Fifty Years since Vatican II

This fall is the fiftieth anniversary of the opening of the second Vatican council, and the changes over the intervening years have been enormous. The council document *Gaudium et Spes* took note of the importance of science, and one young priest who read that document carefully was Fr. Robert A. Brungs, SJ. Combining his knowledge of both theology and science, Fr. Brungs was perfectly positioned to grasp the significance of Vatican II, and discerned from *Gaudium et Spes* that science really matters to the Church.

Recognizing the need for a closer interaction (and a better understanding) between faith and science, in 1968 Fr. Brungs originated the *Institute for Theological Encounter with Science and Technology*. He thereafter devoted his entire life to this ministry. ITEST has worked unceasingly to strength the linkage between faith and science over more than four decades, and has many accomplishments along the way, ranging from annual conferences on particular topics at the faith-science interface, through the publication of the *ITEST Bulletin*, to our latest innovation, the elementary-school education program *Exploring the World, Discovering God*. The leadership and the inspiration of Fr. Brungs has been the cornerstone of ITEST throughout our history; at one point Fr. Brungs quipped that ITEST has “survived into existence.”

Survival has never been assured; it must be earned over and over again. The many competing demands for time and attention that bedevil the entire Christian community, the secular culture of our times, plus the fact that many attacks against religion are wrapped in the clothing of sciences, all tend to drive science apart from religion. The central goal of ITEST remains the same as in Fr. Brungs’ day, but the specific focus continually moves forward with changing technology and science.

The Internet age has expanded communication opportunities beyond anyone’s expectation. In the case of adult education, it is no longer necessary to travel to a bricks-&-mortar building to learn a subject; on-line courses are sweeping traditional academia aside. The Church has wished for some time that its seminaries could teach more science to those studying for the priesthood, but resources are chronically too thin at any one seminary to provide the opportunity. The laity in large numbers seek higher education about their faith, and are pursuing Master’s degrees in theological fields. Eager students fit the coursework into the structure of their weekly activities, taking longer than a standard curriculum but nevertheless learning the content solidly.

ITEST is collaborating in the development of a “minor in faith and science,” whereby a student (regardless of geographical location) can learn about how science fits into our Catholic faith. Several of our ITEST members have already become part of this “faculty” of this internet program, administered through *Holy Apostles Seminary* in Cromwell CT; several courses are already being taught this way.

The Second Vatican Council, and *Gaudium et Spes* in particular, foresaw that the future of the Church depends upon the laity. Following Fr. Brungs’ vision, ITEST is at the forefront of drawing our laity into a closer interaction with the scientific side of the modern world.

*Director, ITEST*
Announcements

GOOD NEWS!!
Our Sunday Visitor Institute (OSV) Grant

We are delighted to announce that the OSV has awarded a generous grant to ITEST for a one year Marketing Plan to extend the promotion of the second tier of integrated faith/science lessons (Grade 5-8) of Exploring the World, Discovering God (EWDG). This marketing plan will allow us to increase the influence of the program in the upper grades. The success of the Pre-K-Grade 4 encouraged us to seek funding for the specific marketing of the lessons (5-8) while continuing to promote the Pre-K through grade 4 lessons. Our latest statistics indicate that more than 300,000 actual downloads have occurred in English speaking countries around the globe. We want to build on that success and expect to achieve more interest through intense marketing using the digital means available to us. In the next issue of the bulletin we will report on the progress in this area. In the meantime, as we noted before, “…take a look at the Pre-K through Grade 8 lessons on the web site at www.creationlens.org and invite your friends and colleagues to download the lessons. Ask the teachers in your parish, school and home school venues to browse the web. There are riches in those lessons! You should mine them.”

Exploring the World, Discovering God (EWDG)

As part of the marketing plan for EWDG, the ITEST staff has worked with our web designer, Bill Herberholt, to create a new four color brochure on EWDG. We are working on the final proof and we will make it available to ITEST members digitally and in hard copy. In the meantime ITEST has contacted all the St Louis Archdiocesan elementary schools with the opportunity to hear more about EWDG by offering workshops for parent/teacher meetings faculty and parish meetings and school events. This will afford ITEST a more substantive way to assess the interest in the program from participants who may not be familiar with the faith/science integrated lessons. With this increased exposure of EWDG, the success of the workshops may result in more principals and teachers adopting this supplementary program for their schools.

Open Forum on Early Human Life Issues
(See Tom Sheahen’s synopsis on page 9)

The ITEST Fall meeting welcomed professionals and students in the medical field, educators and others to an informative and animated exchange of ideas on early human life issues. Under the leadership of Georgetown Professors Fr. Kevin FitzGerald, SJ and Dr. G. Ian Gallicano, the medical and scientific aspects of the forum focused on the history and development of adult stem cell research and its place in the laboratories around the world today. Each ITEST member received a copy of the feature article published in the St. Louis Review the following week. Here it is again for those who did not see it. www.stlouisreview.com/article/2012-10-17/ethicist-confident

Father Ronald Mercier, SJ, Professor of Theology at Saint Louis University, presented the theological aspects of the topic focusing on the concept of transhumanism and what it means to be human in an age of scientific and technological advancement. Thanks to Dr. Sebastian Mahfood, OP, who provided the videotaping equipment and Dr. Ralph Olliges who videotaped the speakers, we now have CDs of the presentations which we will make available on the ITEST web site. As soon as the technical editing has been completed we will let you know how to access the presentations. In the past we published bound books of the proceedings. However this 21st century digital age, has enabled us to reach our constituents more effectively by using the current means of communication available to us.
Incarnation

This paper is about suggesting an “understanding” of what cannot be understood, namely that God can be God in that which is not God. I’m referring here to the central paradox of Christianity, which is that Christ, the Son of God that is God, can become a human being, that which certainly is not God. For Christianity knows that Christ is the unity, the Synthesis, of the absolute difference between the nature of God and the nature of man. Christianity knows by faith about this deep truth revealed in the paradox of Christmas, the paradox of incarnation.

I’ll argue that a light shines from this central paradox unto the mystery of creation; this because we know from the Genesis text (Gn1.1) that creation is created through the Word of God that is God, yet creation is certainly not God. How can it be true that God can be God in that which is not God but creation? Our logic refuses to admit that something can be that, which it is not! Yet through the eyes of faith we might be able to catch a glimpse into God’s logic of incarnation. This because God’s logic of incarnation is rooted in God’s love: “Deus Caritas Est.”

From this central revelation of Christianity it follows that creation must be the gift of the loving God.

To some limited extent we can understand what a gift is, what giving really means. This because even a human gift, given out of love, not self-interest, is only a true gift if it is really given away-no conditions or strings attached. As a consequence, the one who receives the gift receives it in such a way that the gift now really belongs to the one who genuinely receives it. Human love allows us to “understand” to some very limited extent that Christmas is

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Rudolf Brun

Rudolf Brun is professor emeritus of developmental biology at Texas Christian University in Fort Worth, Texas. Decades ago, Rudy was a member of the group founded by the Swiss theologian Hans Urs Cardinal von Balthasar. “God is love” is Balthasar’s point of departure for his extensive writings. This foundation of Balthasar’s work became also the title of our Holy Father’s first encyclical: “Deus Caritas Est.”

If God is love, and he is, then creation must be the gift of God. This gift of God to the world is his Son, Jesus Christ, the Word of God. It is through this given Word that creation is created (e.g. prologue to John, Paul’s epistles). Since God’s creative word is truly a gift, it is totally given away to creation, meaning that God’s creative Word now belongs to creation-no strings attached (see the writings of Ferdinand Ulrich). How can the Word of God that is God become the creative center of creation, of that which is essentially not God? How can God become that which is not God? Our logic insists that something cannot be that which it is not! Yet, in the incarnation event God proves that he can become that which God is not: a human being! The paradox that God can become that which God is not is again demonstrated in the Eucharist. Here God becomes bread and wine; yet bread and wine are certainly not God! The Eucharist and Christmas are both anchored in God’s logic of incarnation and so is creation!

In creation, God also becomes that which God is not, namely the creative center of the world. It is the Word of God in the total “otherness” of creation that “holds the world together” (Goethe, Faust), “the heart of the world,” (Balthasar), the gift of God, out of which creation is capable of becoming itself (modern science). Why? Because “Deus Caritas Est.”
the gift of the Word of God that the Father is really giving away his Son to the world.

My argument is that the incarnation of the Word of God in the Christmas event is one aspect of the Father’s gift, another is creation. Why does Christmas and creation belong together? Because in both, Christmas and creation the Word of God that is God becomes that, which is not God.2

Creation comes into existence because God the Father, the creator of heaven and Earth speaks. God speaks his Word out into that, which is nothing, no-thing. Speaking, however, means that the one who speaks does not hold back his words. Rather, the words spoken are spoken out, meaning that the words leave, depart, and separate from the one who speaks. The words must part from the one who speaks because only in this way can the one who hears really receive the words.3 God speaks and the world becomes. We know that because: “In the beginning was the Word, and the Word was with God, and the Word was God. He was with God in the beginning. Through him all things were made; without him nothing was made that has been made” (Jn 1, 1-3). Christian revelation leaves no doubt, the Word of God that is God becomes creation (Rm 12, 36; 1Cor 8, 6; Col 1, 15-17; Heb 1, 2).

How do we know that the Word that God speaks really departs from God into the world, leaves God into the total otherness of God? We know because: “In the beginning was the Word, and the Word was with God, and the Word was God. He was with God in the beginning. Through him all things were made; without him nothing was made that has been made” (Jn 1, 1-3). Christian revelation leaves no doubt, the Word of God that is God becomes creation (Rm 12, 36; 1Cor 8, 6; Col 1, 15-17; Heb 1, 2).

The drama of Christ’s death is the consequence of God speaking out, thereby giving his Word away so that creation may receive it. “For God so loved the world that he gave his one and only Son….” (Jn 3, 16).

Because the creative Word of God is the gift of God to the world- a gift really given away- it is the creative center of creation, the center out of which the world is capable of becoming itself! How so? Because included in this gift is God’s grace to really receive it. Put differently, within God’s gift of existence is also God’s given grace to accept his gift that is created existence.

But, if the creative center of nature is the Word of God that is God, is therefore nature God and God nature, as pantheism claims? The answer from traditional Christianity here is clearly: “No.” No, because the Word of God that is God becomes that which essentially is not God but creation. This paradox cannot be resolved, neither into the view that there is identity between God and nature, nor into atheism, that there is no God, only nature. Christianity needs to hold on to the illogicality that the Word of God that is God can become that which is not God, namely the creative center of creation. This creative center, the nature of nature belongs to creation. Why? Because the Word of God is God’s gift that now belongs to creation, the total “otherness” of God.5

Creation

Creation is anchored in the love of God who gives his Son, his creative word, away to creation. It is thanks to this gift that creation is capable of becoming itself!

From the Christian revelation that God is love, it follows

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that creation must be capable of becoming itself. Why? Because of the “logic of love” the gift that God gives to creation is a true gift and therefore belongs to creation. Creation, therefore, is free to do with this gift whatever it wants, including being rejected by the representatives of creation (Rm 8, 19) by killing it!

To see God’s Word as the center and source of the creative power of nature has fundamental consequences for the Christian “understanding” of creation. For example, over the last decades or so, physics discovered that the laws of nature emerged from the big-bang in a sequence of emerging force-carrying “particles.” This process generated the laws that govern our universe, gravity, electromagnetism, the strong and the weak force. These forces emerged out of a process that is deeply probabilistic- meaning the sequence could have been substantially different. We cannot exclude that there are universes in which “the laws of nature” are very different from the ones that govern our universe. In other words, the universe we live in might just be one particular outcome of perhaps zillion of universes. I mention this because the insight that the laws of nature are an outcome of the natural process is crucial. This because it makes theistic views, that God fashioned natural laws so that creation had to execute God’s plan, obsolete. God does not guide creation through God-given laws that he imposed on nature. Rather, the laws of nature have emerged from within nature, within the natural process that brought forth our universe.

This natural creative process is possible thanks to the unimaginably powerful explosion that released its energy in the big-bang event. It is thanks to this energy that the universe is capable of diversifying, e.g. into the magnificent structures of the sky that the Hubble telescope pictures reveal. In addition, from astrophysics we learned that the atoms listed in the Periodic Chart emerged through the synthetic processes in the atomic furnaces of the stars and/or in the intense radiation when stars explode. The gas clouds left over from exploding stars frequently form solar systems. Recent observations have found planets all over our galaxy and neighboring galaxies. Synthetic processes might occur on these planets that bring forth complex molecules that on our planet Earth brought forth life.

Life is an emergent phenomenon; it comes about through the synthesis of pre-life chemical entities. Yet these molecular building blocks of life are the result of previous syntheses themselves. Wherever possible, the creative process builds increasing complexity through the synthesis of parts that are the result of syntheses themselves. Syntheses of appropriate parts leads to the emergence of novelty that have qualities that their individual parts have not. This is the phenomenon of emergence that Teilhard de Chardin, for example clearly saw. He writes: “In the light of our experience it is abundantly clear that emergence in the course of evolution (original italic) can only happen successively and with mechanical dependence on what precedes it.” Complexification in evolution is the result of sequential syntheses; every novelty emerges through the unification of parts that are the result of synthesis themselves. However, the process that brings forth increasing complexity is not oriented toward a predetermined goal as Teilhard de Chardin had though (see the part on salvation). The creative process that brings forth the universe cannot be teleological because it is essentially historic. Historic, because all that happens as complexity may increase (locally!) happens in time. Time, however, is not uniform. There is an essential difference between the future, the present, and the past; the time of the future is open, whereas the present must always slips away into the past that freezes each, into the unchangeable, closed time of the past. Because of this asymmetry of time, because of this essential difference between the time of the past and the time of the future, the future cannot be already present in the past. It is therefore impossible that the universal creative process is goal-oriented- it cannot be teleological. However, this does not exclude increasing complexity where it is possible. At each moment, what may happen next is subject to probabilistic circumstances; events happen within a set of also possible events. Which one of these also possible events really happens is a matter of chance. The deeply probabilistic nature of complexification is another reason why the universal creative process cannot be goal-oriented. Rather, morphogenesis is the result of historical (probabilistic) sequences of syntheses. Such sequences may bring forth increasing complexity in an essentially historical process where increasing complexity is statistically possible (locally) by chance.

**Salvation**

The asymmetry of time, namely that only the present is capable of transforming the open time of the future into the closed time of the past, is at the center of the historic

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nature of the creative process; it is by chance that present moments transform possible reality into actual existence. The conclusive insight by science that the universal creative process is essentially probabilistic/historic is the foundation for the indeterminacy of the natural process of creation. From a philosophical perspective, this is the reason why nature cannot be under the tutelage of supernatural meddling but is free to construct itself. This insight is not only critical for a philosophy of nature; it is also central for a Christian understanding of creation. This because if the Creator is love, and Christianity asserts that God is love, it follows that what God creates must have the freedom to become itself. Why? Because any loving relationship with the representatives of creation can only be entered freely!

From a Christian perspective, therefore, creation has to be free to become itself; it cannot be railroaded toward a predetermined goal, nor managed to execute a plan conceived by super nature. Why? Because God is love! The freedom of creation to construct itself is the necessary foundation for nature to be capable of also bringing forth a creature that is free. Free to recognize that existence is a gift, for which we have the free choice of denying it, opposing it, or say: “Thank you” to the Creator for all of creation through our actions. For Christianity knows that “Creation waits in eager expectation for the sons (and daughters!) of God to be revealed (Rm 8, 19).

Viewed from the center of Christian revelation that God is love, it becomes understandable (and even necessary!) that creation is free to become itself. This, however, is not only a necessity for a Christian theology of nature; it is also the central discovery of modern science. Therefore, science only makes explicit what is implied in the fundamental dogma of Christianity that God is love.

But: “If creation is free to become itself, how can God’s plan for creation become reality? Teilhard de Chardin thought that the creative process that brought forth human consciousness would continue to unify “towards a transcendent focus we call Omega.” He further saw this point Omega as the reflective center of the world, becoming one with God but not through loosing its created essence “but by the differentiating and communicating action of love.”

Like many Catholics who tried to integrate the insights of modern science into their faith, I too read Teilhard de Chardin’s work with great enthusiasm. At that time, I also was a member of the academic community founded by Hans Urs Cardinal von Balthasar. I had the chance to share my enthusiasm for Teilhard with von Balthasar. I remember his comment on Teilhard’s point Omega well. Balthasar said: “If creation can reach point Omega all by itself, why then the cross of Christ?”

Balthasar’s comment on Teilhard’s point Omega has stuck with me. The main reason is that as a scientist it became obvious that nature is free to become itself, that it cannot be goal oriented but is truly historical and therefore deeply probabilistic. If so, then the question about God’s providence, how God’s plan for creation can become reality if creation does not follow a plan, must have an answer. As I see it, the answer is rooted in what happened to Christ. The history of his passion shows that all involved are free to act freely. Judas, the High Priest, Pilate, the crowds, all act, according to their interest. Yet, through their free actions the saving plan of God becomes exactly executed; even the cock wants to cry at the appropriate time!

What to conclude?

For almighty God freedom is not an obstacle to his providence. God saves the world not through railroading it toward “the goal of his plan,” but through Christ’s death and resurrection.

God’s logic is not our logic, what seems to be folly and weakness, Christ dying on the cross, is actually the wisdom and the providential power of God almighty that saves creation.

**Conclusion:**

God is love! Therefore, his Word, the Son of God that is God, is the gift of God to creation. The Word that creates the world departs from God into that which is not God but creation. Therefore the Word of God is the center of creation, that which holds all of creation, the total ‘otherness’ of God, together. Because this Gift given away to creation, nature is free to become itself. This, however, is precisely what modern science discovered. Because nature is free to become itself, it is also capable to bring forth a creature that is free, free to accept (or reject) the loving relationship offered by the Creator.

If nature is free to become itself, how can the providential nature...
plan of God become reality? The passion of Christ shows that all involved are acting freely. Yet precisely through their free action the saving plan of God becomes precisely executed. How so? Because, as illustrated by the passion of Christ, for God almighty, freedom is not an obstacle to his saving plan.

God is love! Therefore, creation is his gift to creation. Thanks to the gift of the creative Word of God, creation is capable to bring forth itself. Thanks to this freedom to become itself, creation is capable of bringing forth creatures that are free; free to either accept or reject the loving relationship offered to us by God.

From this perspective, modern science only makes explicit what is already implied in the fundamental revelation of Christianity, namely that God is love.

Endnotes
1 “Deus Caritas Est” - Encyclical Letter, Benedict XVI.
2 That God can be God in that which is not God but bread and wine, is also evident in the Eucharist!
4 St. Francis de Sales: Wednesday, May 09, 2012, Easter Weekday.
9 Ibid, p. 310.

Film Review
Cosmic Origins: The Scientific Evidence For Creation
Reviewed by Thomas Sheahen

Produced by Fr. Robert J. Spitzer, SJ, (author of New Proofs for the Existence of God), this video, Cosmic Origins, is composed of a series of interviews with experts in the cosmology/astrophysics field, several of whom have received the Templeton Prize for their studies in religion and science.

To enhance “relatability” of the audience with the experts, there are occasional questions posed by college students, with the narrative leading through consecutive responses based upon these questions. The tone is friendly and relaxed, and the experts are not trying to be authoritative but are striving to explain their points to a non-technical audience. While the early larger section of the film deals with the physics of the early universe, the latter part brings out the importance of metaphysics, necessary to assemble a complete story that “hangs together.”

The narrator, Angela B. Grace, links the students to the experts. Early on we are introduced to Physics Professor Stephen M. Barr, who defines what “cosmology” is and describes some of the early observational data from astronomy that allows us to propose cosmological hypotheses and test their consistency against data: the “red shift” observed by Hubble in the 1920s showed that the universe is expanding, which is consistent with Georges Le Maître’s mathematical model of an initial rapid expansion from a single point, known today as the “Big Bang” theory. We learn about the observations in the 1960s that found the “cosmic background radiation” — the traces of radiation from the Big Bang.

Sir John Polkinghorne explains that the Big Bang is a singularity, something that lies beyond science itself; this is important because Cosmic Origins does not limit itself to physics alone. To pursue answers to very fundamental questions, it will be necessary to reach beyond standard physics.

Science historian, Owen Gingerich, explains one such reach: The speculation that there could be a “bouncing” universe, where earlier the universe had collapsed into a black hole, and the Big Bang was a new explosion that followed. From there a collection of other speculative theories are discussed, such as the “Ekpyrotic” theory, whereby our universe collided with a different universe in another dimension — an idea which can come out of the ten-dimensional String theory.

Yet another possibility is the “Multiverse” theory where our universe is just the one holding the winning lottery

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ticket. Many of the popular TV presentations mislead the viewer by portraying the “multiverse” notion as realistic because some professor speculates about it; here we learn how fanciful it is. These ideas are accumulated from short clips in interviews with experts such as Arno Penzias, Lisa Randall, John Polkinghorne and others; but they coalesce in agreement that none of these speculations are really science because they are incapable of being verified.

Father Michael Heller, also a Templeton honoree, explains that some questions simply don’t belong to science. Perhaps the most interesting question is, “Why is there even one universe?” The incredible numerical improbability of our being here is explored; for example, if the strength of gravity were off by just one part in $10^{120}$, the universe would blow apart. We are led to “Penrose’s number” for the likelihood of intelligent life existing: one part in ten to the power of $10^{123}$; and incidentally there are only about $10^{80}$ protons and neutrons in the universe!

This “fine tuning” shows that life anywhere in the universe is very special indeed. Even the fact that water expands when it freezes is remarkable: if it did not, there would be no life present here. We cannot reasonably attribute this to just random chance. Again, using the visual effect of jumping between student questions and expert replies, Cosmic Origins raises the topic of purpose in the universe: it certainly appears that the universe was put together for a purpose.

That leads naturally into metaphysics. Our existence is not pointless, but is not explained by science either. We’re now examining questions on a higher level than science alone. Father Spitzer explains that the universe could not have created itself; Arno Penzias states that space, time and matter were all created by Something that lies outside of space and time. Owen Gingerich argues that there is a rational creator, because our universe is intelligible.

We are presented with many good reasons to believe in a God who brings forth life and thinking beings: AND we don’t have to choose between physics and religious faith. They are compatible. At the close of the film a college students says, “There’s something larger than ourselves.”

Cosmic Origins is an excellent teaching aid, because it presents its case in an engaging and lively way — there are no lengthy “lectures” to endure, the questions addressed are important and the viewer is kept in the loop throughout.

I particularly recommend this film for collegians who are being exposed to the secular-humanist propaganda that “science proves… [some claim antagonistic to religious faith].” Cosmic Origins explains quite well that what we observe in the universe points strongly toward belief in God.

Cosmic Origins is a 49 minute film from Ignatius Press; Executive Producer, Father Robert Spitzer, SJ, PhD (2012). For pricing information or to see a trailer of the film go to www.cosmicoriginsfilm.com

“The Faith Science Interface”

As I have said many times in the past, one of the most important, if not the most critical issue that the church will face, is that the sciences, especially the biological sciences, technology and industry, are predicting the making of a new human. Cosmological questions and astrophysics, as important and interesting as they are, pale in comparison with this prediction. Cosmological issues deal with systems we are not able to change nor will we be able to change in anything like the foreseeable future. This is not true of the biological sciences. The human race will be changed, perhaps even radically, by the results of the biological sciences. From its earliest teaching Christianity preaches a New Human in Christ. Are these two new humans (the new human promised by “science” and the New Human taught by Christianity) related or are they necessarily in conflict? Logically we can look at three possible arguments.

From - Written in Our Flesh: Eyes Toward Jerusalem (Page 294)
An Open Forum on Early Human Life Issues: a Constructive Dialog
ITEST Annual Conference October 13, 2012 • Cardinal Rigali Center, St. Louis Missouri
Synopsis by Tom Sheahen

ITEST Director Dr. Tom Sheahen introduced the conference topic with a short history of ITEST before presenting the speakers.

Fifty years ago, the second Vatican council began, and that eventually produced the document “Gaudium et Spes” or “The Church in the Modern World.” Fr. Robert A. Brungs, SJ, read that carefully, saw the need for our organization, and in 1966 incorporated the Institute for Theological Encounter with Science & Technology (IT-EST). The first ITEST conference was held in 1969. Over the years Fr. Brungs saw the enormous importance of the advances in the biological sciences, and many ITEST conferences have focused on biotechnology issues.

Throughout it all, we’ve had confidence in the saying from St. Augustine’s day “The book of nature and the book of Scripture were both written by the same Author, and cannot be in conflict when properly read and understood.” Of course, “understood” is the tricky part here.

At ITEST, we enter with the two principles that such understanding is possible, because God made the world to be understandable; and the principal that science and religion are not enemies, but are compatible and mutually supportive ways of advancing our knowledge of God and His creation.

This puts us in opposition to the commonly-held view of so many people, fostered by a media that enjoys promoting a fight. At ITEST, we’re not going to be drawn into a battle, but rather we strive to overcome perceived conflicts.

In 1995, on the thirtieth anniversary of Gaudium et Spes, Fr. Brungs wrote that “it is impossible to overestimate the impact that bioscience, biotechnology and bio-industry will have on the faith.” Rather than recoil in fear, under Fr. Brung’s leadership ITEST emphasized the study of these fields, always confident in the ultimate compatibility of faith and science.

Fr. Brungs lived until 2006, and we who follow in his footsteps bring that same confidence in compatibility to each of our annual ITEST conferences.

At this conference, you will hear three different presentations that weave together the science and theology of early life issues. As you listen, I encourage you to scan your own mind and find elements of compatibility that you haven’t previously imagined. That’s why we call the conference “a constructive dialog”. ITEST’s role has always been to bring together participants who have diverse ideas to share.

Today’s three speakers are: Fr. Kevin FitzGerald, SJ, of Georgetown University; Dr. Ian Gallicano of Georgetown University, and Fr. Ron Mercier, SJ of St. Louis University. Fr. FitzGerald has been a member of ITEST for over 30 years, since he first met Fr. Brungs in 1980. We are all very pleased that Kevin really understands what ITEST is all about. He has been at Georgetown since 2001, and previously from the 1980’s, totaling 18 years. He was on the faculty of Loyola University in Chicago for several years in between. His primary field has been genetics research and bioethics. The many committees he has served on include the Advisory Committee to the Secretary of HHS for genetics, health and society. Today’s presentation is entitled “21st Century Issues Regarding Early Human Life: An Overview.”

The audience was able to follow a handout that matched Fr. FitzGerald’s 32 slides. He began by enumerating three questions about early human life: When does it begin? What is a human being? What is the meaning of “being alive”? That leads to the matter of assessing the quality of life.

The beginning of life is fertilization. Two entities come together and make a new entity. The cell division that follows is part of the reproductive process. There are occasional anomalies that give rise to additional questions, such as twinning, which doesn’t occur beyond 14 days. But it brings up thoughts of cloning, and typical questions arise like “Would a cloned human being have a soul?”

More pressing questions arise from the advances in technology. A fertilized egg in a Petri dish will not survive unless it’s implanted in the mother’s womb. Does “life” begin at implantation? What stages are worthy of our pro-
tection? There have been technical advances to enable young fetuses to live in an artificial womb. FitzGerald enumerated other demarcation points that have been used over the ages, some going back to biology as Aristotle understood it. If you freeze an embryo and thaw it 20 years later, you can develop a human baby.

**Embryonic Stem Cell Research (ESCR):** In 1995, Pope John Paul II wrote *Evangelium Vitae* which said “no” to killing a human embryo. Knowing that there is a probability of a human being there is a good enough reason to forbid embryo destruction. In the USA, there was a statement in 1999 by the National Bioethics Advisory Committee that favored ESCR, but noted that ESCR carries a moral problem, and the topic should be revisited later.

Questions about embryos derive from the more basic question “What does it mean to be human?” A lot of people just don’t know. Where do we form a consensus? What about minority views? What is our concept of “health”? We can discern the influence of DNA, but can you say what is the “right” genome? Every one of us has some “less than desirable” genes; who decides what is best? There are people with *Laron Syndrome* in Ecuador, who only grow to about 4’ 8”. However, they don’t get cancer or diabetes! That’s obviously good health.

Whole-genome sequencing has the potential to revolutionize society, and the cost is dropping rapidly. Some children with rare birth defects may be treatable because of such information.

How do you decide what is “good” research? Fr. FitzGerald cited the example of a goat-sheep combination, where the genomics shows certain characteristics of each. Noting that research is a form of race, he observed that there are additional genetic variations that we don’t understand… such as why Jamaican sprinters often win the Olympics. The Amish got into gene-therapy early (1990s) because of a genetic defect for which they were seeking a cure.

Where should the emphasis be placed? Much more important for a large fraction of the human race are technological interventions in public health, such as sanitation and clean water. There are 2.6 billion people needing that. Therefore we need to decide on research within a social contract.

Fr. FitzGerald concluded by offering a provocative possibility: Health care is *not* about conquering death and disease; it’s about enabling lives to be lived in *love*. We care for each and all. *We* will care for *you*.

Dr. Ian Gallicano is a Georgetown University professor active in stem cell research, who teaches at the medical school there. “Stem Cells: Past – Present – Future” was the topic of his presentation. The audience was given a B&W copy of 63 slides, not all of which were shown in this presentation; but that made it easier to follow along.

Ian divided his talk into 3 parts: A) stem cells, B) cloning, C) his own work. The theme throughout was to examine why there is a controversy. The medical students he teaches have to learn this material; they will someday be running hospitals, making the decisions.

Can stem cells be described in one sentence? They’re cells that renew themselves, or turn into other cells. There are stem cells that make muscle cells, neurons in the brain, etc. There are 250 different kinds of cells, all made from stem cells.

There are *embryonic* or *adult* stem cells. Embryonic stem cells are derived from early embryos, not from later in pregnancy. Depending on the stage of harvesting, you can get either *totipotent* or *pluripotent* stem cells. Stem cell research got underway circa 1958. By 1998, J. Thompson *et al* at Wisconsin isolated human ESCs. Adult stem cells are rare, difficult to identify and isolate. From them you get “progenitor cells” capable of becoming various cell types. Progenitor cells cannot go backward to make stem cells. The “*multipotent*” cells represent a further stage that becomes a few cell-types.

A major accomplishment occurred only a few years ago: by *inducing* adult cells, you can get pluripotent cells (iPS), which act equivalent to embryonic stem cells. That innovative new technology won the 2012 Nobel Prize in Medicine recently.

In a lab, what can we do with eggs? An embryo turns on *oncogenes* which can cause cancer. Just about every type of solid-tumor cancer has been modeled using transgenic mice. A lot of mouse experiments have been done. In 1990, totipotent stem cells were grown in a dish, but it’s very difficult to do. A lot of embryos die in the process, so this method has fallen by the wayside.

What diseases have been cured using embryonic stem...
cells? None yet. Not causing cancer is a key first step. A project at Geron Corp demonstrated a method where teratomas didn’t form, but then the project was shut down. Another project pursued macular dystrophy, and got no teratomas formed. Other things were learned, such as that the brain is unable to make myelin. The problems to be overcome include i) teratomas, ii) immunogenicity, iii) ethical issues, iv) full understanding of terminal differentiation.

For a time there was a prohibition against using more embryonic stem cells, but under Obama, 44 new stem-cell lines were approved, and 114 more are pending.

On the other hand, Adult stem cells are much better, having been explored for decades – such as using bone marrow for leukemia. But you still have to suppress the immune reaction. There is a “theory 1” and “theory 2” of adult stem cells; under “theory 2”, you use the patient’s own stem cells, which have been de-differentiated back into pluripotent cells. Gallicano thinks this is the way to go in the future. A lot of phase one and phase two trials of adult stem cells are ongoing now.

Cloning (Somatic Cell Nuclear Transfer, SCNT) brings up ethical issues. Human cloning hasn’t been done yet; but for lots of animals it has. You cannot clone humans like other animals; the methods don’t work for humans.

Via a series of slides of cells developing in one way or another, Dr. Gallicano illustrated the differences.

The advances in adult stem cell research have been remarkable. In Gallicano’s lab, they are making progress on therapies against diabetes, developing cells that produce insulin. There are still more obstacles to be overcome.

Fr. Ron Mercier, SJ, is a theologian at St. Louis University; his paper prepared for this conference appears in this issue. Fr. Mercier especially noted that “two things caught my attention this morning”: A) there are almost limitless possibilities, and B) How do we discern what to do with these extraordinary technologies?

Ron drew attention to the “Transhumanist Manifesto,” and quoted from them about biological change. Transhumanism goes to the heart of current biological-research issues. It is also possible to look at evolution from a transhumanist viewpoint; transhumanists want to take control of evolution, to upgrade the design of Homo sapiens. They say the age of natural evolution has passed, and we have the ability to enhance future generations. This isn’t just idle talk; people are moving to implement this.

One important alternate view is that put forth by Pierre Teilhard de Chardin, before DNA was discovered and hence long before genetic enhancement became a discussion topic. Striving to bring faith and science together, Teilhard looked at the relationship between reason and evolution; he affirmed the presence of God in the world. Teilhard focused on the drive within evolution toward complexification. Teilhard’s dynamic evolving universe is richer than transhumanism. His Christological dimension is essential. He found a sense of unity in evolution, not randomness.

Fast-forward to Pope Benedict XVI, who shares this sense of oneness. He perceives that technology is not merely an extension of human reason. We must not trust technology alone, but must use it wisely. The fullness of human life lies not in achieving mastery, but in a foundational sense that is sensitive to justice and ecology. This turns transhumanism on its head. We must care for all life; the fundamental call is to value humans within all creation. This is not opposed to progress; it invites a search for ethical ways to pursue certain therapies (such as germ-line therapy). We are not at the end of evolution, but is “enhancement therapy” the most important thing to do? No! Humans are ordered toward complexity and consciousness, but with caring and love, too.

After lunch, the attendees convened again for a question-&-answer session with the speakers. Such topics came up as the failure of the media to distinguish types of stem cell research, which often involves willful ignorance, because nuance and balance do not sell. To questions about couples turning to IVF to have a baby, Fr. Fitzgerald pointed out that many good ways of treating infertility are never heard about, while people are instead turning to more and more expensive technology. Father Earl Muller, SJ, noted that in contrast to the stream of sound bites, the Church tells what it means to be human, dealing with issues that intimately touch our inner being, and insists on the good of marriage. Additional questions dealt with details of type 1 and type 2 diabetes research, to which Dr. Gallicano responded that the field is still in its infancy. Fr. Fitzgerald remarked that the website “clinicaltrials.gov” enables you to keep up to date on what is taking place; by using Google and applying suitable filters, you can zero in on a topic of particular interest.
An Open Forum on Early Human Life Issues: A Constructive Dialog

Photos

John Stith, MD and Deacon Daniel Henroid

Father Peter Pichet, SJ and Heather Essig

Fr. Ron Mercier, SJ and Irene Schutze, MD

Dr. Vince Gibbons and Brother Joseph Kearns

Dr. Ian Gallicano, Sister Marianne, RSM and Fr. Kevin FitzGerald, SJ

Rachelle Barilla and Dr. Tom Sheahen
Our Sunday Visitor celebrated a century as a Catholic publisher. The overarching theme of the conference was a New Evangelization for the 21st Century. The featured speakers were: Francis Cardinal George, Archbishop of Chicago and Ecclesial Advisor to ITEST; Helen Alvare, longtime head of pro-life activities of the USCCB, and Scott Hahn, Professor at the Franciscan University of Steubenville and author of many books. In the evening, the after-dinner speaker was Archbishop Claudio Maria Celli, Head of the Pontifical Council on Social Communications.

Here is a synopsis of each speaker’s presentation:

Cardinal George began by reminiscing to this audience that he learned to read via Our Sunday Visitor. He talked about contemporary apologetics, which means giving reasons for your faith. In doing apologetics you must set the context in order for words to be precise in their meaning. We need people who can explain the faith, but also those who witness to the faith. The Pope challenges us to a New Evangelization. Looking back 50 years to the Second Vatican Council Pope John XXIII wanted to tell all humans that they are one family. Today, Cardinal George noted, the most important issues are not doctrinal, but are moral issues like the sanctity of human life. Fifty years later, global communications are much better, but there are new problems now.

Cardinal George drew attention to two opposing problems that are prevalent today: Scientism and Fundamentalism. Scientism holds that “only the natural is real”; it considers the spirit an epiphenomenon of matter. If only matter is real and spirit is non-existent, then faith is meaningless, and there is no absolute truth. Fundamentalism is non-critical, totally without any apologetics. It holds that there is no natural-law theory, no intellectual underpinning. Cardinal George stated that God wants us to think critically, to use our intelligence. But we must not try to whittle God down to our size.

Actually, Scientism and Fundamentalism are essentially both the same challenge. Scientism is very literal; you only seek one “literal” meaning; but Fundamentalism is likewise literal. Discussion is always closed. In Scientism, you’re limited to a closed world, and in Fundamentalism Scripture is closed in on itself – the meaning is always within the Book of Scripture. In both of those communities, you must accept their premises or else you’re out.

What is our view? Pope Benedict XVI says there are unseen realities that we can access. There is always more in the open community. That is the Catholic Faith. We assert there is always more to Christ. We can be united in a “living faith” where truth and love come together.

We don’t start with either rules (morality) or doctrine. Instead, we seek the relationship with Christ. That in turn leads to a joyful welcoming world where both doctrine and morals are worthy of pursuit.

The hostile climate of the secular society doesn’t want to be reminded that God exists. There is a feeling of contempt in our society today; the community being held in contempt (the Church) is in danger of being wiped out. Driving out religious institutions has happened often in history. The government has contempt for the Church as it imposes rules on church schools, hospitals and organizations.

Cardinal George concluded with a series of explicit steps, which include that we must remain open to positions other than our own. We have to love the enemies of the faith, in which case Scientism can become a dialog partner. We want to positively express our faith. Apologetics must be a response to people. We need humility and respect.

In the Question and Answer session, Cardinal George stressed that our faith makes claims about truth, and these must be defended using reason. He also emphasized that science cannot disprove the existence of God, and referenced Father Spitzer’s book New Proofs for the Existence of God.

Helen Alvare’s talk focused on contemporary issues pertaining to women. She is editor of the book, Breaking Through: Catholic Women Speak for Themselves, in...
which several authors present views that sharply contrast with secular-humanist values. (There is a web site with a parallel title, which contains more information.) Of political interest currently is the so-called “War on Women” and the governmental policies associated with ObamaCare.

Helen explained how the notorious HHS Mandate came about. The “Mikulski Amendment” defined “preventive services” based on input from the Alan Guttmacher Institute (affiliated with Planned Parenthood) in such a way as to justify support of contraception, etc. The term “unintended pregnancy” is deliberately vague, and the category “religious institution” is defined too narrowly. Nearly all the societal interactions of the Catholic Church are excluded by this definition. The mandate leaves no way out; the one-year delay was simply to put it off until after the Election of 2012.

Another example of government hostility was the refusal to renew an anti-trafficking grant for a USCCB program that had been highly successful. The USCCB renewal was forbidden on the grounds that it did not offer abortions services – even though no trafficked woman had complained.

Others have sued about these principles; with occasional success. The Hosannah-Tabor Lutheran Church won a Supreme Court Decision 9-0 saying they have the right to choose their own ministers.

The strategy of the Obama administration has been to assert that religious organizations are engaging in discrimination. “The Catholic Bishops” make a convenient target for NARAL and the abortion industry. Where we stand on moral issues makes us the “enemy” of women in that view. They claim they have science on their side. We hope the Administration will lose on this issue in court because they are placing a “substantial burden” upon religion, a violation of the Constitution. Even if we win one court case, we need to re-define religious freedom or the government will persist with its “discrimination” claims.

Ms. Alvare noted that world-wide, the countries having freedom of religion are the ones who most value the equality of women.

She explained the well-understood economic principle of the “prisoner’s dilemma” which has the effect of coercing women into submitting sexually to men, without the commitment of marriage. The book by Pope John Paul II The Theology of the Body presents a concept of sexual integrity; those who follow it provide a valuable witness about morality. Helen also suggested reading his Love and Responsibility, wherein John Paul II points out that current sexual relations are fraught with conniving and domination and a lot of gender distrust. The prediction that taking the baby out of sex would make everyone happy turned out 100% wrong. People seek long-term relationships; but all the testing and trying it out, such as cohabitation, doesn’t get them there.

By now, people are recognizing the failure of that faulty sexual morality and wish for better interpersonal enduring relationships. The bottom line is: This is an opportune time for us to speak out. But if we don’t, the opportunity will not be there for long.

In the Question and Answer session Helen Alvare emphasized that many people now are reflecting on the state of relationships between men and women. Sex-without-commitment is being recognized as a real problem. Helen also described her cooperative practice of responding to the Media, which helps to overcome widespread ignorance.

Scott Hahn’s presentation was entitled “The Bible, the Eucharist and the New Evangelization.” He recalled how much Pope John Paul II had called for a “New Evangelization” which goes beyond what we have done in the past. We need to re-evangelize those who were baptized but drifted away. Pope John Paul II emphasized that evangelization should proclaim a Eucharistic Christ. That is a key difference.

Hahn went on to bring out the relationship between Christ’s sacrifice on Calvary and his institution of the Eucharist on Holy Thursday. The “New Covenant” is exactly that. Scott Hahn reminded his audience that the marital bond is a covenantal communion; there is a strong nuptial analogy with Christ and the Eucharist.

He also said there is a widespread misunderstanding of the mystery of the Eucharist and the Sacrifice of Calvary. The Lord’s Supper is the Mass. The only way to make sense of Good Friday is to look at Holy Thursday when Christ gave us the gift of Himself. It wasn’t just a standard Passover meal; it is what Jesus did on Holy Thursday that transforms Good Friday into a sacrifice. Scott pointed out several scriptural citations that make this point clearer. Jesus didn’t “lose” His life on Good Friday; He “gave” His life on Holy Thursday.

Continues on page 15
Archbishop Celli, Head of the Pontifical Council for Social Communication, had as his principal theme the use of new Media to enhance our ability to reach out and evangelize. But we must be careful to think about how Media has changed so much. We now have instant access to information all over the globe; that is a revolution in communications technology. How do people use the new technology? There is a new culture of communications. To spread the message of Christ, we need good knowledge of this culture.

Archbishop Celli enumerated certain characteristics of this culture, and suggested ways of approaching it:

A) Digital space is a reality in people’s lives; if the Church isn’t present in that space, we risk abandoning a lot of people who get their news and information this way.

B) We are accustomed to printed text as the normal mode of communication. But for a younger audience you have to do something else—art, music, literature, and so on. We must find digital forms of expression that successfully communicate. We must communicate how our lives reflect Christianity. Believing people, through their faith, draw others to themselves.

C) We must speak to those who are not members of our community. We must listen more attentively to our audience. The most effective form of digital discourse varies for different audiences. The Web is interactive and participatory, with blogging, replying, commenting all standard practice.

D) We can no longer assume the young people are familiar with our most basic beliefs. Many of our religious icons and symbols need to be explained. The new generation in Europe is highly secularized. There are many Catholics who are lost.

E) Authority is not an entitlement; it must be earned. We can’t use the passive model of pulpit and congregation any more. We must have new forms by which to frame communications. The media contains many skill sets that can be put to work.

F) We have to make our laity strong enough to be convincing. We must witness consistently to the gospel. Pope Benedict XVI said “there exists a Christian way of being present in a digital world” and “…give voice to a way of expressing the Catholic faith.” We must speak clearly; but some forms of expression damage the Church.

G) One early purpose of Our Sunday Visitor was to fend off attacks on the Church. There are many critics out there. The Church must not be afraid to acknowledge mistakes. The Catholic Media won’t be credible if it doesn’t confront the problems.

H) In dialog, it is important to respect differences. We don’t just want to score points but to have a fair exchange. Via respect, new doors can be opened to faith. We are in the process of learning to respect other truth and the truth of others.

(Editor’s note: Tom Sheahen attended the OSV celebration as a representative of ITEST)

From the Pope

In a short visit to Rome’s Sacred Heart Catholic University, to mark the 50th anniversary of the Agostino Gemelli faculty of medicine and surgery, Pope Benedict the XVI recently “…expressed concern in regards to the ‘crisis of thought’ where man “almost dazzled by technical efficiency[…]forgets the fundamental horizon of the question of meaning,” thus bringing man to search for absolute truth in science and not in God.

The Holy father expressed that scientific research and the search for God in one’s life and in creation can be mutually beneficial. “It can be said that the very impulse to scientific research springs from nostalgia for God, who dwells in the human heart: at bottom, the man of science tends, even unconsciously, to reach that truth that can give meaning to life,” he said. “However, no matter how passionate and tenacious human research is, it is not capable, on its own, to come to a safe conclusion, because ‘man is not able to clarify completely the strange faint light that rests on the question of the eternal realities… God must take the initiative to come to meet us and to address man.’”

- Cited in ZENIT, May 4, 2012
Letter to the Editor

(Commenting on the letters responding to the articles on climate change and global warming that appeared in the Spring/Summer Volume 43 Nos. 2 & 3 of the ITEST Bulletin, Mr. Robert Morris offers the following observations and caveats)

“…However the item on which I would like to make a comment is the Letter to the Editor exchange involving Fr. Al Fritsch, Paul Crovo, Jerry Hannah and Sister Maxyne Schneider. I do not want to “pick nits” with any one of them. However, I do want to interject an input, which in all of my years of participation in ITEST seems to get minimal consideration. I am neither a scientist nor a theologian! I am an engineer, that species of humanity who will be saddled with the task of making practical and economic sense out of the FACTS that ultimately arise from the research and analysis that finally determines what is really going on with our thermodynamic environment. Unfortunately as a result of the panic created by “politicians” and “communicators” anxious to show their brilliance, social concern and perceived bravery, some of my professional counterparts will waste many years of their lives and many fortunes of money building systems presumed to be the correction of the problem of global warming only to find out that along with most of their fellow citizens they were bilked by one side or the other in the controversy.

“Patience! Please pray for patience! This world has been populated for millennia! Fifty years worth of data that do not represent environmental excursions as great as experienced in the past are no reason to run around in panic like Chicken Little, Jr. yelling “The Earth is overheating”. This is especially true when people are shoveling out of record snow storms in April!”

Jesus of Nazareth: The Infancy Narratives
by Pope Benedict XVI
(Available also in hardcover, Kindle, other e-readers and tablets)

Recently published by Image Press, New York, the Pope’s latest book is the third in the series on Jesus of Nazareth. The Pope however in the foreword to the 137 page volume states that “It is not a third volume, but a kind of small ‘antechamber’ to the two earlier volumes on the figure and the message of Jesus of Nazareth.” The Pope continues: “I have set out here, in dialogue with exegetes past and present to interpret what Matthew and Luke say about Jesus’ infancy at the beginning of their Gospels.”

However, some members of the media establishment expressed dismay over the “revelations” in the Pope’s book about those infancy narratives. Some tabloid headlines, in large type screamed, “Killjoy pope crushes Christmas nativity traditions,” claiming that Benedict had spurned traditions such as animals in nativity scenes and caroling. Another tabloid ran the following: “Pope sets out to debunk Christmas myths.” Bloggers, too got into the act to chastise the pope, branding him as “the New Grinch that stole Christmas” and catapulted him to the “top of the grumpy list for 2012.”

Continuing in the Pope’s own words, we can easily put to rest the fears and consternation of people who read the Pope’s latest book solely for the historical component of exegesis. That is not enough. The Pope writes, “...it is not sufficient to leave the text in the past and thus relegate it to history. A further question posed by exegesis should be: “Is what I read here true? Does it concern me? If so, how? He explains, “In this sense, I have taken pains to enter into dialogue with the texts. In so doing I have been conscious that this conversation, drawing in the past, the present and the future, can never come to an end, and that every exegesis must fall short of the magnitude of the biblical text. My hope is that this short book, despite its limitations, will be able to help many people on their path toward and alongside Jesus.”

Now, bloggers, take that quote and run with it.

(Editor)