



Institute For Theological Encounter With Science and Technology

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What does “Born Again” mean?

The second Sunday in January commemorates “The Baptism of the Lord.” It’s a chance to reflect on the meaning of our own baptism. When Jesus said to Nicodemus, “No one can enter the Kingdom of God without being born of water and spirit” (John 3:5), what did he mean? What inner transformation is supposed to take place when you’re “born again”?

It’s useful to think about being born the first time. For quite a while, you’ve been in the dark, but totally dependent upon a superior being for your food, your oxygen, for everything that sustains your life. And you don’t know or understand anything about it; that’s just the way it is. Upon being born, you emerge into the open and begin to grasp the reality that surrounds you. Then gradually over time you develop a loving relationship with that superior being, based on your improved understanding.

Being born again has many parallels here. The initial realization that you’ve been dependent upon God for everything all that time is a major break-point. It’s the first step along a new path, one you couldn’t have imagined was even possible. Accompanied by the Holy Spirit, you begin to develop a loving relationship with God. And throughout the consecutive growing-up stages, parents, godparents, siblings and friends share and guide the journey.

Perhaps something similar happens in studying science. There is a point where physics all comes together and makes sense; it moves beyond being about masses sliding down inclined planes and batteries sending current through resistors. At an advanced level, a coherent unity stands out, and physics is seen as a complete system. In science, “born again” means to understand that it’s all God’s handiwork – that the laws are what God originated, and their symmetry and beauty guide us to appreciate His magnificent creation.

In this issue, we are pleased to carry two letters-to-the-editor from ITEST members of great distance. The ITEST Bulletin is your publication, and we hope you’ll keep the letters coming. Additionally, remember that ITEST has a Facebook page where we encourage discussion of the items posted there: <http://www.facebook.com/group.php?gid=114517700573>

This issue also contains a reprise of a significant but little known statement produced by the 1977 synod of bishops about the relationship between faith and science. ITEST’s founder, Fr. Robert Brungs SJ, was an important contributor to that document, continuing to draw upon its message in subsequent years. Over the intervening decades, this document (regrettably relegated to the “dusty” archives of Church history) deserves a “re-birth” at least in the hearts and minds of ITEST members and colleagues. While many in the Church have forgotten that there is any link at all between faith and science, ITEST continues to follow and expand Fr. Brungs’ vision. This document forms an important component of that vision. We hope that in reading it now, you’ll see ways in which it’s applicable to your own life.

Thomas P. Sheahen, PhD
Director: ITEST

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Announcements

Alternative Web Address (url) For ITEST: www.ITEST-faithscience.org

We recommend that you bookmark an additional URL for the ITEST web site's regular URL. In your search enter www.ITEST-faithscience.org. It is longer than our www.faithscience.org but, according to Tom Sheahan, using the longer URL will give us a better listing on Google's "top ten hits."

Tom writes, "Those who have heard of ITEST, but don't recognize or recall the string "faithscience, will most likely google ITEST to find us. That effort leads to google's "top 10 hits." He adds, "An instrument-testing company, who owns the site name, ITEST, receives many hits daily; but we DO appear on the first page of google listings as of December 31, 2010. It is desirable to stay on that "front page" of google.

"Now, if we start accessing our web site by deliberately going to www.ITEST-faithscience.org, it will have the effect of enhancing our "score" at google. During the months of January/February please access our site using the ITEST tag in the URL. We will monitor google and see if we have made it closer to the top of the list.

Our web site URL listed on our stationery is correct and will remain the same; the only difference is that you now have two options instead of one.

Future Conferences and Lectures

The 11th Annual Goshen College Conference on Religion and Science will be held on the weekend of March 25-27 in Goshen, Indiana featuring Owen Gingerich, Professor Emeritus of Astronomy and of the History of Science at Harvard University and Senior Astronomer Emeritus at the Smithsonian Astrophysical Observatory in Washington, DC.

For more information contact Carl Helrich, PhD, conference director, at carlsh@goshen.edu

The Washington Theological Consortium announces a lecture on religion and science, Saturday, March 19, 2011 at the Washington Theological Union in Washington, DC. Dr. Stephen Barr, Professor of Physics, Bartol Research Institute

of The University of Delaware, will deliver a lecture titled, "Quantum Creation of Universes, Multiverses and String Theory," Stephen Barr was one of the presenters at the ITEST 2008 symposium, Astronomy/Cosmology and the God Question. The edited book of proceedings containing his paper and those of the other presenters may be purchased from ITEST.

ITEST "Looks Into" E-Books

We are in the initial stages of looking into the feasibility of publishing some of our latest ITEST proceedings digitally for use on e-readers. Since the proceedings from 2007 to the present are already in digital form, it would be relatively easy to convert them to the e-reader or e-pub format at a reasonable cost. From the late 80's to 2006 the edited and bound proceedings were produced using the reliable but now "dinosaur-ic" WordPerfect for DOS.

Presently, the Kindle reader from Amazon.com seems to be the prominent reader, but there are many other readers available in various formats and styles. Tell us the name of your e-reader (Kindle, Nook, iPad and others) and whether or not you would be interested in accessing selected ITEST material from the conferences and symposia via that device. At this stage We are limited to a certain extent if we choose the Kindle as the reader of choice since other e-readers cannot read books or material from Kindle on their own devices.

In Memoriam

Robert E. Miller of Kansas City, Missouri, philanthropist and long-time ITEST member and supporter died in Hospice Care on August 1, 2010.

We also ask your prayers for ITEST members who are ill. May they feel the restoring hand of the Lord.



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Food, Glorious Food

“Organic food” by Maurice Lange

[Eds. This article, adapted from the oral presentation delivered at the 2010 ITEST conference on food, emphasizes the benefits of organically grown and produced food for the 21st century. The slides following the article represent the people who participate in organic gardening and the food produced by the Community Supported Garden at La Vista in Godfrey Illinois. For more information you may access their web site at www.lavistacsa.org]

(Maurice opens his remarks by referring to Sister Mary Margaret Pazdan’s earlier presentation on “Food in the Bible,” published in the Fall, 2010 issue of the ITEST Bulletin.eds.) That presentation inspired me to begin with an inspiration from another Dominican Sister and mentor of mine Sr. Miriam Mac Gillis. Sr. Miriam writes:

“Several months ago I experienced a moment of profound awareness in a very simple act. The day was cold, the kitchen warm and silent. I was alone, enjoying a steaming bowl of vegetarian chili, extremely conscious of its flavors and textures. It occurred to me that this bowl really held rock and soil, minerals and water, and the energy and heat of the stars. All of the ingredients—the beans, onions, garlic, carrots, tomatoes, basil, pepper and oregano—had once been seeds that I inserted into soil.

“Now they were all providing me with delight and nourishment. And they would soon become my blood, my bones my sight, my movement, my thoughts, my prayers. I was overwhelmed by the limitless generosity of the universe and its Creator. It was *gospel* and *eucharist* in a sacrament so simple, so holy, my heart brimmed with gratitude.”

What struck me about Sister Miriam’s description of this simple meal is the mindfulness of where the food came from that I would like to especially focus on within this presentation.

Let me continue with an exercise in our imagination:

Imagine you are by yourself, or maybe with a small group of friends, hiking in some deep woods, or perhaps driving the back streets of an unfamiliar city. There you are hiking or driving along and gradually you recognize that you’re not quite sure where you are. You decide to make this turn, to hike that other trail but to no avail: you finally recognize that you are lost.

What’s the first question that comes to mind as a way to re-orient yourself?

Of course: “Where am I?”

You need to locate your whereabouts in order to situate yourself and then eventually make it to your destination.

Wendell Berry, the Kentucky farmer, philosopher and poet, has said, “You can’t know *who* you are unless you know *where* you are.” Pondering our global ecological crisis, where we are occurs at a time and place where we *humans have lost our way in a sustaining relationship with the planet.*

Where we are, where we find ourselves, therefore, is in these two or three very poignant decades where our decisions will tell the fate of future generations of so many of the Earth’s species, including our human descendants.

This is where we are.

Three signs of our ecological times include:

- the very high rate of species extinction,
- the continual fouling of air and oceans, and
- an unprecedented Western ignorance of the source of our food, as well as its true cost.

We seem largely oblivious to asking basic questions about our sustenance;

Where does our food come from?

How was it grown?

Who grew it for us?

Continues on page 3

Maurice Lange



Maurice grew up in the ranch country near San Antonio, Texas. His early enjoyable experiences with nature, among them, swimming in ponds and drinking from natural springs, inspired him to pursue degrees in environmental studies and theology. He apprenticed at the renowned Genesis Farm Ecological Learning Center in Blairstown, New Jersey and the following year worked with the biodynamic farmers at the Community Supported Garden at Genesis Farm.

Maurice moved to the Midwest in 2000 and went on to found the La Vista Ecological Learning Center and Community Supported Organic Farm in Godfrey, IL. He currently serves as the director of eco-justice for the Franciscan Sisters of Our Lady of Perpetual Help in Kirkwood.

That is not to mention the tragedy of our ignorance regarding any answers to these basic questions.

This sort of ignorance is something very new for humans. It is historically very new for us to be so disconnected to that which nourishes us, to that which *becomes* us.

For hundreds of thousands of years of hunting and gathering and the last 10,000 years of agriculture we could answer with confidence these three fundamental questions:

- we knew where our food was from,
- we knew basically how it was grown, and
- if we did not grow it for ourselves we as least had a sense of the farmer in our region.

Of course the *way* that food was grown for a majority of these last 10,000 years was the *only* way: it was *organic*.

What is “organic” ?

Most would say that “organic” is an absence of chemical fertilizers and pesticides. Some others would say “organic” contains no genetically modified organisms, or “organic” is free from the use of toxic sewer sludge and the process irradiation

While those definitions would be considered *partially* correct, they are really a *negative* definition. i.e.,: that’s what organic *isn’t*.

What is a *positive* definition of organic? Well, if you are an organic farmer, you know that the soil is alive. Organic = life! The *soil* is alive, it’s organic. Healthy soil is teeming with microbial life, and it’s those microbes, from what I understand, who are the *real* farmers. They are busy transmitting the nutrients within the soil to the root hairs of the plants. So, an organic farmer wishes to *enhance* the microbial life of the soil. Hence healthy soil= healthy plants. Healthy plants are better able to withstand predation by any pests that come along.

An organic farmer would not dream of putting anything on the soil which would degrade or erode the life and habitat of those microbes. And, yes, the vocation of the organic farmer is about reaping the harvest *from* the soil, but he or she also is as dedicated to *giving back* to that soil in turn.

I will list some of the techniques that organic farmers use to produce healthy organic crops as well as to replenish the soil: cover cropping, fabric row covers, mulching, composting, companion planting, rotating of crops and fallowing. Later on we will see some of these techniques illustrated in a case study I’ll share with you.

I would now like to distinguish between “industrial organic” and “local organic.” We might feel that if we shop at the corporate grocery and find food labeled with the USDA

organic seal that this is the best we can do. While this “organic” food is certainly a step in the right direction, we have to ask where this food originates. Much of the organic food in grocery stores comes from California or other places at a considerable distance. Consider, if you will all the “food miles” that food has traveled which includes the oil used for transport and coolants used for preservation, not to mention the question of *when* it might have been picked and under what labor conditions.

Local Organic is extremely important as this gets to the heart of the organic philosophy*, typically: small-scale, family-operated, biologically diverse, humane, and socially-just.

*(www.centerforfoodsafety.org)

My particular experience in “Local organic” is with Community Supported Agriculture (or CSA). In the late 90’s I interned for 2 years at Genesis Farm in New Jersey. Genesis Farm began in 1986 as the sixth CSA in the United States. (Now there are thousands of CSA’s in this country.) In 2003 I, and others, began the second CSA in the Metro East called the *Community Supported Garden at La Vista*. In this kind of “local organic” shareholder families purchase a seasonal share of the harvest from the farmer.

The food travels *very few* food miles, is seasonal, in a CSA the food is most likely harvested today, or yesterday, there is a direct relationship with and knowledge of the farmer.

This, and other types of Local organic benefit the local economy and keep food dollars in the region. Local organic such as this builds community and that community’s tie to their local region of life.

[At this point Lange moves to the slideshow part of his presentation with a case study of Local Organic focusing on the model of the Community Supported Garden at La Vista in Godfrey, Illinois.]



1: Welcoming shareholders and visitors alike

Continues on page 4



2: The "Greenhouse" for the project



3: Community planting day in the Spring



4: Look at what the seeds grew into



5: The "Pick-your-Own" section of strawberries



6: This shareholder enjoys picking strawberries



7: Apprentice tilling blossoming potato plants



8: Leading to an abundant harvest



9: More planting on a community work day

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10: Washing freshly picked red & green cabbage



11: Volunteer replenishing the bins of produce



12: Farmer apprentices learn firsthand



13: Salad mix & peppers ready for members



14: Can you imagine how good this will taste!



15: Farmer & apprentice washing the harvest



16: Diverse harvest of a small, organic farm



17: Shareholders enjoy a regular pot-luck meal

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18: Shareholders make new friends



19: Members of all ages at the garlic harvest!



20: Members choose their produce for the week



21: November Harvest Party Hay Ride



22: Farmer intern going out for a harvest



23: La Vista Cherry tomato "art"

In conclusion it has been said "When a culture loses touch with the source of its food, then that culture is endangered."

Given these ecological times, it is *vital* that we regain a knowledge of and deep appreciation for the source of our food. We must pose these questions: Where is the food from? How was it grown? Who grew it? Let us find ourselves, in these precious years, when we chose to establish a healthy human-Earth relationship.

Citing Wendell Berry again: "The way we eat determines, to a considerable extent, how the world is used." How do *you* choose to eat? How does your choice impact the world?

Let us work towards bringing about a *local* food system that focuses on organic practices which sustain our needs today without compromising the right-to-life of future generations.

A Refresher from the Past The Church & Scientists Synod '77

Reprinted with permission
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The relationship between the church and the scientific community was explored in a message submitted to the Synod of Bishops by the U.S. delegation. There is at present a real "opportunity for the church to offer to these scientists the guidance of the wisdom entrusted to it concerning the dignity and vocation of the human person and to collaborate with them in evaluating the impact which these discoveries have on human life," the paper states. The church ought to demonstrate to scientists its willingness to work with them in a partnership for the benefit of humanity, it adds. The paper takes up questions concerning the catechesis of scientists, the relationship between Christian and non-Christian scientists, dialogue concerning the goals and limits of science, recognition of the rightful independence of science and the role Catholic colleges might play in promoting dialogue of the church with the scientific community. The text of the message follows.

Contemporary culture in many parts of the world is characterized, among other things, by a scientific and technological revolution which evangelization and catechesis must take into account (cf. *Gaudium et Spes*, 54). Part of the church's response to the opportunities and challenges posed by this cultural situation should be directed at those men and women responsible for scientific research and the application of its discoveries. If the gospel is indeed to penetrate "into all the strata of humanity" and bring about a transformation of humanity's "criteria of judgment, determining values, points of interest, lines of thought, sources of inspiration and models of life" *Evangelii Nuntiandi*, 18, 19), the world of science and technology cannot be ignored.

Of particular urgency today are the questions posed by advances in the so-called life sciences. These appear to make possible the identification, dismantling, rearrangement and reassembly of the basic components of living organisms, including deliberately modifying the human organism. Humanity stands at the threshold of being able to direct its own biological future consciously and deliberately. Nor is it only a question of biological technology; it is also a matter of a kind of biological industrialization, that is, the integration of such fields as solid-state physics, genetics and neurophysiology. For example, scientists are talking about joining electronic circuitry to human brain function. These and other developments and possibilities raise

serious questions about personal human integrity which are of enormous import to humanity and therefore to the church, which shares "the joys and hopes, the griefs and the anxieties of the people of this age" (*Gaudium et Spes*, 1).

Moreover, the scientific community is very far from monolithic in its opinions concerning the significance of these discoveries. There is at present a real -- and, we would say, providential -- opportunity for the church to offer to these scientists the guidance of the wisdom entrusted to it concerning the dignity, and vocation of the human person and to collaborate with them in evaluating the impact which these discoveries have on human life. The Catholic Church has now a providential opportunity to demonstrate to scientists its willingness to work with them in a partnership for the benefit of humanity. It is opportune to recall the closing message addressed by the Second Vatican Council to the men and women of thought and science: "Our paths could not fail to cross. Your road is ours. Your paths are never foreign to ours. We are friends of your vocation as searchers, companions in your fatigue, admirers of your successes, and, if necessary, consolers in your discouragement and your failures Without troubling your efforts, without dazzling brilliance, we come to offer you the light of our mysterious lamp which is faith Never perhaps, thank God, has there been so clear a possibility as today of a deep understanding between real science and real faith, mutual servants of one another in the one truth. Do not stand in the way of this important meeting."

Admittedly this effort involves a very precise and specialized form of catechesis, but it is one which cannot be ignored. Some of the fundamental components of such a catechesis are the following:

1. The recognition of the rightful independence of science. The faith of the church is not threatened by scientific discoveries. "If methodical investigation within every branch of learning is carried out in a genuinely, scientific manner and in accord with moral norms, it never truly conflicts with faith. For earthly matters and the concerns of faith derive from the same God. Indeed, whoever labors to penetrate the secrets of reality with a humble and steady mind is, if even unawares, being led by the hand of God, who holds all things in existence and gives them their identity" (*Gaudium et Spes*, 36).

Continues on page 9

2. The most important area of dialogue between the church and the scientific community does not concern the discoveries of science as such, but the uses to which these discoveries are put. It is precisely in this area that the most important concerns and questions raised by recent discoveries in the life sciences lie. The fundamental conviction which the Catholic Church offers to the scientific community is this: all problems regarding human life are “to be considered -- beyond partial perspectives -- whether of the biological or psychological, demographic or sociological order -- in the light of an integral vision of man and of his vocation, not only his natural and earthly, but also his supernatural and eternal vocation” (*Humanae Vitae*, 7).

The new biological technology, for example, requires the direct, immediate and systematic intervention into the human composite. This means that for biomedical procedures to be used successfully, in order to create new norms of physical, intellectual and psychological health, they must produce results which are both predictable and repeatable. Such considerations, however are proper only to a controlled or closed system. Therefore they cannot provide the ultimate criteria for the construction of a society that is truly human. They represent a threat to human spontaneity. They can only result in a society which is essentially static. Creativity is thus threatened. The human spirit, which is always open to a transcendent dimension which cannot be controlled, is stilled. Unless the values of human integrity and a respect for human freedom motivate scientific research and technological practice, we will arrive at a world in which nothing is independent, nothing is moved by its own vitality, a society in which even our children are not our progeny, but our creation. Partisans of large-scale eugenics planning are often motivated by noble humanitarian sentiments. Yet it cannot be the values of science which alone determine what human life ought to be like.

The Catholic Church believes that salvation cannot be obtained without the grace of God which is a gift. Human self-fulfillment, therefore, will not be brought about entirely by human planning. The ultimate resolution of the drama of human life lies in a divine intervention which transcends the limitations of space and time: the lordship of Jesus Christ. Hence the teaching of the Second Vatican Council: “the independence of human affairs . . . (cannot) be taken to mean that created things

do not depend on God and that man can use them without any reference to their creator” (*Gaudium et Spes*, 36).

3. Admittedly, it is not easy to speak of God the creator and of the lordship of Jesus Christ to those scientists who are agnostics or atheists. Nevertheless, the Catholic Church has never despaired of the capacity of the human mind and the human heart to respond to the secret impulses of divine providence, even if their origin is not explicitly recognized. Moreover, many scientists today recognize the precise limitations of their methodology. They have become aware that dogmatism and ideology have not been absent from the history of scientific research itself. The use of the secret of the atom in weapons capable of massive destruction has been a humbling experience for them. In this connection, evangelization and catechesis by scientists who are men and women of faith are extremely important. They should be encouraged by the church. They constitute one of those small groups which will be responsible for so much of the mission of the church in the years to come. Scientists who acknowledge the reign of God should be encouraged to form communities where they may grow in their own understanding, experience and response to their Catholic faith, and where they show their insights into how the mysteries of redemption can be presented to their brothers and sisters who are seeking answers to the dilemmas posed by their scientific research.
4. Catholic institutions of higher learning should be encouraged to promote programs of this kind, especially since they are equipped to offer the opportunity for an interdisciplinary dialogue in which theology and philosophy can make an invaluable contribution (cf. *Gravissimum Educationis*, 10).
5. Finally, all the faithful should be made aware of the implications to the faith of what is taking place in these scientific investigations. They should be helped to become more familiar with the teaching of the church concerning the proper role of scientific research; the limitations of scientific discoveries; the positive and negative aspects of technological progress; the sanctity of life; the respect due the human person regardless of physical, intellectual or psychological characteristics; the supremacy of grace and the need to respond to unwarranted use of scientific discoveries with a resistance which may sometimes have to be heroic.

New Proofs for the Existence of God

by Robert J. Spitzer

(Eerdmans: 2010) ISBN 978-0-8028-6383-6; 291 pages

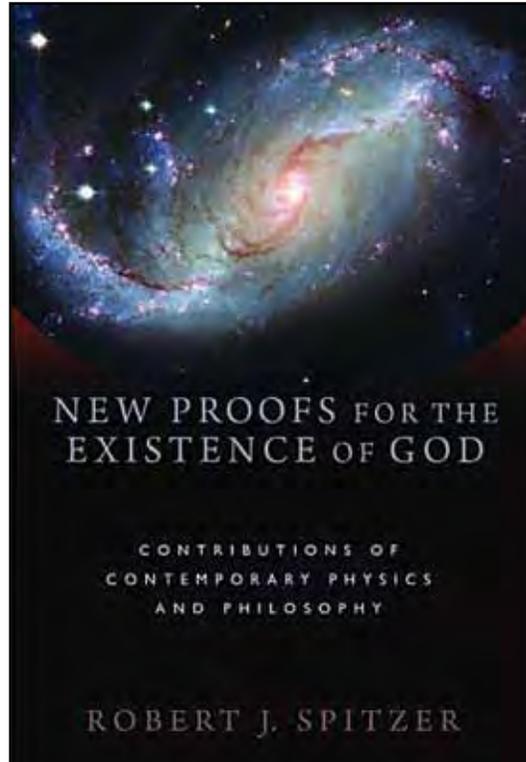
Reviewed by Thomas P. Sheahan

Fr. Robert J. Spitzer, SJ, is a Catholic scholar with an excellent grasp of cosmological physics, philosophy and theology. In this book he carefully demonstrates why it is most reasonable to believe that God created the universe, and he further shows the enormous implausibility of alternate explanations involving “multiverse” hypotheses.

The book is divided into three parts. First Spitzer considers the cosmological information that we have today, and inquires into the implications for understanding the existence of the universe. In one corner stands the *belief* that a transcendent super-intellect (God) created the universe. Against that are an assortment of other speculative statements, all of which are *beliefs* based on one or another claim derived by seeking a “naturalistic” cause. Both data and theory accumulated in the past century have narrowed the allowable possibilities. For nearly 300 years after Newton, philosophers assumed that time reached back infinitely far, and hence all possibilities could be exhaustively tried. Now we know that the universe is 13.7 billion years old. We can estimate the magnitude of the mass/energy of the universe, by combining how much visible matter there is, along with dark matter; and the presence of dark energy of even greater amounts is plausible. All these numbers are large but finite. The hypothesis of an endless series of big-bang/big-crunch cycles (the “bouncing” universe) is severely circumscribed.

A highly general concept within cosmology (the BGV theorem) dating from only 2003 ensures that our universe had a beginning, and any universe that expands also must have a beginning.

There are numerical values and ratios in the laws of nature that are extremely fine-tuned to produce the circumstances necessary for life. Spitzer describes several of these “anthropic coincidences” and presents the incredibly small numerical probability that these could occur by chance



alone. Those wishing to avoid believing in God typically select some variation of the “multiple universe” hypothesis as their favored pathway. Spitzer observes that these violate the principle of “Occam’s Razor,” are totally theoretical speculations that are unobservable in principle, and often contain inconsistencies. Adhering to one of the “multiverse” or “bouncing universe” hypotheses leaves one in a position that is far less plausible than believing in a transcendent cause of the universe.

There is a 28-page appendix for specialists by Bruce Gordon that supports chapter 2. Rather than being placed in the rear like most appendices, it is placed immediately behind chapter 2. Unfortunately, many readers without PhD’s in physics who wade into that text

will go away discouraged and probably will set the book aside. Grasping it is not mandatory to understanding the rest of the book. This appendix deals with the properties of inflationary universes, and very effectively closes the door to a variety of speculations designed to avoid “the God hypothesis.” The “Landscape” hypothesis arising from *String Theory* suggests one version of a “multiverse” hypothesis, but its implausibility becomes apparent when it turns out to require fine-tuning of its initial conditions, which undermines the reason for choosing that hypothesis.

The primary conclusion from part one is that the information we have from modern physics (numerical values, probabilities, etc.) has shot down many “naturalistic” speculations about the origin of the universe, and has made belief in God the more plausible choice.

Part two is almost a totally separate book. Its 4 chapters deal with concepts in philosophy, not with physics, so the numerical values of part one have vanished. Instead, Spitzer’s attention turns to proving philosophical points via deductive reasoning. This will be easy reading for

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philosophers, difficult for physicists. The goal is to establish a framework for “reasonable and responsible” beliefs, which Spitzer defines as follows: A belief may be considered reasonable and responsible if:

- a) it can be affirmed by rigorous public corroboration, or
- b) its denial leads to an intrinsic contradiction, or
- c) its denial leads to a contradiction of publicly corroborated fact.

Chapter 3 gives a proof of God’s existence that draws upon the field of metaphysics. A series of diagrams is helpful in keeping track of the steps in reasoning here. The ontological concept of *unconditioned reality* is the object of the proof; and it is further shown that such is both unrestricted and unique. A very clear summary brings the step-by-step reasoning procedure together.

Chapter 4 is a modification of a proof of God’s existence by Lonergan¹; Spitzer comes in the door of *ontology* whereas Lonergan had entered via *epistemology*. The reader familiar with Lonergan’s proof of God’s existence will discern many parallels here. It bears remembering that Lonergan’s three-line statement followed nearly 700 pages of development. Along the way, Spitzer shows that God cannot be confined to a spatio-temporal manifold. He concludes with an invitation to “stay tuned” until chapter 8, where man’s linkage to God’s transcendence is discussed.

Chapter 5 presents a proof that the universe could not have existed for infinite time. Drawing from the philosophy of mathematics developed by David Hilbert, Spitzer identifies three different kinds of infinities [A, B, C], and explains that type C infinities do not occur in reality; in any finite structure, it would cause a contradiction. Subsequently, he shows that postulating infinite duration of the universe would require that the universe never change at all, which is contrary to fact. The conclusion is that time, created by God, has a finite past.

To the scientific reader who found the physics-related arguments of part one persuasive, the question comes to mind “is this needed?” Conversely, the reader who was baffled by the physics in part one will find the philosophy of part two more accessible. The point of the book is that *both* pathways run parallel, reinforcing a belief in God.

Chapter 6 opens by stressing the importance of *complete disjunctions* in philosophical arguments. Next Spitzer clarifies the relevance of the notion of infinity, and states there are three kinds of causation: finite reality, finite intelligibility and temporality. The reasoning that follows shows that it is impossible to disprove the existence of God. This all seems pretty abstract to the reader entering

through the door of science. It would have been helpful if this material had been placed in the front of part two – sort of a “prerequisite” section – so as to initiate the scientific reader in advance of tackling the philosophy chapters.

At the end of Chapter 6 is a very helpful section where Spitzer examines how people move into atheism: often due to their personal experience with suffering and/or the problem of evil: viz., “If God is perfectly good, how can He allow evil in the world?” Spitzer responds “...evil is seen to be a negation of a free being’s power to love ... the occurrence of evil is not something that exists in itself; rather, it is the result of a free agent’s choice to ignore or undermine the capacity for affection, empathy, compassion – love.” This is reminiscent of Lonergan’s position. Spitzer apologizes for the brevity of his summary of a different presentation²; but his synopsis is adequate to support his position that most atheists have a faulty definition of God.

The final two chapters comprise part three. Chapter 7 discusses five transcendental properties of God, connecting simplicity and unity with love and beauty. Chapter 8 calls attention to five *a priori* characteristics present within humans, which we all can recognize. Each of them points toward a property of God. Chapter 8 has a welcome “personalizing” effect; in contrast to the abstract concept of a transcendental creative power that underlies the universe.

To a physicist inclined toward the tangible, ontological concepts like “being itself” or “understanding itself” have faint appeal; but the way in which we are drawn to see the beauty in the symmetry of the equations of physics is very meaningful. Physicists recognize that our appreciation of symmetry is basically a *belief*, but one that we all share. In the October 2010 issue of *First Things*, in an article entitled “Fearful Symmetries,” Stephen Barr explains how there is a profound simplicity at the heart of physics, and it is easy to recognize God’s hand there. Reading Spitzer’s Chapter 8, the physicist is led to ponder “why?” we think that way. What is drawing us to associate beauty with symmetry? (Spitzer only discusses art, not mathematical symmetry; but the similarity is evident.)

After building an edifice upon philosophical reasoning, *New Proofs for the Existence of God* contains a succinct 5-page “conclusion” section, which reminds us that ontological reasoning isn’t as comforting as experiencing God’s love. Spitzer sets forth five questions along the path of such experience, which are sequential -- each is premised upon the answer to the previous question. Accompanying a closing quotation from St. Augustine, Spitzer gives this instruction: “But you, the reader, will have to affirm these contentions through your own heart and mind. If

Continues on page 12

you believe that God would relate to us in unconditional empathy and love, then it will be incumbent upon you to seek that God in revelation, others, the depths of the heart, and the movements of history. It will be incumbent upon you to seek the God of patience, kindness, mercy, empathy, affection, humility, gentleness, and peace through faith and prayer.”

Bridging across physics and philosophy/theology in a single book is no easy task. By his careful examination of topics like the expanding universe and the “multiverse” hypothesis, Fr. Robert Spitzer has earned the respect of professional physicists. It is entirely true that discoveries in physics over the past century have changed the playing field for arguments about the existence of God. Notions taken for granted by the Enlightenment followers of Newton’s physics are gone: determinism and the absolute immutability

of time no longer pertain. The field of theology, often in arrears to science, has re-entered the arena through the kind of reasoning presented here by Spitzer. His arguments are fully up to date with both modern physics and contemporary philosophy.

I recommend this book to those of scientific background who are inclined to attribute value to philosophy; and to readers from the theological side who want to enhance their grasp of relevant parts of cosmological physics. No one is going to find this book an “easy read,” but the effort is worth it.

1. B.J.F. Lonergan, *Insight: An inquiry into Human Understanding*, (Longmans-Green: 1958)
2. R.J. Spitzer, videotape series on *Suffering and the God of Love*



Creation Lens

Exploring the World, Discovering God

“Capturing Their Hearts and Minds”

(Fall Bulletin, 2005 Volume 36, No. 4)

[In the opening paragraph of this message, Father Brungs brings the good news of a grant received from the Our Sunday Visitor Institute (OSV) for the pilot program in faith/science interfaced modules, Exploring the World, Discovering God. After notifying the readers he goes on to explain the basis for this project. In this issue of the bulletin, on the next page, we see the fruits of this project reported by our project manager, Evelyn Tucker]

“This gives us the opportunity to begin at the beginning—with pre-schoolers to grade 4. If we can get children interested in God’s beauty and in his concern for them and all of creation, we should have “captured” them for life. We can teach them about the interrelatedness of all thing—from the immensity of space to the delicate intimacy of DNA. That religious theme carries us back to the first chapter of Genesis. As early as 1 Corinthians St. Paul taught that interconnectedness and interdependence was paramount. We should be teaching it to our children as soon as possible.

“We are related to each other and the creation in the sacraments. We are being built into the Kingdom of God, first on earth in sign and then in the eschaton in glory. Christian children must be told of the love of God for them and the myriad gifts of God to us in creation. They need to realize that we are not freelancers in the faith, that the church is their home. But it is a home always needing repairs and additional rooms. They are to be brought to a ‘zeal for their Father’s house that will consume them’. If we can capture their hearts and their imaginations when they are young, we have a much better chance to help in the redemption of the world.”



Creation Lens

Exploring the World, Discovering God

Progress Report On Exploring the World, Discovering God

[We thought you would like to see the progress made in our project, Exploring the World, Discovering God. In this report to the Our Sunday Visitor Institute, Evelyn Tucker, Project Manager, details the activities occurring during the Summer of 2010]

Creative Teacher Think Tank Sessions

The Creative Teacher Think Tank phase of our Project Grades 5-8 is complete. As a result of these sessions in St. Louis, MO, Grand Rapids, MI, Fall River, MA, and San Antonio, TX we had the original format for over 125 modules. The Advisory Council reviewed all the modules and we had a team of science and religion teachers for grades 5-8 review the modules. From those selected by the Advisory Council and the Teacher Team, we selected modules for our Pilot Program.

Post CTTT Sessions Activities

We have advertised with Home School Education Resource about our CTTT and pilot programs. We have received some general interest as well as two home school educators who want to be part of the pilot program.

The Advisory Council

A committee of several of the Advisory Council members has been working on Human Sexuality/Science modules. This committee met on September 25 prior to the ITEST Conference to put together their modules. They are currently revising those modules and will be submitting them to the Project Manager in a few weeks. We will submit those modules to our local Religious Education Department and to Archbishop Carlson for review. We hope to add those lessons to the web site after the Pilot Program

The Pilot Program

The Project Manager has been actively recruiting schools and teachers for the Pilot Program which began this fall semester. We have 25 teachers in 12 schools in St. Louis, MO, Fall River, MA, Grand Rapids, MI, Portland, MI, and

Sullivan, MO. We have pilot modules being taught in the following grades: Grade 5: eight teachers; Grade 6: ten teachers; Grade 7: six teachers; Grade 8: seven teachers. Some teachers teach multiple class of each grade science and religion.

Pilot teachers and schools have access to the Pilot Program website at www.creationlens.org/pilots/pilotind.html. Pilot Teachers are selecting the 6 pilot modules which will best fit into their current curriculum for Science and Religion. The schools and the pilot teachers have signed an agreement to teach the pilot modules, submit timely evaluations, and video tape or photograph at least one of the modules being taught. All pilot lesson evaluations and materials are due to the Project Manager by the end of the 2010-2011 school year.

Additional Activities

The Project Manager will do a final formatting of the Pre-K to Grade 4 new modules and give them to the web master to put on the website by the end of October. The CTTT teachers also created some modules which interface other subjects with faith lessons. Those will be incorporated onto the web site under a new heading: Other Subjects. These new offerings will be announced by a massive email blast to over 3000 contacts world-wide.

Exploring the World, Discovering God continues to be listed on the Home School Educators Resource site. This publicity gives us another route to engage home schooling educators in faith/science interfaced lessons.

The Project Manager used the opportunity as a presenter at the Grand Rapids Catechetical Conference on September 25 to distribute project information and as a result recruited two additional Pilot Teachers.

The Project Manager is always available to the Pilot Teachers and other interested parties for questions and information. evelyntucker@archstl.org

120 Years of Catholic Social Thought

(reprinted with permission from *Initiatives: In Support of Christians in the World*.
National Center for the Laity, PO BOX 291102, Chicago, IL 60629
Editor, Bill Droel; www.catholiclabor.org/NCL.html,
January, 2011, Number 191).

Why do so few people in the U.S. accept Catholic social teaching about the market, business, and politics? Because, writes Fr. John Coleman, SJ, Catholic teaching and three elements of U.S. culture are largely incompatible. One element is consumerism—putting a higher value on *having* over *being*, at an environmental cost of producing too much and disposing of so much waste.

The second is individualism—giving priority to your *self* at the exclusion of others. “The unencumbered individual as an autonomous chooser, cut off from essential relationality” is a dominant theme in U.S. culture, he says. This is “diametrically opposed to the Catholic understanding of the human person as profoundly and essentially relational.”

The third is a “romance” with technology, which “stresses means, technique, [and] procedure...rather than substance and goals.” The combination of these three produces wariness toward Catholic social teaching on the common good and human solidarity.

“In short,” says Coleman, U.S. “culture is not the most congenial possible setting for CST.”

Nevertheless, U.S. Catholics have made noteworthy contributions to the development of Catholic doctrine, he adds, citing as an example the pioneering work of James Cardinal Gibbons (1834-1921) of Baltimore in coming to the defense of workers and their efforts to organize.

Coleman, who participated in our National Center for the Laity’s founding convention, tracks the mixed record of the bishops’ conference in taking timely public policy positions. He gives high praise to two very influential bishops’ pastoral statements: in 1983 *The Challenge of Peace* (USCCB, 3211 Fourth St. NE, Washington, DC 20017; at www.usccb.org/sdwp) and in 1986 *Economic Justice for All* (available through Office of Social Justice, 328 W. Kellogg Blvd., St. Paul MN 55102; www.osjspm.org).

A “unique process” causes those two documents to stand

out. Before publication, the bishops widely conducted hearings among experts (secular and religious) and circulated drafts for discussion and feedback. One beneficial result was to introduce policy elites, the media and the public to CST—perhaps for the first time. Since 2001 no U.S. bishops’ teachings have a participatory process, Coleman concludes in *Catholic Social Teaching in Global Perspective* edited by Fr. Daniel McDonald, SJ (Orbis Books [2010], PO Box 302, Maryknoll, NY 10545).

Meanwhile, the dominant worldview in the U.S. leaves many people unsatisfied. Is there a way that Catholic principles can be attractively presented to young adult Catholics and others, while respecting the beauty of U.S. pluralism?

Lectures and Conferences of interest:

Peacemaking in a Culture of Violence is the title of the March 1-4, 2011 gathering of Congress on Urban Ministry (SCUPE, 200 N. Michigan Ave. #502, Chicago, IL 60601; www.congressonurbanministry.org). Among the speakers are biblical scholar Walter Brueggemann, author of *The Prophetic Imagination* (Augsburg Fortress [1978], 4001 Gantz Rd. E., Grove City, OH 43123) and Chicago Fr. Mike Pflieger, subject of *Radical Disciple* by Bob McClory (Chicago Review Press [2010], 814N. Franklin St., Chicago, IL 60610).

Catholic Social Teaching and World Poverty is the latest in a series of conferences, March 21-23, 2011. at Villanova University (800 Lancaster Ave. #Corr Hall, Villanova, PA 19085; www.villanova.edu/mission).

The National Center for the Laity will co-sponsor a March 24-26, 2011 conference: *Celebrating 120 Years Since **Re-rum Novarum*** (the document that began modern Catholic social thought). The Center for Social Concerns (1212 Geddes Hall, Notre Dame, IN 46556; is the convener; the University of Notre Dame is the site).

From Our Readers On Hawking

Dear Editor:

Recently, I received the ITEST Fall 2010 Bulletin and enjoyed reading it, especially the review of *The Grand Design* by Hawking. That book was also big news in Japan.

I can understand Hawking's argument that the Big Bang does not prove the existence of God. Any physics theory, be it Newton's equations of motion or Maxwell equations, quantum theory or relativity does not prove or disprove God as science.

The review of Hawking's book, which I unfortunately have not read yet, reminded me of an episode many years ago. In 1951, Pope Pius XII delivered a message to the Pontifical Academy of Science, saying "...it would seem that present-day science, with one sweep back across the centuries, has succeeded in bearing witness to the august instant of the primordial *Fiat Lux* [Let there be Light], when along with matter, there burst forth from nothing a sea of light and radiation, and the elements split and churned and formed into millions of galaxies.

"Thus, with that concreteness which is characteristic of physical proofs, [science] has confirmed the contingency of the universe and also the well-founded deduction as to the epoch when the world came forth from the hands of the Creator. Hence, creation took place. We say: therefore, there is a Creator. Therefore, God exists!"

I learned that Fr. George Lamaitre, a Belgian physicist and priest, and the founder of the Big Bang theory, was

a member of the Academy at that time and was critical of the Pope's statement. He thought that Christian doctrine should not be explained in terms of a scientific hypothetical theory. Even a steady state universe theory could be compatible with the doctrine of *creatio ex nihilo*. The desire to "prove" Christian doctrines by science is based on a scientism, as was the case of the "Intelligent Design Theory."

Tom, Sheahan, writing in the latest bulletin, in reference to Spitzer's book, *New Proofs for the Existence of God*, notes that "Among other arguments, Spitzer carefully examines the incredibly tiny probability that the universe we live in could be a result of chance alone." The chance is referred to with a negative nuance. I, as a Japanese Christian, always wonder if western people think that Chance is out of God's hand.

A Similar argument appears in the discussion of evolution. I was happy to find in *COMMUNION AND STEWARDSHIP* by THE INTERNATIONAL THEOLOGICAL COMMISSION

(2004) the statement "But it is important to note that, according to the Catholic understanding of divine causality, true contingency in the created order is not incompatible with a purposeful divine providence." (No. 69)

Since my English is not the best, I may not have understand correctly the meaning of some of the points in the Bulletin but I always find it inspiring. Thank you for your efforts.

Yoshio Oyanagi
Professor and Dean/Physicist
Kogakuin University
Japan

From Our Readers On Hawking

Dear Editor:

Can Stephen Hawking question creation from physics?

Worldwide mass media have echoed the comments made in his latest book, *The Grand Design*, by the eminent and well known physicist Stephen Hawking, who held until a few months ago the Lucasian chair at Cambridge University, the same chair held in his time by Isaac Newton. In contrast with Newton, who in his book *Principia Mathematica* recognized that this marvelous system of sun, planets and comets can only be explained as created by an all powerful God, Hawking asserts that the universe has sprung spontaneously from nothingness and the laws of physics explain it, without the need for a creator.

His comments have been published and commented on in many newspapers. A number of commentators have called attention to the fact that Hawking's statements are outside the field of science and belong really to philosophical speculation, which, by the way, Hawking in his book declared to be dead. "Creation" and "nothingness" are not concepts used in physics, but in philosophy. Physics can talk of the "origin" of the universe and the "vacuum," but these are different things. To create is a metaphysical or religious concept, which refers to giving existence to what doesn't yet exist. In science existence is taken for granted, not explained. Moreover, science proceeds by theories which must always have recourse to observations and experiments. At the very least, as was proposed by the philosopher of science, Karl Popper, they must be falsifiable by experience.

The statement that the universe has been created by itself cannot be based on experience, as neither can it be that it has been created by God. This problem lies outside the very methodology of physics, which deals always with the transformation of what already exists in one form or another. The problem is that the boundary between science and philosophy is somewhat blurred and diffused. Often scientists fall in the trap of crossing the boundary from science by speculating philosophically, pretending to be still in the proper field of science. Hawking has every right to philosophize and present his atheistic views, but in so doing he must recognize that he is no longer in the strict field of physics. His extrapolated conclusions about creation, supposedly based on string theory, cannot be presented as scientific conclusions, since they can neither be verified nor falsified by experience nor guaranteed by the scientific community. Besides, from a philosophical point of view his position of a spontaneous creation is hardly acceptable.

The only alternative to the creation of the universe (or of the multiverses) is its eternity. Democritus in the fourth century BC stated that nothing can surge from nothing and he postulated the eternity of the atoms, which were for him the essence of things. To the creation by God one arrives from religious faith or by reason through philosophical considerations. It implies an option for the sense of existence. The atheistic position is also an option, in this case for the absence of any sense, and it is not legitimate to disguise it as a scientific conclusion. In fact, we all, believers and unbelievers, as Saint Paul said, walk by faith not by vision (2Cor 5,7).

Agustín Udías, Emeritus Professor of Geophysics

Universidad Complutense de Madrid

Author of *Ciencia y religión: Dos visiones del mundo*

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