly useful tool. So to the degree that faith and science are perceived to differ about the nature of the human person, every pastor faces a challenge in his ministry.

I believe the Holy Father is right when he says that no fundamental conflict can exist between science and religious faith, whatever the appearance to the contrary. Truth can't contradict itself, and both science and faith are means to discovering truth about creation. But their estrangement is often still very real, and that's what I'd like to reflect on tonight. Why is there a "disconnect" between them, and how do we fix it?

In trying to answer that, I'm going to observe the good scientific principle of parsimony and keep my thoughts simple and short. In fact, I have only three basic observations, and then perhaps we can open the floor to questions and general discussion, because I came here as much to learn as to teach. But I want to approach my first point in a roundabout way. We heard earlier this afternoon about the cosmological order and biological reductionism. I'd like to talk instead about the theology of B movies.

How many of you remember what a B movie is? How many of us here tonight were born in the 1940s or earlier? A good number. Those of us who are in the general vicinity of 50 have something uniquely in common: We're the first generation of the atomic era. Our memories are conditioned by that. Some of you will recall the air-raid drills of the 1950s. Remember how we would climb under our desks at school, hoping they'd protect us from a nuclear blast?

And some of you may also remember the films. I don't mean the big-screen, Cadillac releases like *Ben Hur*. I mean the low-budget, black and white titles like *The Blob*, which starred a giant, man-eating amoeba; *Them*, which starred giant, man-eating ants; and *The Attack of the 50-Foot Woman*, which starred a giant, taxi-crushing Amazon. I've always believed that painting, music, literature, architecture — each of these is a window on the psychological and spiritual state of a people. The popular media, like B movies, serve exactly the same purpose. They're clues to our hopes and anxieties — crude ones, it's true, but sometimes amazingly accurate. In most of the B movies of the 1950s, a scientific accident — usually involving radiation — triggers an out-of-control monster who's defeated only by luck, or by an even more ingenious scientific countermeasure. Each of these movies points to a deep popular ambivalence toward science. We desire the power science brings. But we also fear its consequences, because deep-down we instinctively realize that we lack the ability to control what we unleash. Like Pandora, we've opened a box filled with surprises — and not all of them are welcome. We've released a whirlwind of change that threatens to unhinge all our notions of coherence.

The main value today of most of these old B films is curing insomnia on late night cable TV. But I mention them because one of these films stands out as a very interesting anomaly. How many of you have seen *The Incredible Shrinking Man*? Does anyone remember the ending? It's pretty unusual.

Here's the plot: The hero is an average, innocent, middle-class fellow who, one day, gets hit by a random burst of cosmic radiation. That's all the explanation we ever get. A few days later, he notices that his clothes are a bit loose. Gradually he discovers that he's actually shrinking. He goes to the doctor. The doctor does tests, gives him a shot and reassures him that science will find a cure. But it doesn't. He continues to shrink until he's the size of a mouse, and then an insect. At this point he has a fairly standard, B-movie, life-and-death struggle with a house spider — which now seems the size of an elephant, by his scale. He kills the spider, but the effort exhausts him. He falls into a deep sleep, and when he awakes, he has evaporated to virtually nothing. In the movie's final scene, he drags himself to a basement window and looks out — and then upward — through a forest of grass, to a night sky blazing with stars. And this is what he says:

I looked up, as if somehow I would grasp the heavens. The universe — worlds beyond number, God's silver tapestry — spread across the night. And in that moment, I knew the answer to the riddle of the infinite. I had thought in terms of man's own limited dimension. I had presumed upon nature. That existence begins and ends — this is *man's* conception, not nature's. And I felt my body dwindling, melting, becoming nothing. My fears melted away, and in their place came acceptance. All this vast majesty of creation had to mean something — and then I meant something too; yes, smaller than the smallest, *I* meant something too. To God, there is no zero . . .

Now, I certainly don't want to invest a low-budget science-fiction film with the moral gravity of the ages. Nor do I usually have the time to watch anything on TV, let alone *The Incredible Shrinking Man*. But the message of this strange little story is almost unique among its genre: Life has meaning, no matter how battered or small; God is good, and the universe reflects His design; and creation is infinitely more vast and mysterious than our ability to control or even understand it. It sounds familiar, doesn't it? Let me remind you where we've heard that message before: Job 38 and 40.

Then the Lord answered Job out of the whirlwind: . . . Where were you when I laid the foundation of the earth? . . . Have you commanded the morning since your days began, and caused the dawn to know its place. . . ? Have *you* an arm like God, and can you thunder with a voice like His . . . ?

And this is my first point. The appropriate posture of man and woman before God, and science before God's creation, is humility — the virtue which Bernard of Clairvaux called *verissima sui agnitio*, "the truest knowledge of oneself," and Newman described as the "reverential spirit of learners and disciples." Even for those who do not know God or do not believe in Him, the lesson is the same: Science uninformed by modesty in the face of its own limitations will end by dehumanizing the humanity it intends to serve.

Pride, including scientific pride, kills the human spirit. The evidence of this century is irrefutable. We are not gods. We will never be gods. And to be in right relationship with nature, *we must never seek to be gods*. It may not be intentional, but it's certainly very curious, that the shrinking man of our 1950s movie only discovers truth and peace as his former self literally melts away.

II. THE BEGINNING OF WISDOM

The first point leads to my second: Human happiness is not a function of worldly knowledge, including scientific knowledge. Knowledge sometimes creates as much misery as comfort. We all know hundreds of facts which really add nothing to our lives. Does it help you to know that the surface temperature of Venus will boil lead? Unless you're an exobiologist, probably not. No, happiness flows from *meaning*, the discernment of which requires wisdom.

Let me share with you another story. Most of us know Taylor Caldwell through her novel about St. Luke, *Dear and Glorious Physician*. But she wrote many other things, and one of her lesser known but most intriguing novels is a book called — if I remember it correctly — *Dialogues with the Devil*. The structure of the book is simple. It's an exchange of letters between two polite but estranged brothers — in this case, the archangels Lucifer and Michael — who argue over the policies of their Father, who is, of course, God.

In one of his letters, Lucifer describes a room in the afterlife reserved for scientists who have knowingly and willfully rejected God. It has no demons. No fires. No instruments of torture or discomfort of any kind. In fact, just the opposite. Every tool of scientific inquiry is immediately available. So is every reference book. So are unlimited data about anything which any scientist would ever hope to know. Only one thing is missing: *purpose*. In rejecting God, they've rejected the One Being who gives context and meaning to all knowledge; the Whole who completes all the fragments of information which science laboriously acquires and studies. That's their eternity. They know everything . . . and yet they also know it's empty without the one priceless piece they've thrown away forever. That's an unflattering portrait of some scientists, I admit. My only defense in using it is that I'm sure the room set aside for bad archbishops is even worse. You get the idea, though: Human happiness may be enriched or advanced by scientific knowledge, but it's not finally *about* knowledge. It's about who we are, and why we're here. Science can't address that. Despite all its power, science has some very severe limits. Quantum physics can predict that certain particles will behave in a certain way with a superb degree of reliability . . . but it really has no idea *why* they behave that way. Science can't even attempt to answer the ethical questions it raises, because of the moral neutrality it enforces upon itself.

Ironically, it was the great scientist Pascal who observed that "the heart has its reasons which reason cannot know." Science is fundamentally — *by its nature* — inadequate to the hungers of the heart. Poetry and art and religious faith speak to those hungers, and those hungers are very real, no matter how many attempts are made to explain them away as biochemically based projections or neuroses. You see, we can live without a lot of data. But we can't live without a purpose. And science has no competence to provide one. That in itself is tremendously revealing of the kind of creatures God designed us to be.

I have one final, cautionary thought about science, and it has to do with its bloodline. "Science" is an interesting word. It traces itself back to the Latin verb *scire* (to know) and the Latin noun *scientia* (knowledge). Science, defined in popular terms, is knowledge covering general truths or the operation of general laws — especially as obtained, tested and refined through the scientific method. What science has done in the 500 years since Francis Bacon lived and wrote, is to provide living proof for his claim that "knowledge is power." Bacon is the earliest salesman for today's "knowledge societies." Knowledge works. It's useful. American technology is a global witness to it. Scientific knowledge has brought us many tremendous benefits, from antibiotics to electric lights. But the spirit of utility at the heart of applied science is something with which *none* of us should feel entirely comfortable.

Knowledge may be power, but it's not the same as moral character, joy, love, freedom or wisdom — the things that sustain the human heart. Today's science and technology, in fact, have an ambiguous family history. In *The Abolition of Man*, C.S. Lewis reminds us that, "The serious magical endeavor and the serious scientific endeavor are twins: One was sickly and died, the other strong and thrived. But they were twins. They were born of the same impulse . . ."

I'm not sure many scientists would welcome the idea that Great Grand Uncle Albert may have been a sorcerer. But Lewis, who was an impeccable scholar, makes a pretty strong case. "For the wise men of old," he says, "the cardinal problem had been how to conform the soul to reality, and the solution had been knowledge, self-discipline and virtue. For magic and applied science alike, the problem is *how to subdue reality to the wishes of men*: The solution is a technique; and both, in the practice of this technique, are ready to do things hitherto regarded as disgusting and impious . . ." If this sounds alarmist, let's remember that eugenics; partial birth abortion; physician-assisted suicide; cloning; cross-species experiments; and genetic manipulation were all just crazy ideas for low budget, B-grade horror films when C.S. Lewis was writing 40 or 50 years ago. Now they're here. Now they're real.

When you go home tonight, or back to your hotel room, open your Bible to Psalm 111, or to Sirach, chapter 1. They're very similar. Listen to these words of the Psalmist, which I've taken at random from the text: "Great are the works of the Lord . . . full of honor and majesty is His work . . . *holy and terrible* is His name! . . . Blessed is the man who fears the Lord . . ." because "*the fear of the Lord is the beginning of wisdom . . .*" And then listen to these verses from Sirach, 1:11 and 12: "The fear of the Lord is glory and exultation, and gladness and a crown of rejoicing. The fear of the Lord delights the heart, and gives gladness and joy and long life."

It is *natural* for the human heart to find joy in "the fear of the Lord." And by fear I mean the awe we instinctively feel in the presence of something great, mysterious and beautiful. The universe is more than dead matter and impersonal equations. Wisdom enables us to see this. And wisdom is what we lack when reason separates itself from faith. It's a kind of poverty, for too many scientists, that their vocabulary for understanding truth covers only one dialect.

III. I AM THE ALPHA AND THE OMEGA

If you have a spare summer day when you've visiting Denver sometime, here's a suggestion: Get up at 4 am and drive west on Interstate 70 about an hour until you reach U.S. Route 6. Take 6 west to the top of Loveland Pass. Park your car, wait for the sunrise, and then hike north along the Continental Divide trail. Every great artist has a "signature," some habit of craft that's unique and which everybody immediately recognizes. For Van Gogh, it's probably his brush strokes in a painting like *Starry Night*. The high Rockies at sunrise — that's God's signature. Anyone who comes away from a moment like that without sensing that nature is somehow *sacramental*, something sacred which hints at Someone even greater than itself, just doesn't have a pulse.

I began my comments tonight by asking why the estrangement between science and faith still persists, and how we might fix it. I suspect that religious believers sometimes make matter worse by expecting too much from Scripture and tradition. To quote C.S. Lewis again:

Christians . . . have the bad habit of talking as if revelation existed to gratify curiosity by illuminating all creation so that it becomes self-explanatory and all questions are answered. But revelation appears to me to be purely practical, to be addressed to the particular animal, Fallen Man, for the relief of his urgent necessities — not to the spirit of inquiry in man for the gratification of his liberal curiosity. We know that God has visited and redeemed His people — and that tells us just about as much about the general nature of creation, as a dose given to one sick hen on a big farm tells *it* about the general character of farming in England.

In his statements on Galileo, evolution, and in a hundred different other environments, Pope John Paul II has recognized the legitimate autonomy science must exercise in its pursuit of truths about creation, and as recently as his Wednesday audience of September 16, he stressed again that the Church is the friend of any sincere and ethical human research. This merely echoes what Vatican II taught so articulately in its *Pastoral Constitution on the Church in the Modern World (Gaudium et Spes)*:

. . . [M]ethodical research in all branches of knowledge, provided it is carried out in a truly scientific manner and does not override moral laws, can never conflict with the faith, because the things of the world and the things of faith derive from the same God. The humble and persevering investigator of the secrets of nature is being led, as it were, by the hand of God in spite of himself, for it is God, the conserver of all things, who made them what they are (36).

From the perspective of science, of course, the rationalist-materialist prejudices which scientists inherited from the Enlightenment continue to drive many of them away from the deeper truth found in religious faith. But as others at this conference have already noted, times are changing as the “argument from design” has gained new strength. Anyone who hasn’t seen the August 1998 issue of *Scientific American* should pick up a copy and browse through the article entitled “Beyond Physics: Renowned Scientists Contemplate the Evidence for God.” While the writer certainly doesn’t take a Catholic approach to these issues, listen to the following quotations from the article:

“There is a huge amount of data supporting the existence of God,” asserts George Ellis, a cosmologist at the University of Cape Town and an active Quaker . . .

“The science of the 20th century is showing us, if anything, what is unknowable using the scientific method — what is reserved for religious beliefs,” [adds] Mitchell P. Marcus, chairman of computer science at the University of Pennsylvania. “In mathematics and information theory, we can now guarantee that there are truths out there that we cannot find . . .”

“The inability of science to provide a basis for meaning, purpose, value and ethics is evidence of the necessity of religion,” says Allan Sandage [one of the fathers of modern astronomy] — evidence strong enough to persuade him to give up his atheism late in life.

[Meanwhile, George] Ellis, who similarly turned to religion only after he was well established in science, raises other mysteries that cannot be solved by logic alone: “The reasons for the existence of the universe, the existence of any physical laws at all and the nature of the physical laws that do hold — science takes all of these for granted, and so it cannot investigate them.”

“Religion is very important for answering these questions,” Allan Sandage concludes.

This brings me to my final point. The way science will regain its soul, the way science and faith will begin one day to work together to serve the truth and advance real human dignity, is through the witness of intelligent women and men of faith, like yourselves. The Fellowship of Catholic Scholars has come a long way in a short time. Believe me when I say that God is using all of you as missionaries to a new areopagus, where people have a desperate need for God but don’t have the language to even ask for your help.

Your faith in Christ Crucified — as scholars and writers, teachers and scientists — is a very powerful form of evangelization. You preach the Christ who is Alpha and Omega, the beginning and end of all things; the One in whom the natural and the divine, the spiritual and the material, science and faith, are reconciled. I mentioned earlier that poetry, like art and religious faith, is one of those things that speaks to the hungers of the human heart. I’m not much good at reading poetry in public, but there’s a poem by Rainer Marie Rilke — it’s called “Evening” — which captures so beautifully some of the things we’ve been talking about tonight. I encourage you to read it and reflect on it. Listen just to the final verse:

To you is left (unspeakably confused)
your life, gigantic, ripening, full of fears,
so it, now hemmed in, now grasping all,
is changed in you by turns to stone and stars.

This is the human predicament: part clay, part glory; a story told crudely in low budget films and elegantly in high poetry; studied and measured by science; redeemed by God’s son . . . and lived by each of us. The reconciliation of faith and science, I suspect, takes place first in our own hearts. And it begins when we say “I believe” — and we mean it.

Thank you, and God bless you all.

ADDENDUM

Evening

By Rainer Marie Rilke

Slowly now the evening changes his garments
held for him by a rim of ancient trees;

you gaze: and the landscape divides and leaves you,
one sinking and one rising toward the sky.

And you are left, to none belonging wholly,
not so dark as a silent house, nor quite
so surely pledged unto eternity
as that which grows to star and climbs the night.

To you is left (unspeakably confused)
your life, gigantic, ripening, full of fears,
so it, now hemmed in, now grasping all,
is changed in you by turns to stone and stars.

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