



Institute For Theological Encounter With Science and Technology

Volume 43 - # 2 & #3

Spring/Summer 2012 Bulletin

Financial Realities

Dear ITEST colleagues:

In this opening message, I will bring you up to date on the financial position of ITEST, and the plans we must necessarily make for the future.

Member dues have never covered more than about 1/6 of our annual expenses. The fundraising efforts of the last couple of years have fallen short of our goals, and our treasury is now severely depleted. ITEST's founder, Fr. Robert Brungs, S.J., always described ITEST as a "mendicant ministry" that "survived into existence." We are now looking at the question of how to survive, and in what form.

After Fr. Brungs died in 2006, ITEST relocated its office from the Jesuit residence at SLU to the Cardinal Rigali Center, the headquarters of the Archdiocese of St. Louis. We've been there over five years, paying a very modest rent that we can't match elsewhere in St. Louis. Our staff consists of ITEST's Associate Director Sr. Marianne Postiglione, RSM, with whom you are presumably all familiar after a quarter-century, plus her part-time Executive Assistant, Cheryl Harness. During the period when we were developing the learning modules of the program Exploring the World, Discovering God (EWDG), we also had Evelyn Tucker as project manager under contract; but not after the expiry of the supporting grant. It is now financially necessary that we shrink down even further.

ITEST will continue to exist, pursuing faith-science unity as before, staying interconnected primarily via internet links. We intend to continue our website www.ITEST-faithscience.org, as well as our FaceBook and LinkedIn pages. ITEST's foremost active "asset" is the assembly of faith-science learning modules for the elementary grades, which can be downloaded from our sister website www.creationlens.org. Our foremost goal is to keep these websites up and running. The quarter-million downloads so far from CreationLens tell us that the EWDG program is definitely useful to educators in Catholic and Christian schools. It would be a travesty to allow those modules to disappear. The cost of maintaining our websites, fending off hackers, etc., is held down by the way Bill Herberholt bills us for much less than his actual cost in doing that work.

Owing to our strong educational component, it is possible that some ITEST activities may be absorbed within the Archdiocesan education department, but that is not certain at this writing.

We are going to try very hard to maintain publication of the ITEST Bulletin. Since the articles are all contributed by authors without fee, the major Bulletin cost is for Sr. Marianne's time in preparation and editing. Sending it by Email to most members has reduced our postage cost dramatically. The present "double issue" is an example of how we're striving to hold down costs.

We are very grateful to all of you who have continued to express confidence in ITEST over many years. The modern world certainly needs a forum that brings faith and science together.

Thomas P. Sheahen, Director

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Announcements

Mrs. Marie C. Sherman

1924-2012

The members of the ITEST Board of Directors and Staff extend condolences and prayers to the family and colleagues of Mrs. Marie C. Sherman who died and rose to new life on March 31. Marie was a valued member of the ITEST Board of Directors for many years and also served on the Advisory Council for Exploring the World, Discovering God (EWDG) since its inception in 2006. Marie officially retired from the duties of the ITEST Board in January, but agreed to stay on in a consultative position.

Marie was the widow of Lewis Sherman, the mother of eight children and cherished grandmother of many. After launching her career as a chemist with Monsanto during World War II, she devoted the next twenty years to raising her family as a “stay-at-home” mom. After receiving her Master’s degree in chemistry, Marie went on to become a nationally lauded science educator and advocate with special emphasis on chemistry education. She taught chemistry at Ursuline Academy in St. Louis

for 45 years, and during that time inspired many young women to pursue the study of science. Marie was also known in the St. Louis region for the live chemistry shows she gave at elementary schools since the 1970s.

In a letter to Marie from the ITEST Board of Directors on the occasion of her retirement from that body, Sister Marianne wrote, “Your teaching science to students on the high school level added to your credentials as ‘bench scientist’—one of Father Brungs’ favorite expressions. He often said that doing science at the bench or teaching others is a form of worship—perhaps not official liturgical worship, but worship, nonetheless.” The words in Proverbs may have been written with Marie in mind—“Who will find a good woman?” Marie did not spin fine cloth or deal in regal purple dyes; but in the eyes of those who served with her on the ITEST Board and the Advisory Council, “...we have found that good and holy woman, right in our midst.” Live in the joy of the Risen Christ!

Revised Schedule for ITEST Fall Conference

Early Human Life Issues

An Open Forum on Issues raised by Scientific, Ethical and Theological Concepts

Saturday, October 13, 2012 – 8:30 to 3:00 pm

The Cardinal Rigali Center

Speakers: Fr. Kevin FitzGerald, SJ, Georgetown University
Dr. Ian Gallicano, Georgetown University
Fr. Ronald Mercier, SJ, St. Louis University

This conference is for pastoral care teams, parish, counselors, hospital staffs, medical ethicists, physicians, high school teachers, college/university professors in science and theology and concerned citizens. All are welcome – open to the public. More information will follow in a separate e-mail as soon as the details are settled



Institute For Theological Encounter with Science and Technology
Cardinal Rigali Center • 20 Archbishop May Drive • Suite 3400-A • St. Louis, Missouri 63119 • USA
314.792.7220 • www.ITEST-faithscience.org • E-mail: mariannepost@archstl.org

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The Cardinal's Column

by Francis Cardinal George, O.M.I., February 26, 2012
(Cardinal George is the Archbishop of Chicago and ecclesial advisor to ITEST)

What are you going to give up this Lent?

The Lenten rules about fasting from food and abstaining from meat have been considerably reduced in the last forty years, but reminders of them remain in the fast days on Ash Wednesday and Good Friday and in the abstinence from meat on all the Fridays of Lent. Beyond these common sacrifices that unite us spiritually to the passion of Christ, Catholics were and are encouraged to “give up” something voluntarily for the sake of others. Often this is money that could have been used for personal purposes and instead is given to help others, especially the poor.

This year, the Catholic Church in the United States is being told she must “give up” her health care institutions, her universities and many of her social service organizations. This is not a voluntary sacrifice. It is the consequence of the already much discussed Department of Health and Human Services regulations now filed and promulgated for implementation beginning Aug. 1 of this year.

Why does a governmental administrative decision now mean the end of institutions that have been built up over several generations from small donations, often from immigrants, and through the services of religious women and men and others who wanted to be part of the church's mission in healing and education? Catholic hospitals, universities and social services have an institutional conscience, a conscience shaped by Catholic moral and

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social teaching. The HHS regulations now before our society will make it impossible for Catholic institutions to follow their conscience.

So far in American history, our government has respected the freedom of individual conscience and of institutional integrity for all the many religious groups that shape our society. The government has not compelled them to perform or pay for what their faith tells them is immoral. That's what we've meant by freedom of religion.

That's what we had believed was protected by the U.S. Constitution. Maybe we were foolish to believe so.

What will happen if the HHS regulations are not rescinded? A Catholic institution, so far as I can see right now, will have one of four choices: 1) secularize itself, breaking its connection to the church, her moral and social teachings and the oversight of its ministry by the local bishop. This is a form of theft. It means the church will not be permitted to have an institutional voice in public life. 2) Pay exorbitant annual fines to avoid paying for insurance policies that cover abortifacient drugs, artificial contraception and sterilization. This is not economically sustainable. 3) Sell the institution to a non-Catholic group or to a local government. 4) Close down.

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In the public discussion thus far, efforts have been made to isolate the bishops from the Catholic faithful by focusing attention exclusively on “reproductive” issues. But the acrimony could as easily focus next year or the year after on assisted suicide or any other moral issue that can be used to distract attention from the attack on religious liberty. Many will recognize in these moves a tactic now familiar in our public life: those who cannot be co-opted are isolated and then destroyed. The arguments used are both practical and theoretical.

Practically, we're told that the majority of Catholics use artificial contraception. There are properly medical reasons, in some circumstances, for the use of contraceptive pills, as everyone knows. But even if contraceptives were used by a majority of couples only and exclusively to suppress a possible pregnancy, behavior doesn't determine morality. If it can be shown that a majority of Catholic students cheat on their exams, it is still wrong to cheat on exams. Trimming morality to how we behave guts the Gospel

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call to conversion of life and rejection of sin.

Trimming morality to how we behave guts the Gospel call to conversion of life and rejection of sin..

Theoretically, it is argued that there are Catholic voices that disagree with the teaching of the church and therefore with the bishops. There have always been those whose personal faith is not adequate to the faith of the church. Perhaps this is the time for everyone to re-read the Acts of the Apostles. Bishops are the successors of the apostles; they collectively receive the authority to teach and govern that Christ bestowed upon the apostles. Bishops don't claim to speak for every baptized Catholic. Bishops speak, rather, for the Catholic and apostolic faith. Those who hold that faith gather with them; others go their own way. They are and should be free to do so, but they deceive themselves and others in calling their organizations Catholic.

Since 1915, the Catholic bishops of the United States have taught that basic health care should be accessible to all in a just society. Two years ago, we asked that whatever instruments were crafted to care for all, the Hyde and Weldon and Church amendments restricting funding for abortion and respecting institutional conscience continue to be incorporated into law. They were excluded. As well, the present health care reform act doesn't cover entire sections of the U.S. population. It is not universal.

The provision of health care should not demand "giving up" religious liberty. Liberty of religion is more than freedom of worship. Freedom of worship was guaranteed in the Constitution of the former Soviet Union. You could go to church, if you could find one. The church, however, could do nothing except conduct religious rites in places of worship-no schools, religious publications, health care institutions, organized charity, ministry for justice and the works of mercy that flow naturally from a living faith. All of these were co-opted by the government. We fought a long cold war to defeat that vision of society.

The strangest accusation in this manipulated public discussion has the bishops not respecting the separation between church and state. The bishops would love to have

the separation between church and state we thought we enjoyed just a few months ago, when we were free to run Catholic institutions in conformity with the demands of the Catholic faith, when the government couldn't tell us which of our ministries are Catholic and which not, when the law protected rather than crushed conscience. The state is making itself into a church. The bishops didn't begin this dismaying conflict nor choose its timing. We would love to have it ended as quickly as possible. It's up to the government to stop the attack.

If you haven't already purchased the Archdiocesan Directory for 2012, I would suggest you get one as a souvenir. On page L-3, there is a complete list of Catholic hospitals and health care institutions in Cook and Lake counties. Each entry represents much sacrifice on the part of medical personnel, administrators and religious sponsors. Each name signifies the love of Christ to people of all classes and races and religions. Two Lents from now, unless something changes, that page will be blank.

The observance of Lent reminds us that, in the end, we all stand before Christ and give an accounting of our lives. From that perspective, I ask lay Catholics and

I ask lay Catholics and others of good will to step back and understand what is happening to our country as the church is despoiled of her institutions and as freedom of conscience and of religion become a memory from a happier past.

others of good will to step back and understand what is happening to our country as the church is despoiled of her institutions and as freedom of conscience and of religion become a memory from a happier past. The suffering being imposed on the church and on society now is not a voluntary penance. We should both work and pray to be delivered from it.

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Silence Gives Consent

by Edward J. O'Boyle

I have puzzled over whether ITEST as an organization ought to take a stand on the issue of the HHS mandate regarding contraceptive services and President Obama's "accommodation" knowing that there is no *hard* science perspective to draw upon and warn about. Even so, I see a *social* science perspective in that the mandate and accommodation have the effect of weakening private institutions such as universities and health care providers, Catholic or otherwise, thereby eroding some of the protection they afford persons and families when governments grow larger, more powerful, and more intrusive and making them more dependent on those governments. This erosion occurs in part because these private institutions have been "bought and paid for" by federal funds and for that reason are effectively silenced. Aside from Belmont Abbey College, Ave Maria University, and Louisiana College, what other private institutions have sued HHS on this matter of freedom of religious expression?

Silencing those institutions has the effect of silencing the persons associated with them...

Silencing those institutions has the effect of silencing the persons associated with them, or at least making it more costly for persons of conscience in those institutions to speak freely. This chilling effect likely will be felt by faculty (especially those who are not tenured) in the classroom, the research for which they seek funding, and the interpretation they put on their findings in order to please the sources of their funding. And, even more likely, will force physicians in those institutions to abandon or scale back their resistance to certain health care practices they regard as unethical. Sadly, we all know that those who "go along and get along" often get ahead and become role models for younger, ambitious colleagues.

Institutions that hold and express certain religious beliefs and convictions are being forced to choose between those beliefs and convictions and their financial stability. If they cave in to the government

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coercion, we can expect a slow and subtle erosion of other freedoms such as freedom of association, freedom of assembly, freedom of the press much the same way that married couples feel threatened when their married friends are unfaithful because they know at least intuitively that infidelity undermines the institution of monogamous marriage. Thus, when some universities and health care providers are unfaithful to their religious convictions in order to stay in business, others are weakened in their resolve to remain faithful and they too are nudged into silence by the very same coercive government mandates.

When *Roe v. Wade* was decided nearly 40 years ago a very small group of Catholic friends observed that even otherwise faithful Catholics little by little would be silenced on the abortion issue because someone they knew and loved would in fact have an abortion. For some Catholics put in a situation of holding fast to their convictions and continuing to care for and support their loved ones, their consciences sadly were turned into sleeping dogs best left undisturbed. Catholics today, if you believe the national polling on abortion, support that deadly practice in proportions very similar to other Americans. It follows that any

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Edward J. O'Boyle, PhD

Brief Biography

Edward J. O'Boyle, PhD, is Senior Research Associate affiliated with Mayo Research Institute and a long-time member of ITEST. He is a past president of the Association for Social Economics and recipient of the Association's Thomas Divine Award for lifetime contributions to social economics and the social economy.

Catholic institution, or other institution with similar beliefs and convictions, that today buys into the HHS mandate and the accommodation in effect has lost some of its integrity and for that reason finds itself best served by silence.

I contacted DePaul University recently because proponents of the HHS mandate and accommodation had stated publicly that DePaul is the largest Catholic university in the United States and provides its employees with insurance coverage for contraceptive services. Thus, if DePaul finds nothing objectionable with the practice, why should anyone else? The DePaul president, a Vincentian priest, responded through an intermediary who said that DePaul has “no plans to issue a general public statement but [is]

responding to inquiries and expression of concern ... [and] is encouraged by the [Obama] administration’s willingness to forge a compromise, but it would be premature to discuss it further until the university has had time to fully review the administration’s new approach.” As I see it, the University has been trapped into silence.

Tragically for all those who do not speak out on this freedom eroding HHS mandate and morally obtuse accommodation, their silence gives consent.

Being Human in an Age of Unbelief

Delivered to “Penn for Life,” University of Pennsylvania November 7, 2011

Archbishop Charles J. Chaput, O.F.M. Cap., Archbishop of Philadelphia

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In getting ready for tonight, Charles Gray asked me to keep two things in mind. First, he asked me to remember that we have a mixed audience here in Houston Hall, both Catholic and non-Catholic. Second, he asked me to explain what Catholics mean when we talk about the “sanctity” of human life, and why the Church deals with issues like abortion so vigorously in the public square.

As it turns out, most of my sources tonight are not Catholic. That shouldn’t be surprising. Catholics have no monopoly on respect for human dignity. Catholics do have a very long tradition of thinking about the nature of the human person and society, and I’ll be glad to talk about that in my remarks. But I’d like to begin by setting the proper framework for our discussion, which needs to be broader than abortion.

Last year I had the good fortune to read Eric Metaxas’ wonderful book, Bonhoeffer. It’s a biography of the great Lutheran theologian, Dietrich Bonhoeffer. I’ve quoted

Bonhoeffer’s work many times over the years. The reason is simple. I admire him. He could have been a professor. Instead he chose to be a pastor. He could have had a sterling academic career of lecturing about his ideas and his faith. Instead he chose to put them into action and to immerse himself in people’s lives. He was a man not of “values” in the meager modern sense, but of virtues in the classical and religious sense — the virtues of justice, courage and love, all grounded in the deep virtue of faith in a loving God.

The Third Reich hanged Bonhoeffer for his resistance activities just a few weeks before the end of the Second World War. Today we see him — rightly — as one of the great moral witnesses of the last century; a man who fought for the good, in the face of very grave evil, at the cost of his life.

Another great moral witness of the 20th century was the writer Alexander Solzhenitsyn, who began as an atheist but ended as a Russian Orthodox. His history of *The Gulag Archipelago*, in its indictment of Marx, Lenin, Stalin and the brutality of Soviet repression that grew naturally from their thought, is a masterpiece of modern literature. Like

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Bonhoeffer, Solzhenitsyn wrote from direct experience of imprisonment and organized inhumanity. Unlike Bonhoeffer, Solzhenitsyn survived the war, survived years in prison camps and was eventually exiled to the West. And that's where his story gets useful for our purposes tonight.

In 1978, four years after Solzhenitsyn left Russia, Harvard University asked him to speak to its graduating students. What Harvard may have expected was praise for Western abundance, freedom and diversity. What it got was very different.

Solzhenitsyn began by noting that Harvard's motto is *Veritas*. This is the Latin word for "truth." Then he added that "truth is seldom pleasant; it is almost invariably bitter."

Then he spent the next 6,000 words saying what nobody wanted to hear. He methodically criticized Western cowardice and self-indulgence; the vanity and weakness of America's intellectual classes; the "tilt of freedom in the direction of evil"; the right of people "not to have their divine souls stuffed with gossip, nonsense [and] vain talk" by the mass media; a pervasive Western atmosphere of legalism and moral mediocrity; and the rise of a destructive individualism that now forces decent people "to defend not so much human rights as human obligations."

Some of Solzhenitsyn's hard words came from his suffering. Some flowed from loneliness for his own country. But while Solzhenitsyn was harsh in his comments at Harvard, he was also accurate in at least some of what he said. Speaking of his Russian homeland he said, "After suffering decades of violence and oppression, the human soul longs for things higher, warmer and purer" than anything offered by the practical atheism now common in the West.

The reason for the problems of the West, said Solzhenitsyn, is found "at the root, at the very basis of human thinking in the past [several] centuries." Our culture has fallen away from our own biblically informed heritage. We've lost the foundation for our moral vocabulary. This loss has starved our spirit, debased our sense of any higher purpose to life, and destroyed our ability to defend or even to explain any special dignity we assigned to the human person in the past.(1)

Now I've said all of this to give a context for four simple points I'd like to share. I'll be brief. Then we can discuss them together.

Here's my first point. We remember Bonhoeffer, Solzhenitsyn and other men and women like them because

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of their moral witness. But the whole idea of 'moral witness' comes from the assumption that good and evil are real, and that certain basic truths about humanity don't change. These truths are knowable and worth defending. One of these truths is the notion of man's absolute uniqueness. Man is part of nature, but also distinct from it.

The philosopher Hans Jonas said that three things have distinguished human life from other animal experience since early prehistory: the tool, the image and the grave.(2) The tool imposes man's knowledge and will onto nature. The image—man's paintings and other art—projects his imagination. It implies a sense of beauty and memory, and a desire to express them. But the greatest difference between humans and other animals is the grave. Only man buries his dead. Only man knows his own mortality. And knowing that he will die, only man can ask where he came from, what his life means and what comes after it.

The grave then is an expression of reverence and hope. When Christians and other people of good will talk about "the dignity of the human person" and "the sanctity of human life," they're putting into words what we all instinctively know— and *have* known for a very long time. Unique in nature, and unlike any other creature,

Unique in nature, and unlike any other creature, something elevated and sacred in men and women demands our special respect.

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something elevated and sacred in men and women demands our special respect. When we violate that human dignity, we do evil. When we serve it, we do good. And therein lies one of many ironies. We live in a society that speaks persuasively about protecting the environment and rescuing species on the brink of extinction. But then it tolerates the killing of unborn children and the abuse of human fetal tissue as lab material.

This leads me to my second point. The University of Pennsylvania is one our country's premier research universities. That's a great gift to the Philadelphia community. It's also a great privilege for all of you as students, especially those specializing in the sciences.

Science and technology have expanded human horizons and improved human life in vital ways over the last century. They've also, at times, done the opposite.

Science and technology have expanded human horizons and improved human life in vital ways over the last century. They've also, at times, done the opposite.

Part of a good education is learning the skill of appropriate skepticism. And that skepticism, that healthy wariness, should apply even to the methods and claims of science and technology. When a distinguished and thoroughly secular scholar like Neil Postman writes that “the uncontrolled growth of technology destroys the vital sources of our humanity. It creates a culture without a moral foundation. It undermines certain mental processes and social relations that make human life worth living”—then we need to be concerned.(3)

There's a proverb worth remembering here: “To a man with a hammer, every problem is a nail.” If modern man is scientific man, technology is his hammer. But every problem isn't a nail. Knowledge without the virtues of wisdom, prudence and, above all, humility to guide it is not just unhelpful. It's dangerous. Goethe's poem, *The Sorcerer's Apprentice*—which some of us probably know from the Mickey Mouse cartoon based on it—sticks in our memories for a reason. We're never as smart as we think we are, and we have a bad track record when it comes to preventing the worst uses of our own best discoveries.

Science involves the study of the material world. But human beings are more than the sum of their material processes. Trying to explain the human person with thinking that excludes the reality of the spiritual, the dignity of the religious and the possibility of God simply cripples both the scientist and the subject being studied—man himself. To put it another way, we can destroy what we mean by humanity while claiming, and even intending, to serve it.

We might wisely remember one other fact about science. Writer Eric Cohen observed that “From the beginning, science was driven both by democratic pity and aristocratic guile, by the promise to help humanity and the desire to be free from the constraints of the common man, with his many myths and superstitions and taboos.”(4) In other words, scientists too often have a divided heart: a sincere desire to serve man's knowledge, and a sincere disdain for what they see as the moral and religious delusions of real men and women. If this doesn't make us just a little bit uneasy, it should. Both faith and science claim to teach with a special kind of authority. One of the differences is this. Most religious believers accept, at least in theory, that they'll be judged by the God of justice for their actions. For science, God is absent from the courtroom.

This leads to my third point. God is also absent from the U.S. Constitution—but not because he's unwelcome. In effect, God suffused the whole constitutional enterprise. Nearly all the Founders were religious believers, and some were quite devout. Their writings are heavily influenced by biblical language, morality and thought.

America could afford to be secular in the best sense, precisely because its people were so religious.

America could afford to be secular in the best sense, precisely because its people were so religious. The Founders saw religious faith as something separate from government but vital to the nation's survival. In his Farewell Address, Washington famously stressed that “religion and morality are indispensable supports” for political prosperity. He added that “reason and experience

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both forbid us to expect that national morality can prevail in exclusion of religious principle.” For John Adams, John Jay, James Wilson, Alexander Hamilton, Charles Carroll, George Washington and most of the other Founders – including Thomas Jefferson and Benjamin Franklin—religion created virtuous citizens. And only virtuous citizens could sustain a country as delicately balanced in its institutions, moral instincts and laws as the United States.

Here’s my purpose in mentioning this. The American Founders presumed the existence of natural law and natural rights. These rights are inalienable and guaranteed by a Creator; by “nature’s God,” to use the words of the Declaration of Independence. Such ideas may be out of fashion in much of legal theory today. But these same ideas are very much alive in the way we actually reason and behave in our daily lives.

Most of us here tonight believe that we have basic rights that come with the special dignity of being human. These rights are inherent to human nature. They’re part of who we are. Nobody can take them away. But if there is no Creator, and nothing fundamental and unchangeable about human nature, and if “nature’s God” is kicked out of the conversation, then our rights become the product of social convention. And social conventions can change. So can the definition of who is and who isn’t “human.”

The irony is that modern liberal democracy needs religion more than religion needs modern liberal democracy. American public life needs a framework friendly to religious belief because it can’t support its moral claims about freedom and rights with rational and secular arguments alone. In fact, to the degree that it encourages a culture of unbelief, liberal democracy undermines its own grounding. It causes its own decline by destroying the public square’s moral coherence.(5)

That leads to my fourth and final point. The prolife movement needs to be understood and respected for what it is: part of a much larger, consistent and morally worthy vision of the dignity of the human person. You don’t need to be Christian or even religious to be “prolife.” Common sense alone is enough to make a reasonable person uneasy about what actually happens in an abortion. The natural reaction, the sane and healthy response, is repugnance.

What makes abortion so grievous is the intimacy of the violence and the innocence of the victim..

What makes abortion so grievous is the intimacy of the violence and the innocence of the victim. Dietrich Bonhoeffer—and remember this is the same Lutheran pastor who helped smuggle Jews out of Germany and gave his life trying to overthrow Hitler—wrote that the “destruction of the embryo in the mother’s womb is a violation of the right to live which God has bestowed on this nascent life. To raise the question whether we are here concerned already with a human being or not is merely to confuse the issue. The simple fact is that God certainly intended to create a human being and that this nascent human being has been deliberately deprived of his life. And that is nothing but murder.”(6)

Bonhoeffer’s words embody Christian belief about the sanctity of human life present from the earliest years of the Church. Rejection of abortion and infanticide was one of the key factors that set the early Christians apart from the pagan world. From the Didache in the First Century through the Early Fathers of the Church, down to our own day, Catholics—and until well into the 20th century all other Christians—have *always* seen abortion as gravely evil. As Bonhoeffer points out, arguing about whether abortion is homicide or only something close to homicide is irrelevant. In the Christian view of human dignity, intentionally killing a developing human life is *always* inexcusable and *always* gravely wrong.

Working against abortion doesn’t license us to ignore the needs of the homeless or the poor, the elderly or the immigrant. It doesn’t absolve us from supporting women who find themselves pregnant or abandoned. In Catholic belief, all human life, no matter how wounded, flawed, young or old, is sacred because it comes from God. The dignity of a human life and its right to exist are guaranteed by God. Catholic teaching on abortion and sexuality is part of the same integral vision of the human person that fuels Catholic teaching on economic justice, racism, war and peace.

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These issues don't all have the same content. They don't all have the same weight. All of them are important, but some are more foundational than others. Without a right to life, all other rights are contingent. The heart of the matter is what Solzhenitsyn implied in his Harvard comments. Society is not just a collection of sovereign individuals with appetites moderated by the state. It's a community of interdependent persons and *communities* of persons; persons who have human obligations to one another, along with their human rights. One of those obligations is not intentionally kill the innocent. The two pillars of Catholic social teaching are respect for the sanctity of the individual and service to the common good. Abortion violates both.

In the American tradition, people have a right to bring their beliefs to bear on every social, economic and political problem facing their community. For Christians, that's not just a privilege. It's not just a right. It's a demand of the Gospel. Obviously, we have an obligation to respect the dignity of other people. We're always bound to treat other people with charity and justice. But that good will can never be an excuse for our own silence.

Believers can't be silent in public life and be faithful to Jesus Christ at the same time. Actively witnessing to our convictions and advancing what we believe about key moral issues in public life is not "coercion." It's honesty. It's an act of truth-telling. It's vital to the health of every democracy. And again, it's also a duty—not only of our religious faith, but also of our citizenship.

The University of Pennsylvania's motto, as most of you know, is *Leges sine moribus vanae*. It means "Laws without morals are useless." All law has moral content. It's an expression of what we "ought" to do. Therefore law teaches as well as regulates. Law always involves the imposition of somebody's judgments about morality on everyone else. That's the nature of law. But I think the meaning of Penn's motto goes deeper than just trying to translate beliefs into legislation. Good laws can help make a nation more human; more just; more noble. But ultimately even good laws are useless if they govern a people who, by their choices, make themselves venal and callous, foolish and self-absorbed.

It's important for our own integrity and the integrity of our country to fight for our prolife convictions in the public

square. Anything less is a kind of cowardice. But it's even more important to live what it means to be genuinely human and "prolife" by our actions—fidelity to God, love for spouse and children; loyalty to friends; generosity to the poor; honesty and mercy in dealing with others; trust in the goodness of people; discipline and humility in demanding the most from ourselves.

These things sound like pieties, and that's all they are—until we try to live them. Then their cost and their difficulty remind us that we create a culture of life in the measure that we give our lives to others. The deepest kind of revolution never comes from violence. Even politics, important as it is, is a poor tool for changing human hearts. Nations change when people change. And people change through the witness of other people—people like each of you here tonight. You make the future. You build it stone by stone with the choices you make. So choose life. Defend its dignity and witness its meaning and hope to others. And if you do, you'll discover in your own life what it means to be fully human.

(1) Alexander Solzhenitsyn, "A World Split Apart," Harvard Class Day Afternoon Exercises, June 8, 1978

(2) Hans Jonas, "Tool, Image and Grave: On What is Beyond the Animal in Man," 1985

(3) Neil Postman, *Technopoly: The Surrender of Culture to Technology*, Vintage Books/Random House, New York 1993; p. xii

(4) Eric Cohen, *In the Shadow of Progress: Being Human in the Age of Technology*, Encounter Books, New York, 2008; p. 15

(5) See Colgate University political scientist Robert P. Kraynak, *Christian Faith and Modern Democracy: God and Politics in the Fallen World*, University of Notre Dame Press, Notre Dame, IN, 2001; p xii and throughout

(6) Dietrich Bonhoeffer, *Ethics*, Macmillan, New York 1978; p. 175-176

Ashes to Ashes

by John Garvey

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John Garvey is an Orthodox priest and a columnist for Commonweal.

(Editor's note: A year or so after Fr. Brungs' death in 2006, a search of his ancient WordPerfect computer files revealed the following article from Commonweal found in his "special documents" file. Having witnessed Father Brungs' serious reflection and prayer on the nature of life after bodily death, and the promise of a glorified body, I found it intriguing to note that Fr. Brungs gave special attention to the following article. Have we not all at some time or other, asked the same questions posed by the author?)

The first time I seriously questioned what we usually think of as the self, or the soul, was following an operation which required general anesthesia. My loss of consciousness was so profound that there was no experience, none at all, of time passing, as there is during ordinary sleep. I went under, then seemed almost immediately to wake up. The hours between might as well not have been there.

If an anesthetic can do this, I thought afterward, if it can so thoroughly cancel what I thought of as me, what will death be like? And this led me to wonder what it is that I consider my self. Is it the sum of my memories? That could be canceled by a blood clot. Is what I consider my self, or my soul, what God considers my self? And could I imagine my self or my soul without a body that is unquestionably me, any more than I can consider my mind without my brain?

After ten years as a parish priest, and after many conversations with parishioners and with other clergy, I am convinced that where death and the afterlife are concerned, most Christians are functionally Neo-Platonists. Neo-Platonism was an influence on many early Christian thinkers, Augustine among them; it tended to find the soul not only superior to the body, and an entity quite separate from the body, but saw the body as in many ways an encumbrance, something we will be happy to escape.

Think of the way many of us were taught: after death, an

immortal soul leaves the mortal body and goes to heaven or hell (or, if you are Catholic, maybe—even probably—to purgatory). The implication of this way of thinking is that we will be much happier once the soul leaves our body behind. There was always a nod to the idea that resurrection was somehow part of this—we would get glorified bodies after the general resurrection at the end of time, and they wouldn't be much like bodies at all—but the really important thing was whether we were going to heaven after death. In much of our writing and preaching

In much of our writing and preaching about death there is an implicit denigration of the body and the flesh.

about death there is an implicit denigration of the body and the flesh. The spirit is seen as superior to flesh, and the soul, freed from the flesh, will certainly be better off.

It is easy to see how some scriptural passages could be read this way. "Who will deliver me from this body of death?" Paul asks in Romans (7:24). For Paul, though, the sense of the flesh as a negative thing comes not from the fact that flesh is physical rather than spiritual, but that, as a result of sin, it is death-bearing. For Paul, the world, before God's will is completed in it, is given over to suffering and death, to the mystery represented by Christ's Passion and Cross. The problem is not with the physical, fleshly nature of our being. The problem, rather, has come about because the physical world and the flesh—both holy, both good, from the time of creation—have been dragged into sin and death by a failing that is spiritual, not physical: by sin, something we both choose and fall into, a dark possibility that infected the world from the moment we were given the possibility of choice.

In his book *O Death, Where is Thy Sting?* (St. Vladimir's Seminary Press), Orthodox theologian Alexander Schmemmann cites Romans 5:12—Through sin, death has come into the world—and comments that

For Christianity, death first of all is revealed as part of the moral order, as a spiritual catastrophe. In some final, indescribable sense man desired death,

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or perhaps one might say, he did not desire that life that was given to him by God freely, with love and joy... The world is a perpetual revelation of God about himself to humanity... But the tragedy—and herein lies the heart of the Christian teaching about sin—is that man did not desire this life with God and for God. He desired life for himself... And in this free choice of himself, and not of God, in his preference for himself over God, without realizing it, man became inextricably a slave of the world, a slave of his own dependence on the world.

Schmemmann points out that even our life-sustaining eating is a communion with death. The plants we eat have been cut away from their roots, the fruit has been plucked from the tree, the animals have been killed.

He eats in order to live, but with his food he communes with what is mortal, for food does not have life in itself... Thus, death is the fruit of a life that is poisoned and perpetually disintegrating, a disintegration to which man has freely subjected himself. Not having life in himself, he has subjected himself to the world of death.

If we bracket the assumptions we have been educated to have with regard to death and life after death, the Scriptures make it clear that the idea of an afterlife seen in terms of the immortality of the soul is more a Neo-Platonist than a Christian idea. Biblically, eternal life and the resurrection of the body are essentially the same thing. Resurrection implies embodiment. It means taking the flesh — God’s creation, a good thing — more seriously than much of Christian thought has tended to. In 2 Maccabees 7, resurrection is spoken of most dramatically. After torture, one of the persecuted brothers “quickly put out his tongue and courageously stretched forth his hands, and said nobly, ‘I got these from Heaven, and because of his laws I disdain them, and from him I hope to get them back again.’” Isaiah is even more explicit in linking the body to immortality: “The dead shall live, their bodies shall rise. O dwellers in the dust, awake and sing for joy!” (26:19).

We should nevertheless understand why the Neo-Platonist idea of the unencumbered soul’s immortality remains so attractive. It is easier, in a way, to think that something naturally immortal inheres in us, to be freed by death. It makes death seem less total, less thoroughly annihilating.

This is precisely where we move away from the Bible. Ruah, in Hebrew, and pneuma, in Greek, are often “spirit” but both literally mean “breath.” “Put not your trust in princes, in a son of man, in whom there is no help,” says Psalm 146. “When his breath departs he returns to his earth; on that very day his plans perish.” Another psalm is even starker: “As for man, his days are like grass; he flourishes like a flower of the field; for the wind passes over it, and it is gone, and its place knows it no more” (Psalm 103). Biblically, death is what it looks like. The corpse in front of you is not the husk of Fred, who has left a fleshly prison to go in some shining form to a better world, It is Fred, dead.

Our belief in the immortality of the soul is attractive because we hope that there is something about us that is less contingent than the body, something less creaturely, that possesses an inherent immortality. For much of history it was possible to think of the mind as somehow separate from the body, consciousness as somehow spiritual in the way the meat soup of our brain is not. This has been especially true in the West, but Hinduism and Buddhism have also seen lively debates about this dualism. That has changed in recent years. Although philosophers and neurologists still debate the relationship between mind and brain, the idea that one can be in any way separate from the other is no longer tenable.

If we see our bodies as the selves we are, if we understand that soul and body are not separate entities but that the fullness of what we are spiritually can only exist embodied, we are totally dependent on something we do not and cannot possess. While believers hold that God wills us into being from nothing, heartbeat by heartbeat, and that from the beginning of time God knew that we would exist and saw this as something good, we also know that before a certain point — our physical conception—we simply

It was God’s will that brought us into being, and any being we have after death will likewise have to be willed by God.

were not. It was God’s will that brought us into being, and any being we have after death will likewise have to be

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willed by God. This has nothing to do with something we possess or are due.

It puts our faith more on the line to believe in resurrection than to believe in an immortal soul. To believe in resurrection means that just as there was no life before conception, there can be no life after death that is not given by God's willing it to be so. And we are incapable of knowing what any kind of life after death will be like, or how it will be accomplished. This is an insult to our imagine autonomy.

All of which means that we are putting ourselves completely into the hands of a God we cannot understand, except through trust — stepping over the edge of a cliff in the dark, hoping that the promised net will be there — that what we have been told, second-hand, will be true. I say second-hand because even someone who thought he had witnessed the Transfiguration or the Resurrection might alter legitimately wonder, might have second thoughts. Peter, after witnessing the Transfiguration, denied Jesus three times, and we are all far from having come that close to witnessing God's glory. Still, as believers we have a story which is compelling to us. We hold on to it because it makes more sense to us than any other story—more sense than reincarnation, or ultimate meaninglessness, or an extinction we won't have to worry about because we won't be there to experience it.

Returning to my experience of anesthesia, I am not sure I have resolved what I encountered there, except to say that death may be known as a cancellation, as total an ending as humans could experience (if total endings can actually be a matter of experience), but at the same time God has the power to raise me to life. There may be no interim... we are out of the space/time continuum, the "now" and "later" of the universe as we know it, with time as one of its limited dimensions. Yet I have no way of knowing this.

My faith is that if I am canceled by the power death has in our world, God's greater power can overcome it.

Is the desire to survive death, to live despite death, a case of wanting to believe in something because the alternative seems too bleak? Or, as some would have it, a result of not wanting to face the truth? Here one must ask why the assumption that the truth will be bleak ought to be preferred to good news to the contrary. Is one view inherently more realistic or more naïve than the other? I say this as one

whose instincts are all thoroughly agnostic, dark, and pessimistic; but I have experienced enough to know that I am often wrong in allowing those instincts to govern my assumptions. That lump turns out not to be cancerous more often than not... but even apart from such obvious things, there are those times when an experience of great beauty or joy bursts in on you, or the incandescence of love overwhelms you, and such experiences put darkness and pessimism in their lesser place. Such experiences either are merely human symptoms (like indigestion and dandruff) or they have something to do with what the universe is about, its ultimate ground. Without proof—without proof being possible — I will try to live as if the latter were true.

The idea that a soul has a separate existence — separate from the body, existing as a monad — is, if not part of orthodox Christian thought, a popular misunderstanding among Christians. It is hard, especially in a culture that stresses individualism, to accept the idea that the self exists only in relationship with others. In fact, who we are is formed by the family into which we are born, the language we learn, the culture in which we are immersed. Finally, we are, we exist, because we are loved by God who wills us to be. Even within the Trinity, the persons exist separately only in relation to one another. The moment we think that our being is in any way independent of the relationship we have with God we fall into the trap Genesis warned us about: We want to be like gods.

I want to make it clear that, when I move away from terms like "immortal soul" to a more biblical understanding I do not mean that God wishes for us to be transitory, or to say that we are not in fact called forth into eternal being. Rather, I mean only to move away from giving the priority to the idea of disembodiment, to the idea that what really matters is liberation from the flesh. To think that we can have an eternal life apart from resurrection is not Christian. It means taking neither death nor resurrection seriously enough, neither seeing the tragedy of the first in all its depth, nor the great joy of the second in all its glory.

First, as Christians we must take seriously the tragedy of death. Christianity is not meant to reconcile us with death, but to see it for the horror it is. Jesus weeps at the tomb of Lazarus, and at Gethsemane he is filled with horror at what awaits him. This is a contrast with those forms of religion that console us with the idea that "death is just a

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part of life.” Some part. We must face the fact that death is as bad as it looks, that it is not a simple rite of passage. It is the loss of everything we have known. No one who has loved anyone or anything in this life can find the idea of leaving life anything but tragic.

For the Christian, joy is found in the fact that even this enemy, even this thing we fear most—and rightly so — has been overcome in Christ. The Paschal liturgy of the Orthodox Church sings over and over again, “Christ is risen from the dead, trampling down death by death, and upon those in the tombs bestowing life.” It is a victory dance. And it involves embodiment, Schmemmann again:

In essence, my body is my relationship to the world, to others; it is my life as communion and as mutual relationship. Without exception, everything in the body, in the human organism, is created for this relationship, for this communion, for this coming out of oneself. It is not an accident, of course, that love, the highest form of communion, finds its incarnation in the body; the body is that which sees, hears, feels, and thereby leads me out of the isolation of my “I”... The body is not the darkness of the soul, but rather the body is its freedom, for the body is the soul as love, the soul as communion, the soul as life, the soul as movement. And this is why, when the soul loses the body, when it is separated from the body, it loses life; it dies, even if this dying of the soul is not a complete annihilation, but a dormition, or sleep.

What will this be like? Who knows, or can? We should allow ourselves — in fact, should demand of ourselves — an agnosticism about imagining the afterlife, or what resurrection will mean. Our best scriptural witnesses stammer. Paul in 1 Corinthians 15, speaks of the body we now have as a mere kernel, as if what it will blossom into is something we are incapable of imagining. In 1 John 3:2 we are told, “Beloved, we are God’s children now; it does not yet appear what we shall be, but we know that when he appears we shall be like him, for we shall see him as he is.”

Of course it is hard to have faith that this will be so. Still as Daniel Callahan suggests (“Visions of Eternity,” *First Things*, May, 2003), some secular approaches to the idea of immortality are even more problematic. Callahan addresses, for example, the scientific vision of life

extension (which encompasses even the idea of extending life forever), and contrasts it with the Christian approach to the question of eternal life. He quotes professor of religion Carol Zaleski: “To be given everlasting longevity without being remade for eternal life is to live under a curse.” The extension of human life as it is, for many years or forever, would mean extending nearly infinite forms of misery, heartlessness, boredom, and torment, most of them the result of the kind of people we are. Callahan goes on to point out the obvious: death and suffering are not made the agonies they are by a conquerable biology, but by human behavior.

Because Christian belief has held that eternal life requires embodiment, Christianity has a long tradition of thought about what eternal embodiment might mean. It would mean a transformed reality participated in by a transformed people. Callahan offers a delightful quote from Marguerite of Oingt, a fourteenth-century nun and mystic, who wrote that “the saints will be completely within their Creator as a fish within the sea; they will drink to satiety, without getting tired and without in any way diminishing the water... [They] will drink and eat the great sweetness of God. And the more they eat, the more their hunger will grow. And this sweetness cannot decrease any more or less than can the water of the sea.”

So much for the problem of boredom. This is very much like the vision of St. Gregory of Nyssa, who said that because God is infinitely other than we are, an eternity of approaching what we can never reach will mean our continual transformation. “We can conceive then of no limitation in an infinite nature; and that which is limitless cannot by its nature be understood. And so every desire for the Beautiful which draws us on in this ascent is intensified by the soul’s very progress towards it. And this is the real meaning of seeing to have this desire satisfied: (From *Glory to Glory*, St. Vladimir’s Seminary Press).

Christian thinkers have approached the idea of immortality in a way that is, in Callahan’s words, a “much richer, more nuanced picture than anything the scientists and their followers have conjured up.” Callahan quotes Caroline Walker Bynum’s *The Resurrection of the Body*: However absurd the idea of resurrection may seem, “it is a concept of sublime courage and optimism. It locates redemption there where ultimate horror also resides — in pain, mutilation, death, and decay....Those who articulated

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[it] faced without flinching the most negative of all the consequences of embodiment: the fragmentation, slime, and stench of the grave... We may not find their solutions plausible, but it is hard to feel they got the problem wrong.” Comments Callahan: “The crux of their ‘courage and optimism’ was to make the body the center of their attention, turning their back on the Greek notion that the soul is the essence of personhood. Not so, the medieval held: it is the body.”

Callahan is bold enough to suggest that scientists might pay more attention to the Christian vision, much as it might gall them to take seriously a tradition they too often see as hostile to science: “Nonetheless, in the doctrine of the resurrection of the body many generations of thoughtful and imaginative people have tried to imagine what eternal life might be like; and, even more to the point, what it ought to be like if we are sensibly to desire it.”

And we do desire it, sensibly or not so sensibly. Having been given the vision of a God whose care for us is so heartbreakingly thorough that he became one of us, suffering what we suffer, dying as we do, to show us that

even what we fear most has been conquered by a love we are called to show one another, we cannot but hope that it is true and try to stake our lives on that hope. Our faith tells us that we have been baptized into Christ’s death and the hope of resurrection. “For you have died,” Colossians tells us, “and your life is hid with Christ in God.” When Christ who is our life appears, then you also will appear with him in glory.” This is the risen Christ who asked Mary not to cling to him, who showed Thomas wounds received on our side of death, and who made breakfast for his friends at the edge of the sea. And if we find this hard to believe, let us hope that our doubt has something in common with that of the Apostles in Luke’s account (24:41) when they encountered the risen Christ: “While they still disbelieved for joy and wondered, he said to them, “Have you anything here to eat?”

Letters to the Editor

January 27, 2012

Letter to the Editor

The study of faith and science in the Catholic Church progressed a notch with the first offering of ST 221 by the Paul VI Pontifical and Catechetical Institute of the Archdiocese of St. Louis in the Fall Semester, 2011. This course offered a historical and current appraisal of the contributions of Catholic Scientists and the Catholic Church throughout the ages. It also looked at current issues in which the Church and Science need to collaborate to find Truth. Dr. Thomas Sheahen, ITEST director and Sister Carla Mae Streeter OP, Aquinas institute, met with the students to give their own analysis of church and science. Most of the students in the class were teachers, but not all. Some came to be better informed about the relationship between Faith and science. Reports on video selections

were given by the students also. The final papers dealt with Stigmata occurrences and miracle cures at Fatima or Lourdes and how science and Church cooperated in authenticating these occurrences. The relationship of current Catholic Scientists to their Catholic Faith was also examined. These ten weeks—a short period to review over 2000 years of Church and human history—offered the students a fast but relatively thorough examination of the church’s proactive support of science and the search for truth.

The dialogue between instructor and student continues via email. Articles and information found are shared enabling them to stay current on faith/science issues.

Evelyn P. Tucker
Instructor - Paul VI Institute

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Letters to the Editor

Fr. Al Fritsch, SJ
316 Fifth Street
Ravenna, KY 40472

Dated February 15, 2012

Dear ITEST Friends,

I read with utter dismay the two articles in the ITEST Bulletin, Volume 43, #1 dealing with global warming skepticism and climate change and the Catholic Church. They arrived a little after the official Jesuit global environment report "Healing a Broken World." Why the dismay? Because the Jesuit report agrees with the expected climate change effects caused by human action -- a most Christian and prudent thing to do (and prudence is not found in your two articles). Mere absence of absolute certitude and the admitted lack of possible scientific experimental evidence should not feed skepticism or a denial of what could happen to damage the vitality of our planet. Where is a pro-life stance in your essays?

The added pain is that I concelebrated several Masses at Stockholm at [t]he First United Nations Environmental Conference in June, 1972 with our mutual friend, Bob Brungs, SJ. Were he alive I am convinced he would never had allowed your two articles to coincide with our Jesuit statement.

In the ensuing forty years, much has occurred. "Through our fault" is a good ecological confessional refrain, even though the merchants of doubt have led us to voice skepticism in such areas as tobacco smoking regulations, DDT, ozone holes, and climate change; for them and their think tanks going slow is best -- certainly for their corporate coffers.

At least, folks, present both sides of the environmental issues for the good memory of Bob Brungs.

Al Fritsch, SJ
Earth Healing
February 15, 2012

3696 Green Ridge Road
Furlong, Pa. 18925

February 26, 2012

To the ITEST community,

First let me express my gratitude for posting my editorial, "Climate Change and the Catholic Church" in your most recent Bulletin and also allowing me to respond to a letter from one of your Jesuit subscribers that took issue with my commentary.

In responding to the letter I believe there are several points to be made. First, as I noted in my editorial, those who believe in the scientific method in addressing the climate change debate are no less interested in the health of the planet than those who advance the alarmist position. We have no hidden agendas but prefer to let the facts speak for themselves. Indeed, I find it sad that the priest needs to revert to the trite "denier" label to address his opponents. There is no need to denigrate the thousands of highly accredited scientists around the world who are uncorrupted by the grant process and are only searching for a better understanding of this issue.

Second, it is with utter amazement that I find Father Fritsch willing to subscribe to a point of view without being willing to question the underlying science. Does he blindly submit to the teachings of the ecotheologians of our time like Thomas Berry, the NRPE and the fraudulent assessments of the United Nation's IPCC or has he done his own objective research of the subject and arrived at this own independent conclusions? I should note that as a product of a four-year Jesuit college, Loyola University of Baltimore, one of the foremost principles inculcated in the students was the need to question, and that is the tack I have taken on this subject. So I find it quite puzzling that the Jesuit priest has fallen in line with the crowd that believes climate change to be a closed issue. Scientific theory, by definition, is never a closed issue.

Third, I find offense in the accusation that as a practicing Catholic, my position on climate change conflicts with a pro-life position. In point of fact, it is those who want to limit third world access to fossil fuels who are depriving these people of a better standard of living and curtailing

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their life expectancy. The reference to DDT in Father Fritsch's letter should also not be allowed to stand without noting the surge in malaria-related deaths since the post-Silent Spring banning of DDT for unsubstantiated reasons. Rachel Carson herself stated "If the untouched, 'natural' state is one in which millions contract deadly diseases, so be it." This statement underpinning her support of the DDT ban could hardly be described as pro-life.

In short, I fully support the right of those who believe in man-made climate change to present their point of view, but only ask for equal respect for those who support our side of the debate. I understand from my friends at ITEST that Father Brungs would feel the same way.

Paul Crovo
Furlong, Pa

Dear Sister Marianne.

It should not be surprising that my letter, expressing skepticism regarding the global warming threat, would draw a negative response. And I think it is proper for ITEST to allow both sides of the issue to be expressed.

At the outset, I disagree with Father Fritsch's interpretation of how Father Brungs might have judged this issue. Several decades back I knew Father Brungs quite well, and he impressed me as being very much a "show me the facts" guy; he would not be one to confuse a "correlation" with a "cause and effect" situation.

I claim no expertise in global warming but I do claim knowledge in several areas related to the atmosphere. For two full years I made laboratory studies of the rate at which carbon dioxide is absorbed by liquids, ranging from distilled water to full strength seawater, including measurements of pH changes in those processes. Also, for more than 20 years I studied the rates of CO2 absorption by green algae on a minute-by-minute basis. Regarding the CO2 absorption rates in seawater and freshwater, I have often wondered whether the modelers are fully aware of the great differences between those two types. My attempts to compare notes with the global warming advocates on these subjects were categorically rejected.

Because there seems to be a constant agreement between global warming advocates and environmentalists, I imagine that the former are unanimous in the belief that

the Chevy Volt has been a highly important achievement, which I reject. For the Volt to play a significant role in transportation, its batteries must be re-charged by electric power plants which the current Administration intends to run out of business. A good friend of mine would suggest that makes as much sense as trying to teach poetry to a squirrel.

How can we resolve this impasse between two groups of intelligent people who hold such opposing views? Perhaps that eminent philosopher, Rodney Dangerfield, would have some respectful advice because respect seems to be lacking here but, alas, he is no longer with us. As of now, neither side can prove without doubt that it is right.

Jerry Hannan
5019 Sentinel Drive
Bethesda, MD 20816

Thoughts from *The External Environment, 1991*

(The second of a trilogy on the human relation to creation and the relation of the created universe to God. In it the essayists endeavor to probe the real dimensions of environmental problems like the greenhouse effect, acid rain and energy considerations and their impact on individuals and local and global society.)

"To return to the global warming for a moment, though it would be applicable to some of the other environmental questions as well, it seems that there are two drastic extremes to be avoided. One would be doomsday scenarios and running off in that direction before we have adequate data. The other extreme, to my mind, is to fall back into saying, 'Well, because we see dramatic change on the earth over geological epochs that change is, therefore, automatically acceptable.' We're asking a question about possible effects over our lifetime and that of foreseeable generations. The ultimate question seems to be social rather than technical and scientific. In the absence of good data that can be obtained in the very short run, how do we act in a responsible fashion in the light of the data we possess?"

Sister Maxyne Schneider, SSJ

Go to the ITEST web site www.ITEST-faithscience.org, then Media, then Books in Print, to read the overview of the workshop.

The Cell Declares His Handiwork

by Tom Bethell

The evolution wars continue, although less so in the headlines these days. Perhaps that's because the Darwinists are slowly losing their grip. Most of the new research is at the molecular level, studying the interior of the cell. What they see there is not encouraging to those whose philosophy obliges them to believe that organisms assembled themselves, bit by accidental bit.

That philosophy is called materialism, or sometimes naturalism. It is the belief that matter in motion is all that exists. As for mind, it is reduced to an inner experience caused by the activity of neurons in the brain. Darwin was a materialist, who perceived that evolution by natural selection was a way of getting rid of God. Richard Dawkins, the best known evolutionist of our day, shares that view.

The cell's fantastic complexity makes it unlikely that it could ever have appeared through a series of random changes, which is what Darwinism demands. Some higher power, operating on a supernatural plane, must have designed the cell -- and all of life.

Supporters of intelligent design (ID) argue that Darwin's theory of evolution as presently understood cannot explain the existence of life. Creationists agree with that. But unlike creationists, the advocates of ID do not appeal to religious faith or Scripture. They rely solely on scientific and logical arguments.

Darwinists, on the other hand, believe that random variation (mutation) and natural selection—the mechanism of evolution that was central to Darwin's *The Origin of Species* -- sufficiently account for every living thing. Jerry A. Coyne's *Why Evolution Is True* and Richard Dawkins's *The Greatest Show on Earth: The Evidence for Evolution* were published in 2009. Both authors are prominent atheists who believe that religion is in conflict with science. Science cannot admit anything other than physical causes, they insist.

Microscopes, not fossils or field expeditions, provide most of the new evidence. It addresses not what we discover inside the Earth but what we see inside the cell. Darwin knew next to nothing about the cell. His contemporary and supporter, the German embryologist Ernst Haeckel, called

the cell "a simple little lump of albuminous combination of carbon." But he didn't know what he was talking about.

Now we see just how complex the cell is, even if we still don't know how it got that way. Michael Denton, the author of *Evolution: A Theory in Crisis*, wrote that bacteria, the simplest self-reproducing organism, is a "micro-miniaturized factory, containing thousands of elegantly designed pieces of intricate molecular machinery, made up all together of one hundred thousand million atoms, far more complicated than any machinery built by man and without parallel in the non-living world."

"Things are getting substantially worse for Darwinism," Michael Behe told me in an email. He is a professor of Biological Science at Lehigh University, and the author of two books critical of Darwinism: *Darwin's Black Box* and *The Edge of Evolution*. He added: "The more we know, the more complex and elegant life is seen to be."

Jonathan Wells' *Myth of Junk DNA*, recently published, makes the evolutionist's task even harder. Until recently it has been an article of faith—and Darwinism really is a faith—that the human genome, consisting of about three billion nucleotides coiled inside the chromosomes of every cell, was mostly "junk." Supposedly it had accumulated over the eons, thereby leaving a record of evolution's earlier history of trial and error. Short stretches were known to be segments (called genes) that gave instructions for the assembly of proteins. But, evolutionists insisted, maybe 98 percent of the genome had no function or meaning; it was "junk."

That supported evolution. For if the human body was designed, the genome's function would presumably be transparent. On the other hand, if our history had been one of Darwinian trial and error, then a lot of randomly accumulated junk is what we would expect to find. The latest research, copiously cited by Wells, shows that a large proportion of this supposed junk (and perhaps all of it) has a function.

Because DNA's complexity was not immediately apparent, evolutionists construed their own ignorance as support for their favorite theory. Some have tried to deny

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that they ever called DNA junk, but Wells has the quotes and provides them.

The Genome Project, it turns out, made an undelivered promise but instead delivered an unintended bonus. Treatments for disease, long promised, have proven to be elusive. But so has the Darwinians' precious evidence.

At the political level, committed Darwinists have mounted a furious response to critics. They refer to *Intelligent Design Creationism* to blur the distinction. They try to identify ID supporters with creationism because ridiculing Genesis seemed simpler than revisiting science questions that they thought were already decided. Some of today's Darwinists look back to the creationist wars of the 1980s with nostalgia.

In the biology departments of the secular universities, serious discussion of intelligent design is forbidden. Evolutionism is perhaps the most jealously guarded dogma in the academy today.

But science cannot evade physical evidence, and the evolutionists can't cope with the cell.

David Berlinski, who wrote *The Deniable Darwin* (2009) and *The Devils's Delusion: Atheism and Its Scientific Pretensions*, says that, contrary to what some people think, intelligent design has "flourished" in recent years. Under its own name, it is "*streng verboten*" in biology departments, and in an email to me he continued:

The ID movement itself has put on the table concepts such as specified complexity and irreducible complexity, and in one way or another, these ideas are making steady and inexorable progress. They are everywhere discussed; and they have played a significant role in experimental design. For the first time in 100 years, the faithful have been compelled to justify their claims by experiments.

In this, Mike Behe and Doug Axe have played a tremendous role. Behe cannot be dismissed: Every single time his claims have been put to experimental test, he has been proven right. There is an edge to evolution, and beyond that edge, Darwinian theories have nothing to say. Doug Axe has done the same thing, and because he has designed and executed impeccable experiments, the molecular biologists have been forced to acknowledge them.

ID has no real theory, but says one thing that has always seemed to me an incontrovertible *fact*. Biological creatures look as if they were designed because they are designed. This is not a theory, but it is a very big fact, indeed, a revolutionary fact. It is a fact that both justifies and vindicates the great theological traditions of the west. It is what the tradition has always said and the tradition has always been right to say it.

Materialists believe that everything can be reduced to some combination of chance and the laws of physics and chemistry.

Materialists believe that everything can be reduced to some combination of chance and the laws of physics and chemistry. But the more we learn, the more improbable that claim becomes and the more evolution resembles a faith. All predictions that we would one day replicate life in the lab have met with failure.

Stephen Meyer, who directs the Center for Science and Culture at the Discovery Institute, published *Signature in the Cell: DNA and the Evidence for Intelligent Design* in 2009. It deals with origin of life research and shows just how difficult — perhaps impossible — it will be to recreate life in the lab. And notice the complication that the theory of evolution imposes. A structure such as a bacterium has to be assembled by a series of accidental events. It must arise bit by bit, with each new iteration better able to survive in its environment than it did in its previous state. Which is why that complexity is said to be "irreducible."

Evolutionists also believe that all this happened as a result of *random* changes, or mutations. No designer can be admitted at any stage. To accept the world of evolution is indeed to embrace a new faith. And if you work for the biology department of a secular university today, it is a faith you will not be allowed to question.

Behe's book *The Edge of Evolution* was reviewed by Richard Dawkins who seemed to think that insults would suffice. He was "quite reluctant to engage" the arguments, Behe noted.

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For his part Dawkins wrote in 2009 that he suddenly realized that in his earlier books the evidence for evolution “was nowhere explicitly set out.” Now he would close this “serious gap, in *The Greatest Show on Earth*.” The evidence Dawkins presents is unconvincing. Alfred R. Wallace’s 1858 paper introducing evolution was titled “*On the Tendency of Varieties to Depart Indefinitely from the Original Type*.” Experimenters have never been able to demonstrate this “indefinite departure.”

The British bacteriologist Alan H. Linton, looking for evidence of speciation, concluded in 2001:

“None exists in the literature claiming that one species has been shown to evolve into another. Bacteria, the simplest form of independent life, are ideal for this kind of study, with generation times of twenty to thirty minutes, and populations achieved after eighteen hours. But throughout 150 years of the science of bacteriology, there is no evidence that one species of bacteria has changed into another.”

In 1988, the Michigan State University bacteriologist Richard Lenski began what Behe has called the “largest, most ambitious controlled evolutionary study,” observing changes of the bacterium *E. coli* over time. His study has continued for 23 years, encompassing 50,000 bacteria generations. That is the equivalent of a million years for human evolution. The genome of *E. coli* has been sequenced and enough spontaneous mutations have arisen that every possible point mutation must have occurred many times. But it remains the same species of bacterium. Behe is a “huge fan” of Lenski’s work because, “rather than telling Just-So stories, they have been doing the hard laboratory work that shows what Darwinian evolution can and likely cannot do.”

Lenski’s experiments contrast with 1920s experiments where X-rays zapped fruit flies to speed up evolution. The flies either died or gave rise to a new fly generation that “reverted to the mean.” They never could demonstrate that the fruit flies turned into anything different.

Jerry Coyne gave Behe a lengthy and hostile review in *The New Republic*, showing the difficulty that committed evolutionists have in coming to grips with the new molecular evidence. He tried to answer Behe’s point that protein structures could not have been built up step by step (because all the steps are needed at once if anything is

to work at all). Coyne replied that the process “could have begun” with “weak” associations that were “beneficial to the organism,” and were then “gradually strengthened.” And so on. In other words he was admitting that he didn’t know how proteins are constructed. And this from one who tells us that evolution is a “fact.”

Coyne’s reply suggests that Doug Axe and his assistants at the Biologic Institute may end up surpassing the Darwinians in pure research, for a reason that is rarely mentioned. The restrictive worldview of committed

The restrictive worldview of committed materialists guides them down preconceived channels.

materialists guides them down preconceived channels. They “know” how solutions must be reached, if Darwinism is accepted as true. Yet if they insist on confining themselves to such preconceived searches, they will find (given the complexity of the cell) statistical impossibilities staring them in the face.

It is for these reasons that the Darwinists are quietly losing the battle with the advocates of intelligent design and I believe that is why they sometimes respond to ID with insults rather than answers.

Tom Bethell is a senior editor of The American Spectator

A New Golden Age as seen by the Institute for Theological Encounter with Science and Technology

by Dr. Sebastian Mahfood, OP and Dr. Ralph Olliges

Abstract: In the effort to advance a culture of life, we must return to the work of understanding the relationship between our theology and our science. In doing so, we will find ourselves pursuing a new Golden Age. This paper discusses the Golden Age of learning in terms of how it worked under Islamic Scholasticism – where faith and science were pursued as integral concepts. Christian scholasticism was off to a good follow-through on this before it was shuttled aside by voluntarism and nominalism, two philosophies that brought about a split in the human study of the relationship between faith and reason, eventually leading to the modern Kantian concept of the radical autonomy of man. The Institute for Theological Encounter with Science and Technology (ITEST) seeks to repair that relationship and to advance a worldview where it is realized that the book of nature and the book of scripture were written by the same person and cannot be in conflict when properly understood. ITEST believes, therefore, that we must return to the work of understanding the relationship between our theology and our science. In doing so, we will find ourselves pursuing a new Golden Age.

The medieval period in European history can be characterized as having taken place between the age where the study of philosophy was unencumbered by Divine revelation and the age where the study of philosophy sought independence from Divine revelation. In that long period of philosophical scholasticism, stretching from the life of Boethius (c. 480–524 or 525 AD) to the death of St. Thomas Aquinas (1225-1274), Christian philosophers sought to reconcile faith and reason. Muslim philosophers, too, sought this kind of reconciliation in a period of activity extending from the life of Al-Kindi (c. 801-873) to the death of Ibn Rushd (1128-1198), but Islam called its pursuit in this area a Golden Age, and its catalog of accomplishments enabled, in part, the Christian European Renaissance.

By the time of that Renaissance, Muslim advancements in science and technology had dwarfed those of Europe for four centuries. Islam had accomplished all such advancements during its scholastic period, furthermore, guided by a theocentric worldview. Christian Europe, on the other

hand, had pursued most of its scientific advancements following its scholastic period under an increasingly anthropocentric worldview that tended toward solipsism.

A resurgence of an authentic intellectual tradition, the Muslims proved over a thousand years ago, would benefit from a return to a strong faith tradition, for our understanding of created things requires a concomitant understanding of the ultimate source of their creation.

In pursuit of the relationship between faith and reason, John Paul II begins his encyclical letter *Fides et ratio* (1998), “Faith and reason are like two wings on which the human spirit rises to the contemplation of truth; and God has placed in the human heart a desire to know the truth—in a word, to know himself—so that, by knowing and loving God, men and women may also come to the fullness of truth about themselves.”

As we enter the second decade of the 21st century, especially, we find compelling reasons to articulate once again this relationship between faith and reason, and we can do this by reaching into the Western European intellectual tradition through the method provided us in the Islamic Golden Age. One of the most compelling of these reasons is the rise of the “new atheism” that, according to Scott Hahn and Benjamin Wiker, seeks the political power it needs to advance the culture of death identified in *Evangelium vitae* by Blessed John Paul II.

In the effort to advance a culture of life, one that understands what Horton understood in Dr. Seuss’s children’s book *Horton Hears a Who!* – that a person’s a person no matter how small – we must return to the work of understanding the relationship between our theology and our science. In so doing, we will find ourselves pursuing a new Golden Age. It is only when we have grasped this relationship fully, indeed, that our arts will flourish with a truer purpose than they have long known, for the natural ends of man, defined by Aristotle as a rational creature, always terminate by virtue of that rational nature supernaturally; that is, our immaterial intellects provide us with an eternal destiny that can only be fully realized in joyful communion with our Creator.

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Philosophy, which at its core is the thought process of a human person contemplating the source of all created being, is necessarily a spiritual activity, for it is the exercise of the rational faculties, of the immaterial part of humankind. It is the very kind of activity, in fact, that enables us to transcend our material existence. For a philosopher to say that everything is material is, therefore, absurd, for in the very process of articulating that concept, the concept itself is negated. A proper philosophical anthropology is instructive on this point.

At its core, the soul is a spiritual thing in a composite relationship with matter. To think that matter is “all that matters” is to limit ourselves significantly. If we are composite beings, then that reality brings about a particular way of looking at the world. We find, namely, that a relationship exists between material and immaterial things and that some immaterial things that cannot be known by our senses or our intellects and have been, consequently, revealed to us by a Person Who is our Creator. This is the essence of theology, which is a faith seeking understanding, to quote St. Anselm. We have to approach our search for understanding in the attitude of faith rather than in the attitude of skepticism.

Actualizing the Theoretical Framework

So, how can we *actualize* in the present day a theoretical framework that properly equates the pursuit of the relationship between faith and reason as a return not to a dark age but to a golden age? One way can be found in the work of the Institute for Theological Encounter with Science and Technology (ITEST), which has as its mission the demonstration of the integration that already exists between science and faith. Fr. Robert Brungs, SJ, was the co-founder and the first director of ITEST. He believed that the faith/science mission and ministry must extend to our youngest children, and in the fall of 2005 he sought a grant from Our Sunday Visitor Institute to pursue an ambitious program of study for children in grades pre-k through 8.

The members of ITEST believe in the common wisdom that the book of nature and the book of scripture are both written by the same author that will not be in conflict if properly read and understood, and they will not be in conflict if properly read and interpreted, and they will not be in conflict if properly read and interpreted., and they will not be in conflict if properly read and interpreted. When

Fr. Brungs founded the program of study for children, which he called *Exploring the World, Discovering God* (EWDG), available online at www.creationlens.org, he put in motion a process that would cultivate a generation for whom that reality would be part of their earliest schooling.

Creation Lens Project

The idea that science and faith should co-exist in harmony within the public sphere is at the core of the creation lens project. To make the project work, Fr. Brungs brought together parochial, elementary, and home school teachers in the areas of science and theology to develop the lessons that would be used by their colleagues around the country. Working through Sr. Marianne Postiglione, RSM, and Ms. Evelyn Tucker, the project director, a networking process called the Creative Teacher Think Tank (CTTT) was created to help frame the context for the website that would eventually develop from it. The first phase of the project involved grades pre-k through 4, which, according to Brungs, was

designed to open the children to the beauties of God’s love and care by providing a solid education in both religion and science. Both faith and science teach ‘What God has wrought’, highlighting the fact that both are compatible and making the relationship a pivotal element in the teaching of both areas.

To that end, EWDG focused on creating learning modules that develop science and faith lessons that either may be taught independently of one another or concurrently. Over a series of months, these web-based lessons were created by teachers for teachers during the CTTT workshops in several states across the country. Because each state sets its own science standards, the groups that met one another had to focus on fundamentals that transcended any state curriculum. This was not only accomplished for each grade level, but also across the key scientific disciplines of life science, physical science, and earth science. One set of modules, entitled “Be a Scientist!” encourages kids to start exploring the world for themselves so that the process of inquiry cultivated at an early age is strengthened over time by regular practice. Teachers are also encouraged to browse other grade levels while on the site when looking for a specific topic. For ecumenical purposes, and to broaden the audience base that might make use of these

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learning modules, both orthodox Catholic and mainline Christian components for each lesson were developed.

Because ITEST wanted a broad base of input, it sought a national audience of teachers and homeschoolers to pilot the lessons after they had been created and posted online for the purpose of making suggestions for improvement.

Once the feedback was returned from the testing groups, the EWDG advisory council, which consisted of members with expert backgrounds in science, theology, technology, and education, reviewed the modules for consistency and accuracy, taking into consideration the comments made by the pilot teachers. The lessons were then shaped into their finalized versions and placed on the website at <http://www.creationlens.org>. They continue to receive daily hits from not only persons in the United States but also from persons around the world.

The way the learning modules work in practice is that the teacher uses various activities to teach each lesson. Some of these activities involve posing questions, performing a demonstration, having students discuss the material read, among others. As part of their work, the older students are required to journal both in a science and in a faith notebook. Science and faith links are also provided, both as a resource for the teacher while preparing the lesson and for use by the students as they are moving through the lesson. Other links are primarily a resource for the teacher. Sometimes, free bible stories are included within the lesson for the students to read. Finally, a list of keywords is provided to build the students' vocabulary. In short, the modules are fully supported within their own containers.

Though each module can stand alone as it is taught to a group of students, all modules are part of larger clusters that enable them to be taught in context with the various disciplines or are designed to support a learning-across-the-disciplines initiative that any educational environment would be honored to promote. So well done were these modules and the site on which they rested that in May 2011, the Home Educators Resource Directory (HERD), gave their seal of approval to the pre-k-4 project materials as a recommended resource for its members.

Because of the success of the first phase of the project, a second phase was begun in 2009, and it included the development of learning modules for grades 5-8. The same development and review process was followed for these more recent modules, and some of these modules

were simply enhanced from the earlier grades levels to

Magnetism Module

Multiple science/faith-based lessons are available per grade level on the Creation Lens website. For each lesson, the following parts are provided: goals, outcomes, materials needed, science/religion methodology, resources, links, and keywords. One very good example is a lesson on magnetism. The lesson uses magnets to teach students how some objects are attracted while others are not. For the science lesson, common items such as a stapler, a scissors, a piece of cork, tin foil, a brass object, an aluminum can, and a paper cup are used to test whether the item is attracted to a magnet. For the faith-based lesson, often a bible story is included in the lesson plan. For the magnetism module, the story of the three men in the fiery furnace is told. For the faith-based companion lesson, Jesus' love is more powerful an attraction than the strongest magnet.

extend the lessons to a higher level student audience.

Where to go from here?

In *The Phenomenon of Man*, Fr. Teilhard de Chardin, the priest who came up with the idea that one day our technologies would connect every one of us with one another for the purpose of strengthening our relationship with Christ, writes,

After close on two centuries of passionate struggles, neither science nor faith has succeeded in discrediting its adversary. On the contrary, it becomes obvious that neither can develop normally without the other. And the reason is simple: the same life animates both. Neither in its impetus nor its achievements can science go to its limits without becoming tinged with mysticism and charged with faith.

This realization is a kind of intellectual time bomb set to go off sometime during the 21st century as the chasm initiated by people like René Descartes that separates the pursuit of an understanding of the natural world from the pursuit of an understanding of the supernatural world

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starts to be spanned in the popular consciousness.

The natural world, after all, was understood by Aristotle and the scholastic philosophers who followed him to be the first level of abstraction, that is, the level of material being where things like earth, fire, water, and air (in fact, all material phenomena – wood, for instance, and bricks) were manifest to the sensory perceptions. Anything that we can see, hear, feel, touch, or taste falls into the realm of this first level of abstraction. It is the realm that most of us understand because we can apply our senses to it in a meaningful way that allows us to develop a percept that can be transformed by our minds into a universal concept. We have to touch fire only once, for instance, before we get the universal concept of “hot.” After that experience, the sight of *any* fire will be a signal to us to avoid coming into contact with something that it has recently touched. When a child holds a magnet and attracts a paper clip, furthermore, he or she “gets” the concept of attraction, that some things by their very nature are attracted to other things due to the nature of those things.

While the concept of attraction is highly applicable in the natural world, it is also applicable in the supernatural world, which, after all, was understood by Aristotle and the scholastic philosophers who followed him to be the third level of abstraction,¹⁴ that is, the level of immaterial being where things like God, angels, and departed human souls are not manifest to the sensory perceptions. This is the spiritual realm, the realm in which faith is required, faith, which Hebrews 11:1 defines as “evidence of things not seen; the substance of things hoped for.” Because we cannot see them, the materialist would argue, they simply cannot exist, and the kind of philosophical anthropology (like that of Sigmund Freud) that argues for the existence of a material soul denies any practical value of faith and hope. The fullness of truth is that we are drawn by love. We are attracted to it in a real and palpable way, and the source of that attraction is none other than God, the person who brought us into being for our own sake to live in eternal communion with Him. Our exploring the world that teaches us all sorts of things about its Creator is the most fundamental way we can discover Him.

Back to Scholasticism

This brings us back to the proper form of scholasticism, which was taught to us by the Muslims in that four-century period between the life of Al-Kindi and that of

Averroes, who passed it on to Maimonides, the great Jewish scholastic, and to Siger de Brabant and the rest of the University of Paris faculty until it landed squarely in the hands of St. Thomas Aquinas. The Islamic scholastic pursuits opened a Golden Age of scientific discovery precisely because they properly understood the relationship between their theological pursuits and their scientific pursuits. They not only grasped but advanced the very axiom that the book of nature and the book of scripture were written by the same author and cannot be in conflict if properly understood. Christian scholasticism picked up on this following the introduction of Aristotle to Christian Europe.¹⁵ The challenge for Christian Europe, though, was that its scholastic period ended, really, following St. Thomas’s death. Later so-called scholastics like Duns Scotus and William of Ockham turned toward a voluntaristic and nominalist understanding of God, an understanding based on power rather than reason that began to change the relationship between faith and science. This eventually culminated in a Christian Renaissance mentality that pulled away from the integrated understanding of the relationship between faith and science that had served the Muslim scholastics so well. The Christian scholastic period consequently came to be known variously as the Dark Ages, the Middle Ages, and the Medieval period while that which preceded ours is still known by Muslim scholars as the Golden Age of Islam, a period where faith and science were partners in their pursuit of truth – like the two wings of faith and reason about which John Paul II wrote in *Fides et ratio*.

Conclusion

The Exploring the World, Discovering God project is exactly the kind of thing that can restore the friendship between scientists and theologians who are both pursuing the same truth – the nature of the world in relation to its Source. For the materialist, that source is natural, and it dead-ends in the ephemeral material world. For the realist, that Source is supernatural, and it is God. Our science and our philosophy should point to the ultimate source of being, and we cannot find that in anything ephemeral – only in that which is eternal, in that which is God. Fr. Bob Brungs is living that reality in heaven. It is possible for us to pursue it while still on Earth.

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Endnotes

- 1 The length of this period is misleading, though. The next great scholastic effort made by the West after the death of Boethius did not occur until the 12th century, the one that gave Averroes and all his great commentaries to the West.
- 2 For a full treatment of this, see Jonathan Lyons, *House of Wisdom* (London: Bloomsbury Publishing, 2009). Other resources pertaining to this point include the following: Mirza Tahir Ahmad, "The Quran and Cosmology." *Revelation, Rationality, Knowledge and Truth*. (North Haledon, NJ: Islam International Publications, 1998). Available online at http://www.alislam.org/library/books/revelation/part_4_section_5.html; M.B. Altaie, "The Scientific Value of *Dakik al-Kalam*," *Islamic Thought and Scientific Creativity*. Vol. 5, No. 2 (1994): 7-18. Available online at <http://www.muslimphilosophy.com/ip/dakik.pdf>; Douglas Cox, "The Cosmology of the Koran" (2010). Available online at <http://www.sentex.net/~tcc/quran-cosmol.html>; Jon McGinnis, "Arabic and Islamic Natural Philosophy and Natural Science." *Stanford Encyclopedia of Philosophy* (Dec. 19, 2006). Available online September 1, 2011, at <http://plato.stanford.edu/entries/arabic-islamic-natural/>.
- 3 A goal it accomplished in 1992 when the American Supreme Court adjudicated in *Planned Parenthood vs. Casey* that "[a]t the heart of liberty is the right to define one's own concept of existence, of meaning, of the universe, and of the mystery of human life. *Planned Parenthood of South-eastern Pennsylvania vs. Casey*. (1992). Accessed August 14, 2011, <http://caselaw.lp.findlaw.com/cgi-bin/getcase.pl?court=us&vol=505&invol=833>
- 4 John Paul II. *Fides et ratio*. September 14, 1998. Accessed August 14, 2011, at http://www.vatican.va/holy_father/john_paul_ii/encyclicals/documents/hf_jp-ii_enc_15101998_fides-et-ratio_en.html
- 5 Scott Hahn and Benjamin Wiker, *Answering the New Atheism: Dismantling Dawkins' Case against God* (Steubenville, OH: Emmaus Road Publishing, 2008).
- 6 John Paul II. *Evangelium vitae*. March 25, 1995. Accessed August 14, 2011, at http://www.vatican.va/holy_father/john_paul_ii/encyclicals/documents/hf_jp-ii_enc_25031995_evangelium-vitae_en.html
- 7 Dr. Seuss, *Horton Hears a Who!* (New York: Random House Books, 1954.)
- 8 To paraphrase C. S. Lewis, we are not "bodies," we are "souls" that form bodies; that is, our souls are the form of our bodies. *Mere Christianity* (San Francisco: Harper, 1952), p. 129. This is also what Statius explains to Dante in Canto XXV of the *Purgatorio* - that the work of the soul is to form an operative body that can manifest itself materially within the material world. Dante Alighieri. (1308-1321). *The Divine Comedy: The Inferno, The Purgatorio, and the Paradiso*. Trans. by John Ciardi (1957). New York: New American Library.
- 9 Fr. Bob Brungs, SJ, led ITEST from its home base in St. Louis for 38 years with members in 28 countries. Institute for Theological Encounter with Science and Technology. Accessed August 10, 2011, at <http://www.faithscience.org>
- 10 Fr. Brungs' work has been carried on since his death in 2006 by ITEST. The current director of ITEST is Dr. Tom Sheahen, and Sr. Marianne Postiglione, RSM, is the associate director of ITEST. She has served in that capacity for a quarter of a century.
- 11 ITEST website.
- 12 During the creation of materials for grades 5-8, furthermore, a representative from the project, usually Sr. Marianne Postiglione or Evelyn Tucker, sometimes accompanied by Cheryl Harness, the EWDG administrative assistant, went to schools in Kansas, Michigan, Missouri, Massachusetts, and Texas to help the teachers set up the program. The representative(s) later returned to observe the lessons being taught in the class room.
- 13 Creationlens.org can boast, at the time of this writing, almost a quarter of a million downloads of its teaching materials.
- 14 Astute readers will have noted that the second level of abstraction has been skipped over. The reason is that the second level of abstraction does not pertain since it deals with quantifiable being, that is, with mathematics, rather than with the physical being of the first level or the metaphysical being of the third level.
- 15 This introduction was facilitated by the many commentaries on Aristotle produced by Averroes and by St. Thomas's great synthesis project where he cited Arabic philosophers like Avicenna over 400 times in his *Summa Theologica*.

In The Public Square

Questions from a concerned college student and Answers to ponder

by Tom Sheahan

Q. A number of leading spokesmen for science, such as the late Dr. Carl Sagan, have said that it is “courageous” to abandon religious beliefs and accept the conclusion that our lives are basically meaningless. What do you think about the meaningfulness of life?

A. First of all, remember that whatever you see on television passes through a very narrow filter: in order to be shown at all, it has to coincide with the beliefs of the show’s producer. Opposing views are always represented as incoherent and unscientific. The bible-thumping country preacher is a favorite stereotype that Hollywood reinforces all the time. The reason you ever got to see Carl Sagan is because his views, which are essentially atheistic, coincide with the view of the TV producer.

You never see on television such people as Charles Townes, who won the Nobel Prize in physics for inventing the laser -- Townes is much too religious to be a suitable TV interviewee. You don’t hear much about the “Templeton Prize” for advances in the understanding of religion -- but in recent years, four physicists have won that award. In recent years, progress in mankind’s understanding of our relationship to God has been very great, and it’s been led by physicists, chemists and biologists, who have been recognized by the Templeton foundation for their work.

Q. Who are these physicists who are able to make advances in the field of religion and science?

A. Their names might not be real familiar to you: Ian Barbour, Paul Davies, Sir John Polkinghorne, ... These contributing scientists have one thing in common: they understand the limits of their own sciences. They do not fall for the snappy slogan “Because yesterday scientists have shown that “X is true”, therefore tomorrow somebody else is sure to show that “Y is true”. That kind of thinking is what’s called a “Non Sequitur” -- translated: “It does not follow”. People who truly understand science never fall into that trap. However, all the television networks want to show is flamboyant speakers who act as though they are certain about the positions they espouse. Those guys, (and Carl Sagan was a good example), make for controversy, excitement, and gather high ratings. The fact that they’re hopelessly wrong never bothered a TV producer.

Q. On the subject of meaningfulness, isn’t the universe guaranteed to end in a “heat death” someday, because of the principle of increasing Entropy?

A. Actually, the “heat death” idea has been shown to be false. The notion of a constant increase in entropy of “the universe” originates from thermodynamics as practiced here on earth. Everything we know of -- all substances within our experience -- have a positive specific heat, and so the net entropy always seems to increase. But a few years ago, Freeman Dyson recognized that when a star is undergoing gravitational contraction (*not* gravitational collapse), the specific heat can be a negative number, and so the star can give off energy (such as sunlight) without increasing total entropy, because the geometrical size of the star is becoming a little bit smaller. When gravity is taken into account properly, stars can reverse the constantly-increasing trend of Entropy. Therefore, the “heat death” idea has died. Today’s better understanding of this topic is a good example of how some people (who truly realize just how limited is their own field) are able to see over the horizon and allow for the reality of other effects, even though we cannot duplicate conditions here on earth.

Q. What books would you recommend reading to learn more about these subjects?

A. Actually, I would go a step further and recommend reading on a totally different level. Don’t just bone up on today’s hottest topic; by the time you get through college that topic might be settled and boring. Instead, read books that open your mind and offer you new ways to think. My favorite book in this category was written over 100 years ago, in Victorian England. It’s called “Flatland”. It tells the story of a guy who lives in a two-dimensional space. He’s a square. The first part of the book is just plain fun, as he describes life in his 2-dimensional community. But in the second part, he gets visited by a sphere. Then he has to come to grips with a reality for which he has no language, no thought mechanism, no cultural basis. We sit back reading all this and chuckle at Mr. Square’s confusion. But the real message of “Flatland” is to see

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ourselves in the equivalent way. We think we know so much, but in reality our understanding is very limited. If something as simple as a geometrically higher-dimensional visitor came into my world today, I simply wouldn't have a language to describe it, and the people I would struggle to communicate with would likewise have no such experience.

I think the book "Flatland" has an important message which is essentially spiritual and religious: Don't ever think that God is subject to the same limitations that you and I face.

Reality is much more than we are ever going to know, whether through our science or by any other means. The sooner we become humble enough to accept that principle, the sooner we can begin to take the first few steps in the direction of moving up to a higher plane of understanding.

Q. Would you call yourself a "Born-Again Christian" ?

A. Well, I certainly hope so. I don't do many of the flaky

things that the stereotype of Hollywood tries to pin on Christians. But I think the term "born again", which Jesus Christ introduced, is a very appropriate term. Think about being born originally, the standard way: Beforehand, you're completely in the dark, completely taken care of, completely dependent on a being which has access to a much greater world than you ever dreamed of. But you don't know any of that! It's totally hidden from you in your darkness. Then one day you come out into the light, and your own experience and understanding immediately improves enormously. You begin to see that you are in fact totally dependent; you experience a much higher level of reality. Presently you begin to form a relationship with the one upon whom you are so dependent. Your life takes on an entirely new meaning.

I think the analogy is very accurate, and so I gladly accept the term "born again", and hope that it fits me, at least a little.

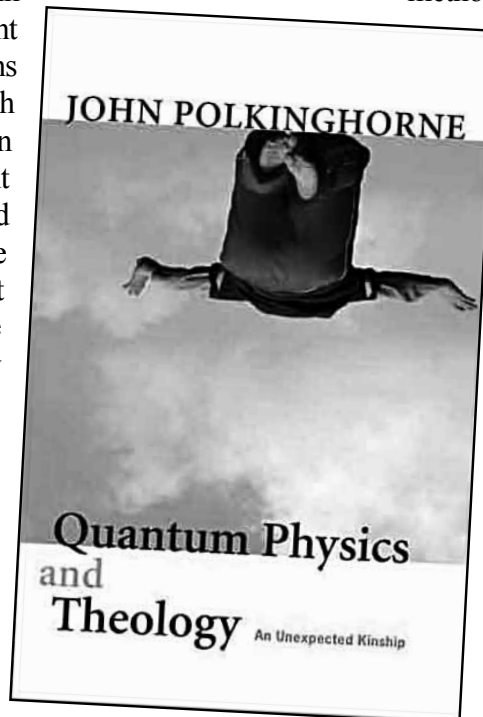
Quantum Physics and Theology by John Polkinghorne

Book Review by Oleksandr Dubov

The conflict between science and religion as different ways of knowing has deep roots in history. It may have started in ancient Greece when mythological explanations of reality were confronted with philosophical knowledge. The tension continued through the Enlightenment era, when Galileo Galilei disagreed with the Catholic Church about the place of Earth in the universe. Recent history offers examples of this type of discord, when evolutionary theory has been passionately confronted by Christian fundamentalists. As ways of understanding reality, science and theology pursue the search for truth by means of knowledge. Truth, knowledge and their correspondence are fundamental for both institutions.

While some may argue for mutual

exclusivity and incompatibility of these separate methods of inquiry, Polkinghorne sees "cousinly relationship" in ways both institutions arrive at their conclusions. Even though they may focus on different aspects of reality, there are certain analogies in the ways that knowledge is acquired in theology and science. Therefore the purpose of the book, according to the author is "to pursue further the analogies between the scientific investigation of physical world and theological exploration of the nature of God." In order to achieve his purpose, the author traces six methodological connections. A historical framework is needed to understand how each discipline has been developed and the ways in which each functions. Increased



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knowledge is the result of studying the effects of new ideas. Coherent conceptual models are the tools needed to better understand the intricacy of experiences. Abounding attitudes and beliefs form the questions perceived to be most important and the ways one answers them. Some gifted individuals provide invaluable ideas in times of major advances in knowledge. Unsolved issues require patience as the quest for sound solutions continues.

These corresponding methodologies are used by the author to look at two cases demonstrating the advances of knowledge in areas of science and theology, namely the progress from classical mechanics to quantum mechanics in science and the development of Christology from the historical Jesus to the creed formulation of divine and human nature. However the creed is not the final vision or expression of who Jesus is, as modern theology continues to find new depth in understanding of this doctrine. In a similar way physicists are still trying to reconcile the dual nature of light and some other physics mysteries. These uncertainties in both areas may lead one to believe that the practice of either science or theology needs a sort of leap of faith in matters that are not proven, accepting concepts that contradict experience when evidence suggests that they offer the best explanation for the totality of one's experiences. Polkinghorne beautifully conveys this idea by introducing epistemological circles where one should believe in order to understand and understand in order to believe. In a similar way, how one knows is related to the nature of the object while the nature of the object is revealed through one's knowledge of it. There is no pure knowledge lying outside of these circles of interpretation, as knowledge is consistent and cumulative.

The strength of Polkinghorne's approach is his certainty that when Christian faith is exposed to the same level of logical analysis that science applies to its data and theories, theology demonstrates an honest search for truth complemented by assurance in its rational motivation. He perceives theology as a critical reflection on religious experience and a rational interaction with the universe around us. This rational interaction with the actual reality lies at the foundation of the author's philosophical approach of critical realism. This theory assumes that science offers only partial, revisable and abstract knowledge of reality. Polkinghorne introduces this view by claiming that everything achieved through science is verisimilitude, not truth but an adequate account of

physical reality. Such knowledge is similar to a map that can be good for some but not all purposes. This theoretical account rejects the dichotomy between scientific and non-scientific knowledge, assuming that knowledge has to remain open to further improvements by whatever tools are appropriate to the subject matter. The openness of this system of thought makes possible real dialogue and integration between science and theology.

Polkinghorne's career is an example that both science and theology can be integrated without a need to take sides. One of the reasons why this book is so well-reasoned and well-argued is because the author brings the expertise of a reputable scientist combined with the experience of serious theological inquiry, ordination and priestly service. This twofold nature of his career allows Polkinghorne to convey his leading ideas without overstating theology or discounting science. He traces similarities between the two in a way that would enable an open-minded scientist to appreciate the intellectual effort embedded in theological reflection and would encourage theologians to study science to see how it may add to their own theological doctrines. It is important to keep in mind that this book is not an attempt to do Christian apologetics by means of quantum physics or to find theological concepts in quantum theory. Rather the author presents a very well thought out list of parallels between the truth seeking efforts of science and theology and accomplishes his purpose of showing how critical realism can bridge the two. The book might not be an easy read for those with no background in either theology or science, but it is manageable and provides a fascinating study. The author makes complex ideas more accessible, his expertise shines through the whole book and he offers insights in a tentative, well thought out and open-ended manner. The book is a joy to read.

Alex Dubov is a PhD student in Healthcare Ethics at Duquesne University. He has a Master of Divinity from Andrews University. His research interests include ethics of end-of-life decision making, transplantation ethics and ethical aspects of human genetics/transhumanism. Prior to his PhD studies he worked as a palliative care chaplain and organ transplant chaplain at Emory University Hospital. Currently he is working on a study of organ donation and transplantation within Islamic and Jewish traditions.