



# Institute For Theological Encounter With Science and Technology

Volume 50 - #3

Summer 2019 Bulletin

## Evolution and Time

Our ITEST conference in November 2019 will be a *Webinar*, with participants on-line from everywhere. This issue of the ITEST Bulletin is part of the preparation for that conference. The conference title: “Is Evolution Catholic?” Our answer is “yes,” and our speakers, Fr. Earl Muller, S.J. and Dr. David Keys, provide explanations that support that position.

However, it is unfortunate that it is even necessary to pose that question. As scientists who perceive faith and science as compatible and mutually supportive, we discern in evolution a tremendous example of God’s cleverness. God employs evolution as His means of creation. To us, it’s plausible that God can be creative in ways that humans could never have imagined.

That’s not the case for everyone. I’m aware of an organization of very devout Catholics, fully involved in the pro-life movement, who sponsor speakers on various topics, including “The Heresy of Evolution.” They have a lot of hard-working teenagers in the organization. I wince at the thought of their being told to regard evolution as a heresy. Among parishioners and other associates of my own age range, there is an enduring nostalgia for the Adam & Eve narrative – not clinging-to-literalism, but discomfort with any modern interpretation.

Around year 400 A.D., St. Augustine wrote a book entitled “*The Literal Meaning of Genesis*” which basically said “don’t take it literally.” One succinct aphorism from Galileo’s time is “The Bible tells us how to go to heaven, not how the heavens go.” In spring 2018, at a “Scientists Speak of their Faith” evening, Fr. Michael Lampe explained clearly the relevance of ancient Hebrew poetry and the correspondence to the days of creation.

Pope Pius XII shocked many conservative Catholics when he gave an OK to studying evolution, and in 1995 Pope John Paul II went further by stating that “Evolution is more than ‘just a theory.’” That displeased many Evangelical Christians, who interpret Genesis much more literally. Pope Pius XII said that, regardless of the evolution of the body, the human soul “is created immediately by God.”

To most people, the word “immediately” connotes a particular point in time. That in turn leads to an image of God as a factory worker stamping out little ghosts and inserting them into babies’ bodies. That is a really lame image, which in fact constrains

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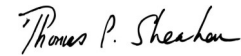
## Evolution and Time —Continued

God to fit within human imagination. Interpreting something as a limitation *upon* God, as contrasted to a limitation *of* human understanding, is always an error.

God is the creator of space and time; He transcends time, and definitely is not subordinate to time. Any statement of the form that God *has to do* something *within* time is an attempt to impose a limitation of human thinking upon God. Big mistake!

From a biological viewpoint, it appears that God's creativity includes making DNA contain the prescription that causes the human being to have intellect and free will (the properties of the soul). God has not yet revealed to scientists the details of how He did that. We need to have enough humility to say "I don't understand this, but God certainly does." The line from the Psalms "How inscrutable your judgments..." is appropriate here.

Thomas P. Sheahan,



Director, ITEST

## Announcements

### Mark your calendars

**ITEST Fall Webinar/Conference**  
**Friday, November 15, 2019, Noon to 3:00pm CST**  
**"Is Evolution Catholic?"**

Join us from the comfort of your computer chair to participate in this webinar on a topic which is still quite current today. Can Catholics or Christians accept evolution? Darwinism in its totality? Evolution in itself? Randomness? Chance? Natural Selection?

Speakers responding to these and other questions are Father Earl Muller, SJ and Dr. David Keys. Keys will focus on the evolution of the universe, the Catholic theological perspective on evolution and interpretation of Genesis relating to creation. From a theological viewpoint, Muller will focus on human evolution, clarifying what the Church teaches about evolution, thus correcting the sometimes mistaken notion of Catholic teaching on the topic.

Both speakers are ITEST members and authors in their own right. Dr. David Keys, scientist and theologian, recently published a book on the Eucharist which we promoted in the bulletin, and Father Earl Muller, in addition to his work with seminarians as spiritual director, has published extensively in scholarly theological journals as well and has been a presenter at ITEST conferences in the past. Watch your email and tweets for more information about how to register "free of charge" as the date approaches.

### Please take note

There are two excellent pieces published in a recent issue of the Magis Center Blog Post Newsletter.

In the first piece, the Blog editors ask, "Are faith and science in conflict? Actually there has never been a better time to unite the two. Contemporary science is giving us the tools to test our reasons to believe, and is leading us to some surprising conclusions." "*Curious Bedfellows: Soul and Brain*" by Dr. Michael Ferguson. The author opens by stating: "As a neuroscientist conducting research at an Ivy League-affiliated hospital, some might assume that I have an irredeemably hostile regard for historical paradigms on human nature. After all, there is an unfortunate tendency for contemporary scientists to disregard, or even scorn, pre-modern and ancient philosophical reflections. However, this would be a gross error in supposition and judgment."

The second piece: "*Is Atheism Consistent with the Scientific Method?*" By Maggie Ciskanik, M.S.

"A prize winning physicist's answer may surprise you". Click on the URL/link below to read more about the two essays above. <https://www.magiscenter.com/science-reason-faith/>



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## Announcements—Continued

### St. Cletus Parish in St. Charles explores interplay of science and faith

Using the ITEST project, “Scientists Speak of their Faith: A model for parish discussion,” as a template, Pastor, Father Jim Benz hosted a panel of three scientist-parishioners who talked about their interest in science and how faith plays a role in what they do. Dr. Michael Conoyer, physician/surgeon, Chuck McDonnell, physical therapist, and Jennifer Balsarotti, microbiologist, discussed what led them to become scientists and how their Christian faith nurtures their science and how their science enlivens their faith.

Kudos to Father Benz. This is the second year he has hosted the panel of scientists from his parish. At ITEST we pray that his good example will motivate other pastors in the St. Louis Archdiocese and beyond to do the same. As we mentioned in the past, this program works well for adult formation sessions in the parish. Six parishes in the St. Louis Archdiocese held these events as pilot programs in 2018. We would like to see this spread to other parishes as a good virus. Let us know if your parish is interested in hosting one of these events. Check our website for the full guidebook to the program. <https://faithscience.org/special-projects/>

### Recent publication of interest on evolution

ITEST recommends *The Human Instinct: How We Evolved to Have Reason, Consciousness and Free Will* by Kenneth R. Miller, Simon and Schuster paperback, New York, 2018, 294 pages. This is a well-researched, and engaging book. Miller knows how to write for the general public without “dumbing down” the science. The bibliography is extensive, the index thorough, the appendices enlightening and the notes helpful.

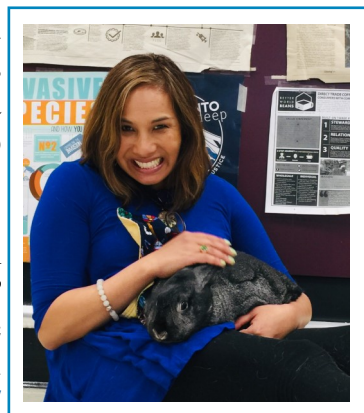
*From the publisher, “The Human Instinct... details our biological trajectory to show how evolution didn’t make us living machines but rather set us free from the constraints that bind so many species—giving rise to self-awareness and the power to shape our own destiny.”*

Finally, as a bonus for our readers we are reprinting an article by Miller from our ITEST archives of the ITEST Bulletin Volume 39 #1, 2008. The article titled: “Darwin, Design and the Catholic Faith,” details his belief that science and faith are not in conflict. In fact, in response to an evolutionary biologist at the University of Chicago Miller notes that “...there are ways for religious people to understand and accept the theory of evolution that are consistent with the Christian faith.” More detailed information on Miller’s work may be found at his homepage at <https://millerandlevine.com/km/>

*Kenneth R. Miller is professor of biology at Brown University and the critically acclaimed bestselling author of **Only a Theory** and **Finding Darwin’s God**. Among his honors are the Stephen Jay Gould Prize from the Society for the Study of Evolution, the Laetare Medal from the University of Notre Dame and the Award for Public Engagement with Science from the American Association for the Advancement of Science.*

## Biology Teacher Addresses Perceived Faith/Science Conflict

Dr. Mariette Baxendale, biology teacher at De Smet Jesuit High School in St. Louis, and ITEST Board Member, recently presented a session on science and faith at the Jesuit Schools Network (JSN) Colloquium: “Building Communities on Justice and Hope” at Loyola University in Chicago, IL. Her presentation, **Faith and Science: Friends Not Foes! How to Incorporate “Religious” into a Science Classroom** was among several inquiry sessions offered to the 523 participants representing 96 schools and organizations across the world. “The Jesuit Schools Network promotes the educational ministry of the Society of Jesus in service to the Catholic Church by strengthening Jesuit schools for the mission of Jesus Christ.” The weeklong colloquium centered about “(1) the formation and support of Jesuit Catholic identity; (2) discerning a response to the signs of the times; and (3) engagement across and beyond the Jesuit Schools Network of North America <https://jesuitschoolsnetwork.org/colloquium/>



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Dr. Mariette Baxendale

The keynote talks and breakout session topics placed special emphasis on the Universal Apostolic Preferences of the Society of Jesus [http://image.jesuits.org/UCSPROV/media/Fr Sosa Letter UAP.pdf](http://image.jesuits.org/UCSPROV/media/Fr_Sosa_Letter_UAP.pdf) : (1) To show the way to God through the Spiritual Exercises and discernment; (2) To walk with the poor, the outcasts of the world, those whose dignity has been violated in a mission of reconciliation and justice; (3) To accompany young people in the creation of a hope-filled future; and (4) To collaborate in the care of our Common Home. One example of great interest, “Ethics Across the Curriculum”, attracted primarily theology teachers and school administrators from Jesuit schools around the nation and beyond. Notably, the only non-theology instructors present at this talk were a math teacher, a Spanish teacher, Dr. Baxendale and another science teacher in a packed classroom of approximately 25. Perhaps the result of competing topics of interest (sustainability, eco-service tours), perhaps a reflection of the deprioritization of the incorporation of faith outside of theology class or the result of the perceived conflict between faith and science, only a Jesuit who teaches science in Canada and a science teacher from San Francisco were in attendance at Dr. Baxendale’s presentation.

Undaunted, Dr. Baxendale delivered her presentation and received positive feedback. As added insurance, she e-mailed the attendees and uploaded her resources on the WEB site so that “...all those who couldn’t attend my talk could download and perhaps utilize the materials” in their teaching.” ITEST will offer the same resources to our

members and will provide links to those documents at the end of this feature.

Chosen as one of our “Star” High School teachers in 2014, Baxendale has a history with ITEST. You may view the video presentation on the ITEST YouTube channel where she and her students demonstrate how faith and science, even in biology class, are friends not foes. Just a glance at Baxendale’s research for her classes at De Smet Jesuit shows how a science teacher, dedicated to her faith and well educated in science, clearly manages to show how God’s work shines through God’s creation.

We invite you to click in the links below to view this highly professional material which serves the students of De Smet Jesuit High School well, not only in their firm grasp of the principles of science, but in their understanding of the complementarity of religious faith and science.

Baxendale clearly demonstrates, through her dedicated teaching, that she has prepared her students well to meet the challenges to the faith they will encounter in the world today.

*Below, we are providing links, with the author’s permission, to the following documents comprising Baxendale’s presentation. They demonstrate the depth of her preparation and the breadth of her understanding of how to reach young minds at the level of their development. The ITEST editors suspect that some college students would be “at sea” when complying with Baxendale’s requirements for her biology courses on the senior high school level.*

## **Dr. Mariette Baxendale’s Resources**

Faith & Science – Friends, not Foes! How Can “Religious” Look in a Science Classroom?  
Mariette P. Baxendale, Ph.D. Science Department Chair Biology & Forensic Science Teacher  
ITEST Board Member [mbaxendale@desmet.org](mailto:mbaxendale@desmet.org) De Smet Jesuit High School, Creve Coeur, MO

**Go to this link** <https://faithscience.org/catholicschools/>

for the following resources:

*Dr. Baxendale’s Presentation Outline and Reflection Questions,  
Biology and Forensics Activities which Blend Faith and Science, and  
Faith and Science Resources*



## Darwin, Design and the Catholic Faith

Kenneth R. Miller

*Reprinted with the kind permission of the author, Kenneth R. Miller, Professor of Biology, Brown University, Providence, Rhode Island. You may access his home page at <http://www.millerandlevine.com/km/>*

Words matter, and they matter most of all in the context in which they are to be read and understood. On July 7, 2005, the *New York Times* published an opinion piece, “Finding Design in nature,” purporting to offer “The official Catholic stance on evolution.” The author of that piece, my fellow Catholic Christoph Cardinal Schönborn, got the theology exactly right, but erred dramatically in his take on the science and the politics of the “design” movement as it exists in the United States. Knowing how the good Cardinal’s words will be misused by the enemies of science in our country, it is important to set the record straight.

As Cardinal Schönborn quite properly points out, the Catholic Church is staunchly opposed to any view of life that would exclude the notion of Divine purpose and meaning. In the new century, as he puts it, the Church will “defend human reason by proclaiming that the immanent design evident in nature is real.” In response I would echo the words of the Catechism that scientific studies of “the age and development of the cosmos, the development of life-forms and the appearance of man...invite us to even greater admiration for the greatness of the Creator.” Indeed they do.

But the Cardinal is wrong in asserting that the neo-Darwinian theory of evolution is inherently atheistic. Neo-



Darwinism, he tells us, is an ideology proposing that an “unguided, unplanned process of random variation and natural selection” gave rise to all life on earth, including our own species. To be sure, many evolutionists have made such assertions in their

popular writings on the “meaning” on evolutionary theory. But are such assertions truly part of evolution as it is understood by the “mainstream biologists” of which the Cardinal speaks?

Not at all. Consider these words from George Gaylord Simpson, widely recognized as one of the principal architects of the neo-Darwinian synthesis: “The process [of evolution] is wholly natural in its operation. This natural process achieves the aspect of purpose without the intervention of a purposer; and it has produced a vast plan without the concurrent action of a planner. It may be that the initiation of the process and the physical laws under which it functions had a purpose and that this mechanistic way of achieving a plan is the instrument of a Planner – of this still deeper problem the scientist, as scientist, cannot speak.”

Exactly. Science is, just as John Paul II said, silent on the issue of ultimate purpose, an issue that lies outside the realm of scientific inquiry. This means that biological evolution, correctly understood, does not make the claim of purposelessness. It does not address what Simpson called the “deeper problem,” leaving that problem, quite properly, to the realm of faith.

Cardinal Schönborn also errs in his implicit support of the “intelligent design” movement in the United States. The neo-creationists of intelligent design, unlike Popes Benedict and John Paul, argue against evolution on every level, claiming that a “designer” has repeatedly intervened to directly produce the complex forms of living things. This view stands in sharp contradiction to the words of a 2004 International Theological Commission document cited by the Cardinal. In reality, this document carries a ringing endorsement of the “widely accepted scientific account” of life’s emergence and evolution, describes the descent of all forms of life from a common ancestor as “virtually certain,” and echoes John Paul II’s observation of the “mounting support” for evolution from many fields of study.

More important, the same document makes a critical statement on how we should interpret scientific studies of the complexity of life: “whether the available data support inferences of design or chance cannot be settled by theology.

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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.”

Right there, in plain view, is the essence of compatibility between evolution and Catholic theology. “Contingency in the created order,” the very essence of evolution, is not at all incompatible with the will of God. The official Church document reemphasizes this point by stating that “even the outcome of a truly contingent natural process can nonetheless fall within God’s providential plan for creation.” And evolution, as Stephen Jay Gould emphasized brilliantly in his writing, is truly a contingent natural process.

The concerns of Pope Benedict, as expressed in his earlier writings and in his coronation homily, are not with evolution per se, but with how evolution is to be understood in our modern world. Biological evolution fits neatly into a traditional Catholic understanding of how contingent natural

processes can be seen as part of God’s plan, while “evolutionist” philosophies that deny the Divine do not. Three Popes, beginning with Pius XII, have made this abundantly clear.

John Paul II’s 1996 letter to the Pontifical Academy of Sciences, which Cardinal Schönborn curiously regards as “unimportant,” bore the magnificent title of “Truth cannot contradict Truth.” In that letter the late Pope, writing in the tradition of Augustine and Aquinas, affirmed the Church’s twin commitments to scientific rationality and to an overarching spiritual view of the ultimate meaning and purpose of life. Like many other scientists who hold the Catholic faith, I see the Creator’s plan and purpose fulfilled in our universe. I see a planet bursting with evolutionary possibilities, a continuing creation in which the Divine providence is manifest in every living thing. I see a science that tells us there is indeed a design to life. And the name of that design is evolution.

## **CYCLIC MODEL VERSUS EVOLUTIONARY MODEL:**

### **A FUNDAMENTAL CONFLICT IN THINKING ABOUT ECONOMIC AFFAIRS**

Edward J. O’Boyle, PhD

Economics for a very long time has been dominated by modeling economic affairs in cyclic terms. Others in economics who are not impressed with the cyclic model insist that the proper way to model economic affairs is in evolutionary terms.

The Cyclic Model. As with other disciplines such as history which “repeats itself,” economics is constructed on a cyclic model that applies circular descriptions and explanations to economic events. Consider the following four examples from economics past and present: (1) characterizing the market as a system that clears shortages and surpluses, automatically returning to a state of micro-economic equilibrium; (2) employing automatic stabilizers to restore macro-economic equilibrium; (3) describing macroeconomic affairs in terms of the business cycle with its repeating pattern of expansion, contraction, peak, and trough; and (4) promoting the natural-rate hypothesis which claims that unemployment invariably returns to its normal or natural rate regardless of the rate of inflation.

In the cyclic model, events are construed as identical and inevitable, and therefore predictable. Reality is closed in and brought under control; though assertive, thinking remains in a primitive mold. Thus, the widespread use of econometrics in mainstream economic analysis. Using cyclic reasoning, and given the data required to operationalize their econometric models, mainstream economists are comfortable in asserting that changes in economic affairs can be predicted. What they do not fully appreciate is that one other requirement -- a central premise of their way of thinking about economic affairs -- must be firmly in place: specifically and notwithstanding any changes taking place in economic affairs over time, homo economicus is an utterly rational, never-changing human individual. Without this rationality and constancy about human individuals as economic agents, and the automaticity which is characteristic of market economies, the cyclic model disintegrates for lack of predictability.

*Continues on page 7*

Walter Ong beckons us to set aside cyclic thinking for evolutionary thinking because “one can make use of the circle model only as a result of a careful selection of details and the calculated elimination of others.” Consider these five examples of “careful selection” and “calculated elimination”: (1) imputing values for unobserved or unobservable variables; (2) assuming that dependent and independent variables are normally distributed in the population; (3) taking for granted that measurement error is randomly distributed; (4) presuming that in linear programming two of the lines bounding a region of basic feasible solutions do not intersect at the same corner point; (5) using budget constraints which ignore kinks, discontinuities, gaps, and nonconvexities.

The Evolutionary Model. Charles Darwin’s theory of evolution with its twin emphasis on adaptation of living organism to the environment and natural selection has had a powerful influence on modes of thought well beyond the precincts of biology. Ong proposes two arguments in support of the evolutionary model. First, “the discovery of evolution has undermined cyclic views even more than would at first blush appear. In the universe as we know it, there exists no real model or analogue for cyclicism – that is the identical and inevitable repetition of an event or two

(much less at an infinite number of) points in time.” Second, the birth of man in the cosmos is striking evidence against cyclicism if further evidence is really needed. For here we have the cosmic processes terminating not in repetition but in its antithesis, the utterly unrepeatable and unique human person.

By extension, Ong is arguing and we certainly concur that there is no way to posit a never-changing homo economicus without essentially casting aside “the central corporate discovery of all mankind” and without effectively cloning all economic agents from a single cell taken from a hyper-rational abstract human being. At the very heart of economic affairs is found the economic agent who is not cyclic but evolutionary, adapting in a Darwinian sense to the economic environment, and changing in a personalist sense simply by acting as an economic agent.

There are several significant examples of evolutionary thinking outside mainstream economics. The evolutionary thinking of Thorstein Veblen, John Commons, Wesley Mitchell, and Clarence Ayres formed the intellectual foundations of the Association for Evolutionary Economics. Other examples that demonstrate evolutionary thinking in economics are worthy of note. Deriving its inspiration from Joseph Schumpeter, the Journal of Evolutionary Economics also presents economic affairs in terms of an evolutionary process. Evolution is one of four ideas which are foundational to institutional theory. The other three are culture, cultural relativity, and instrumental valuing. Evolutionary economics replaces the maximization and equilibrium assumptions of mainstream economics with “uncertainty and imperfect information, routines, heuristic search processes and optimizing behavior, and nonequilibria.”

Analogizing economics to biology, Herman Daly argued that matter-energy are degraded through the economic process in the same way that matter-energy are degraded through the metabolic process. In both the biological order and the economic order the purpose is the same: the maintenance and enjoyment of life. In his extended analogy, Daly examines the life process which he regards as the ultimate subject matter of economics and biology under two aspects: steady-state and evolutionary. Unlike cyclic thinking, Daly’s thinking is linear. He visualizes the flow of matter-energy in economic affairs as “one-way, non-circular, and irreversible.”

*Continues on page 8*

Edward J. O’Boyle PhD, is a Senior Research Associate affiliated with Mayo Research Institute and a long-time member of ITEST. He is 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. O’Boyle has written articles and essays for the Bulletin in the past. His most recent may be found in the ITEST Bulletin, Volume 48, Number 3, Summer. Dr. O’Boyle may be reached at [edoboyle737@gmail.com](mailto:edoboyle737@gmail.com).

In the early 1980s Kenneth Boulding argued that Adam Smith, Thomas Malthus, and Alfred Marshall employed the evolutionary model and that it was Leon Walras and his followers who by grounding economics in mathematics subsequently steered it in the direction of the cyclic model. Economic science, in other words, was first a biological science before it was fashioned into a physical science.

*For those who would like to read Dr. O'Boyle's entire essay on this topic please click on this link:*

<https://faithscience.org/catholicscientists/>

## **Falsehoods and Hypotheses Abstract**

Dr. Donald G. Boland

As I see it the problem of the modern supposed conflict between Science and Religion cannot be properly addressed without showing up the quite deceptive equivocations employed in the basic notions involved. If this is not done religious people can be subtly led into accepting the notions of science and related matters, such as Evolution, put up by their opponents. There is need, then, at the beginning for an exercise in making distinctions, which is a philosophical task.

There are two characteristics of science as today proposed in the philosophy of science that are starkly opposed to the notion of science traditionally understood from the Greeks who started the whole human enterprise of examining things rationally. Aristotle's notion of science may be taken as classical and in fact it is mainly upon his notions of science and reason that the greatest theologians made their rational arguments for a spiritual order of reality culminating in the proof of the existence of God.

The first of the modern characteristics may be called a fundamental scepticism. Aristotle maintained that science was true and certain knowledge obtained by the exercise of our reason. The philosophy of modern science could not be more radically opposed to that: science does not and cannot give us truth, let alone certainty. We may take it as a goal but an illusory one. This we may call the metaphysical difference, for truth is a metaphysical concept, reality as grasped in our reason, and the certainty of all particular sciences, such as Mathematics and the Natural Sciences, rests on fundamental metaphysical principles. From a philosophical viewpoint modern science in this regard falls into absurdity.

The second characteristic may be called materialism. This relates to our knowledge of the material world in which we live. Aristotle held that science of things consists in knowing their causes. He listed four, two extrinsic, efficient and final, and two intrinsic, formal and material. The important difference here in regard to modern science is the exclusive reliance on material and efficient causes. This of itself, from an Aristotelian point of view, makes modern natural science not false, but inadequate. Modern science, so limited, can provide a valuable, and indeed necessary, scientific service (in this regard modern science is not opposed to religion but indeed commended by the Catholic Church). However, this presupposes that it does not ignore the two other lines of explanation of things, where they are available. Unfortunately, in its philosophy of science it has distinguished itself from the beginning by totally rejecting formal and final causality in the study of nature. The situation, however, is complicated by the inclusion of Mathematics in the overall modern notion of science. But fundamentally the materialist philosophy behind modern science can be seen in the discussion of Evolution.

The article is accordingly divided into two parts, the first on the most modern attempt to provide a unifying principle for the employment of scientific method and the second on the most modern attempt to provide an overarching principle whereby to give unity to the subject matter of science. The first as I see it is generally accorded to Karl Popper's Principle of Falsification, being seen as an improvement on the previous principle of verification. The second is generally accorded to the Theory of Evolution, basically as proposed

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by Charles Darwin, if given varying interpretations in more recent times.

The thesis of the article is that such intellectual efforts are futile exercises even in their own terms, since no unifying principle can be obtained from a notion of science understood in purely empiricist and materialist terms, which is assumed in all modern discussions of science and scientific method. In regard to the first methodological principle, truth and falsity go together. If nothing can be verified, neither can anything be falsified. The notion of truth went out with the rejection of Metaphysics. It cannot be resurrected methodologically, as Popper attempts, for logic is not so much science, whose object is truth, but the instrument of science. In rejecting the possibility of achieving truth about things the modern mind necessarily rejects any intellectual value in logic or scientific method.

In regard to the second principle the futility consists in limiting the notion of science to an explanation based solely on a consideration of causes, intrinsic and extrinsic, that are interpreted purely materialistically. The theory of evolution, if it is to have any truth or certainty, has to bring into the consideration of natural things an intrinsic directive principle in terms of formal causality, which intrinsic principle presupposes an extrinsic causal influence that is intelligent,

For those who would like to read Dr. Boland's entire essay on this topic please click on this link:

<https://faithscience.org/catholicscientists/>

Dr. Donald G. Boland, an Australian native received his L.L.B. from the University of Sydney and his PhD from the Pontifical University of St. Thomas, in Rome. He practiced for many years as a lawyer while lecturing in philosophy in various Catholic educational institutions. From 1986 to 2015 he taught at the Centre for Catholic Studies Inc., formerly the Centre for Thomistic Studies Inc, in Sydney covering the whole range of philosophical subjects.

Boland has authored numerous articles available on his website at [www.cts.org.au](http://www.cts.org.au) His first book, **Economic Science and Saint Thomas Aquinas**, has been published by EnRoute Books and Media. Another, **Thomist Tradition: Avoiding Scylla and Charybdis** is forthcoming.



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## From the Past Toward the Future: Creation and Evolution

ITEST workshop — St. Louis, Missouri — October 1997

### Abstract:

This book deals with the vexed and vexing question surrounding the topic of Creation AND Evolution. We basically recognize both creation AND evolution (while not necessarily subscribing to the entire Darwinian theory) separating us from both the evolutionists and the creationists. Much is tied together in this topic. There is the recent statement of Pope John Paul II (1996) which goes beyond anything Pope Pius XII said in *Humani Generis*. What does that statement mean? How far ought we to go in trying to reconcile evolution and creation? What are the ramifications of this issue set on Faith/Science dialogue?

### Foreword:

At the beginning of the meeting essayist, Michael Behe, quoted Cardinal Ratzinger as follows:

It's the affair of the natural sciences to explain how the tree of life in particular continues to grow and how the branches shoot out from it. This is not a matter for faith. But we must have the audacity to say that the great projects of the living creation are not the products of chance and error. They point to a creating reason and show us a creating intelligence . . . .

This quote set the tone for the Workshop. Each of the essayists, in his or her paper and remarks, returned explicitly or implicitly to the ideas quoted above. The essayists and the participants treated the evolution creation debate in the context of the faith-science encounter. In other words, the linkage of the one debate with the other was apparent.

Michael Behe continued:

He [Cardinal Ratzinger] seems to be making the point that, if we think that the world was created, that it was intended, then, perhaps, we should look for physical reasons and evidence to support that belief. We may or may not find it; we should at least look. Fortunately, in the second half of this century, we've been given many reasons for thinking that the natural world points to a creating intelligence.

Behe gave several examples of living systems where there

seems to be an "irreducible complex" system, i.e., one in which we need several or many parts to get the function of the system. Is the Darwinian theory capable of explaining such systems or is there the implication of intelligent design? In brief, does blind chance or random variation and slow gradual change solve the problem presented by such systems?

Father Walter Macior posed these questions:

What is science and what is religion? Is religion a code of belief and behavior in regard to ultimate reality? Is it something else? Many scientists will say, "It's something we do with our mind when we have nothing better to do." Others might say, "Well, we don't need it, so why bother?" Can science be a religion? Some people in religion will say that. It's a religion which has beliefs with no proofs. Other people will say that science has only one dogma; namely, nature works according to law.

Sister Joan Gornley, in her essay, makes the following observation:

Its [fundamentalist Christianity] insistence on a literal reading of the creation accounts in Genesis ensures that the controversy [evolution/creation] will remain a burning one, at least for the immediate future . . . . But another reason why the question of creation and evolution has not been laid to rest is the crucial importance of the issue of human and cosmic origins, an importance which makes it imperative that it be dealt with, not just by the natural sciences, but also by philosophy and theology. . . Bruce Vawter . . . has accented the need for contemporary theologians to address the issues raised by science, and the ramifications they have for the whole social order.

As Sister Joan points out:

The creationists, in their tenacious adherence to the literal sense of the Bible, actually bow in the direction of science in treating the Bible as that which it makes no claim to be, a book of science, as though this were

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the only form of discourse worthy of acceptance . . . [S]ome non-fundamentalist Christian theologians pay similar homage to science inasmuch as they abandon the concepts which are integral to their discipline, including those which come from the Scriptures, “the soul of theology,” adopting instead the language of modern science.

The Reverend Steven Kuhl refers to Daniel Dennett in treating the faith and science aspects of the evolution/creation issue:

Dennett, however, is not really interested in fighting this [creationist] war. He thinks, not without justification, that the creationists have already been defeated intellectually (that is, on the basis of scientific fact) if not yet culturally and politically. Rather, Dennett is concerned about fighting the “peace” (the “AND” in the title of this ITEST Workshop), the many believing scientists and philosophers who “declare that their idea of God can live in peaceful coexistence with, or even in support from, the Darwinian framework of ideas. While Dennett very much affirms the “evolutionary synthesis” of the 1940s (that ongoing process of melding together the concerns of various scientific disciplines with regard to evolutionary findings), he sees no place for theology proper in this synthesis.

That is certainly one way to handle the ongoing faith/science effort.

Monsignor Paul Langsfeld remarks:

Theology in the modern era has not always fared well in relationship to science. Since science became the unquestioned arbiter of all truth during the Enlightenment, theology always found itself on the defensive when trying to establish itself as a true source of knowledge. Science set the terms for any possible debate by establishing the criteria of truth, so that whatever theology had to say about evolution was framed in relationship to science. During the modern period, this involved three possible reactions on the part of theology: rejection of science; a kind of declaration of neutrality; and the accommodation of theology to the findings of science.

This brief excursion into the essays shows the broader

faith/science orientation of those assembled for this workshop. The discussion showed that many had difficulties with Darwin’s formulation of the debate although few had a problem with evolution itself. The “survival of the fittest” was a point in question. Who are the fittest? The survivors, by definition, are the fittest. That this is hardly true of humans is almost beside the point. What the definition implies is that the phrase basically means the “survival of the survivors” – a tautology at best. Who are the survivors – those, according to some, who pass on their genes. It is the gene that survives – the only teleology that most “pure” evolutionists admit. Everything, according to these people, is ordered so that the gene survives.

In medicine, genetics and science in general we seem to be working against the notion of the survival of the fittest – at least in part. We are keeping the weak alive, and even allowing the “weak” to propagate – against the demands of Darwinian survival. Moreover, it is finally ironic that humans – purposive creatures that we are – should be the present (at least) highest product of evolution. At least in the case of humans Darwinism leaves some terribly important unanswered questions.

Several of the participants noted that science has limitations. First of all, science is not as objective as we might perhaps think or like. Science has its orthodoxies as does religion. Just because they are “scientific,” these positions are no less “right teaching.” Evolution, in the minds of many scientists, is one of those orthodoxies. Often enough, it is simply assumed to be the bedrock of biology. No counter arguments need apply.

The question remains. Can creation and evolution be joined? Against the advice (nay, demand) of the pure evolutionists, most of group continued in their belief that, indeed, one can simultaneously hold both positions. The odds against Darwinian evolution seem to be growing. The theory or the concept of evolution itself is changing under the impact of discovery. Biochemistry and molecular biology have raised questions that the Darwinian theory seemingly cannot address. The notion of evolution continues to be strong and enduring. The explanation, the old science if you will, will probably be revised – maybe even to include a notion like a beginning.

Creation from nothing (ex nihilo) requires faith. We believe

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in “creation,” we cannot know it; we cannot prove it. Without faith, creation from nothing is not a viable theory. The same is true of any predictive aspect. Without faith, the future of creation remains unknown, unknowable, unprovable. Without faith, none of us will survive. Survival really is at the heart of all of it. Will we survive as a gene or as a person – and more?

One thing is certain. We answered no questions; we arrived at no set conclusions. In fact, I am not certain that we even agreed on the nature of the problems involving creation and evolution. The meeting was most productive nonetheless. Issues were raised and discussed. People formed their own ideas and left to continue their lives. I believe that every participant left with things to think about, questions to be answered. The meeting was a success in that we got together, expressed our ideas and thought about the issues. More than that, we all got along together – maybe that was the most important part of the Workshop.

Robert Brungs, SJ

Director: ITEST

March 1, 1998

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## **Did you know?**

ITEST has partnered with WCAT Radio to produce two new series on faith and science.

The first is a series on the impact our teachers are having on that conversation. Catholic educators (and some public school educators) in primary and secondary education are being interviewed on how they integrate the study of faith and science within their learning environments. It is hoped that the model provided by these interviews will be an inspiration to Catholic school teachers in all (arch)dioceses in the United States and beyond.

All interviews are pre-recorded and are available for on-demand listening at <https://faithscience.org/catholicschools/>

The second is a series of interviews with Catholic scientists. We will be building this database in the coming months. Interviews are available for on-demand listening at <https://faithscience.org/catholicscientists/>

Would you like to set up an interview? Do you know someone whom we can interview?

Contact Sheila Roth at [sheilaroth@archstl.org](mailto:sheilaroth@archstl.org).

In addition to these two series, check out the newly uploaded presentation, “WCAT TV presents . . . Scientists Speak of their Faith, an ITEST Production”. It can be found here: <https://faithscience.org/special-projects/>