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Untangling Intelligent Design from Science and Creationism

By **Dr. David F. Siemens, Jr.**
with input from **Jim Armstrong**

Dr. David Siemens, Jr. grew up in Ecuador, the son of missionaries. His doctorate in philosophy is from Claremont Graduate School, where he studied under the late E. John Lemmon. He has been a writer-producer of educational films at Moody Institute of Science, adjunct professor at Chinese for Christ Theological Seminary, instructor at several other institutions and a pastor. Dr. Siemens retired as Professor of Philosophy from Los Angeles Pierce College. He is a Fellow of the American Scientific Affiliation (ASA) and a valued member of Canyon Institute for Advanced Studies (CIAS).

As I write this, we await the decision by Judge John E. Jones III in *Kitzmiller et al v Dover Area School District*. Will he rule that Intelligent Design (ID) can be taught in science classes? That it is religion and so out of bounds? Will the ruling be narrow or broad? Whatever it is, some will be distressed or angry.

Numerous reports have been printed and broadcast. Reactions have varied, ranging from thoughtful expressions of a viewpoint to those that manifest confused prejudice. Tragically, some of the latter came from normally dependable sources. This indicates that there is a serious lack of understanding of the outlooks involved.

Sources of Confusion

This confusion is partly due to the use of terminology in ambiguous ways. For example, as a starter, intelligent design is not ID. The latter is the terminology used by the Design Institute for their distinctive view. However, now the tendency is to use lower case, blurring an important distinction. The differentiation will be maintained here.

The belief that the universe manifests the wisdom, goodness and creative impulse of God is intelligent design. This belief is held by every Christian, Jew and Muslim, including the proponents of ID. One aspect of intelligent design involves the anthropic principle, which notes that the earth, the solar system, and indeed the entire universe, is such that it beautifully supports intelligent life, ours. This provides evidence for the existence of God, but is not proof. It is possible to hold that the world matches our needs, not because God so created it, but because only such a universe could support human beings. This turns the Christian outlook around, holding that that we exist because of the way the earth is.

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From the Director's Desk



Rev. David Cleaveland's letter about his students at American Indian College brought to mind the young man in the book of Job, Elihu, who criticized the three other friends for being unable to give a reasoned answer for Job's suffering. Even though his understanding of God's ways was incomplete, Elihu eagerly engaged the others in reasoning through what was right and good from the conflicting arguments presented.

Elihu makes a powerful statement that we ought not to withdraw from efforts to determine the truth that can withstand tests of examination. Whether critiquing contemporary fiction or unraveling theories of creation, "let us discern for ourselves what is right; let us learn together what is good" (Job 34:4).

I hope our offerings in this newsletter and in upcoming publications and lectures are helpful to you and others in seeking God's truth as revealed through all he allows us to know. Of particular note is the article "Untangling Intelligent Design from Science and Creationism" by Dr. David Siemens, Jr. Dr. Siemens does an excellent job of presenting critical information helpful for understanding current political debates. Dr. John Walton, Professor of Biblical and Theological Studies at Wheaton Graduate School, will launch the New Year with another perspective on creation in his lecture "Reading Genesis I with Ancient Eyes: What Does it Mean to Create?" I look forward to seeing you at Dr. Walton's lecture on January 19th.


 Bill R. Williams
 Director

2006 Public Lecture Series

- January 19 Dr. John Walton, Wheaton Graduate School
Reading Genesis I with Ancient Eyes: What Does it Mean to Create?
- February 16 Dr. Hava Tirosh-Samuelsan, Professor
 Arizona State University
Beyond Conflict of Science and Religion: The Case of Judaism
- March 16 Mr. Charles Roberts, Historian
Plurality of Worlds and Extraterrestrial Life: The Historical Development of an Ancient Idea

All lectures will take place in the Williams Building lecture hall on the campus of Grand Canyon University, 3300 W. Camelback Road, Phoenix, Arizona. A full description of each lecture is available on the CIAS Web site: canyoninstitute.org.

Dear Editor,

Dr. Peter Flint's recent lecture "Jesus in the Dead Scrolls and *The Da Vinci Code*" was inspiring, challenging and informative. I was pleased to have students from my Old Testament Survey class from American Indian College attend this lecture with me. Dr. Flint reinforced what I teach in the classroom about the importance of knowing the Bible and relating it to current life issues. When my students learned how the Dead Sea Scrolls relate to a popular novel like Dan Brown's *The Da Vinci Code*, they recognized the connections between what they read in their texts, what is discussed in class, and how society interprets Christianity.

Dr. Flint's presentation on the Dead Sea Scrolls and *The Da Vinci Code* was clear and understandable. In Israel, he actually touched, read, and translated the famous Isaiah Scroll discovered in Qumran. The scroll is 1,000 years earlier than any other Hebrew Scripture in existence up to that time. Dr. Flint writes in the same clear style as he lectures, and I have enjoyed reading his texts. At his presentation for the CIAS Public Lecture Series, my students and I received a copy of the oldest Hebrew text of the Ten Commandments.

My students came away from the evening's lecture with new excitement and interest in studying scripture as well as a deeper appreciation of biblical archaeology. Students in my other classes at American Indian College have also been engaged in discussion about the impact of *The Da Vinci Code* on our society and Christianity. Some people see the ideas expressed in the book as a threat to Christianity. However, I view Brown's novel as a challenge to learn more about how texts became recognized as the Word of God and to communicate the evidence we have for the authenticity of the documents called the Bible. There are thousands of copies of both the Old and New Testament, and by comparison we can determine 99.95% of what was written by the original author. Dr. Flint helped my students expand their thinking about the relevancy of the Bible to their postmodern world. The real life, real world and real personal learning promoted by CIAS helps initiate a genuine curiosity in learning—one of the most powerful motivators in education. Thank you for a great evening!

Rev. David Cleaveland, M. Div.
 Professor of Christian Ministries
 American Indian College, Phoenix, Arizona
 Assemblies of God Missionary to Native Americans

We welcome letters of up to 200 words. They may be edited for clarity and length. Letters selected for publication may be published or distributed in print, electronic or other forms. Please mail your letters to:

Canyon Institute for Advanced Studies,
 3300 West Camelback Road, Phoenix, AZ 85017 USA.

Conflicts and Confederacies Between Mathematics and Christianity

By Dr. Bruce Lundberg

This article is an excerpt from a lecture presented by Dr. Bruce Lundberg as part of Canyon Institute for Advanced Studies Public Lecture Series. Dr. Lundberg is Professor of Mathematics at Colorado State University-Pueblo. He specializes in teaching and research in computational mathematics using projects drawn from a wide range of scientific applications, and for this work, he received the State Board Award for Excellence in Teaching in 1998. Since 1993 he has done extensive consulting in orbit transfer optimization with the aerospace industry. He has served as a missionary in several countries in Southeast Asia and has lectured on numerical optimization in Germany and Poland. Dr. Lundberg earned his Ph.D. from Colorado State University, MA's from Fuller Theological Seminary and Arizona State University, and a BS in Mathematics and in Religion from Grand Canyon University.

“The good Christian should beware of mathematicians and all those who make empty prophecies. The danger already exists that the mathematicians have made a covenant with the devil to darken the spirit and to confine man in the bonds of hell.”

–Augustine, as quoted by M. Kline in
Mathematics for the Liberal Arts

“But those who clearly perceive these truths will be able to admire the grandeur and power of nature in this double infinity that surrounds us on all sides, and learn by this marvelous consideration to know themselves...and to form reflections which will be worth more than all the rest of geometry itself.”

–Pascal, *Of the Geometrical Spirit*

“...the appearance of geometry in Greece is the most dazzling of all the prophecies which foretold the Christ. [Rigorous Mathematics] is one of the gaps through which real Christianity may once again filter into the modern world.”

–Simone Weil, *Intimations of Christianity among the Ancient Greeks*

A mathematically experienced philosophical imagination can come to see as inevitable the conflicts and confederacies between mathematics and religion over a 4,000 year history by reflecting upon that central teaching of the wisdom tradition on the purpose of human life, which the Greeks called *theoria*, and which a Hebrew psalmist described as the “one thing” asked and longed for: “to live in the house of the Lord all the days of my life, to behold the beauty of the Lord and to inquire in His temple.”

Inquiries and perceptions of beauty in mathematics have for millennia spawned reports like Bertrand Russell's: “The true spirit of delight, the exaltation, the sense of being more than man, which is the touchstone of the highest excellence, is to be found in mathematics as surely as in poetry.” Yet, what is the “highest excellence” and “true spirit of delight” of humans? And, how does mathematical experience relate to our chief end?

That wisdom referred to above and subscribed to by the over-

whelming majority of philosophers prior to the 20th century is this: that the pinnacle of human nature, purpose and happiness, subsists in contemplation; that this is a gift of sight the exercise of which engages the whole interior and material life of people in knowing God as creator, in knowing the purpose and form of the created world, and in joining God in contemplation (see D. Conway's *The Rediscovery of Wisdom*, P. Olson's *Journey to Wisdom*, J. Pieper's *Happiness and Contemplation*).

Plato, Augustine and Boethius are only the most well known of many who have seen in mathematical education an effective aid for a life of contemplation. Liberal arts dominated by mathematical disciplines were developed with God in mind, as is typified in sculpture at the west portals of the cathedrals of Notre-Dame and Chartres. Plato's Academy, too, was a worshipping community with members appointed to prepare sacrifices. The Academy's entry posted: “No one ignorant of geometry enter here.”

The similarity between this injunction and Jesus' claim: “No one comes to the Father but by me” indicates *conflict* as well as confederacy between mathematics and Christianity. Indeed, mathematics was the first science to come into direct conflict with Christianity because it apparently provided a path to truth independent of the wisdom revealed in Christ (see G. Henry's *Logos*). This conflict of the patristic period is perennially and cross-culturally relevant, being an early and formative instance of the problem of relating reason and faith. Thus, the case of mathematics serves as a canary in the coal mine of science, sharpening the central issue in science and religion studies: How can we find and sustain the practical wisdom and vision that allow our learning to support and not destroy real human thriving?

Consider now some examples, beginning with Augustine, who propagated a Christianized neo-platonic view of mathematics developed by Origen, Gregory Thaumaturgus and others. They placed Christ's self-emptying response to suffering and natural reality, rather than Plato's idea of recollection, at the center of pedagogy. Augustine drew from John's gospel for his answer to the patristic conflict between mathematics and Christianity: all human knowing is, at its root, an interior dialogue between God and human being through Christ the Word, the Teacher, “the light that enlightens every person...” (John 1: 1, 9, 18, 38).

There are several passages in Augustine like the opening quote to this article. These are not signs of anti-intellectualism; they are warnings: claims of impersonal necessity, which earlier appeared to him as spiritually safe, that can in fact be masks for personal and demonic powers destructive to human beings (e.g., *Confessions* IV3). His term “*mathematicii*,” better translated “astrologers,” names a profession outlawed by Roman emperors.

Yet Augustine relied heavily on mathematics in his escape from Manichaeism (*Confessions* V3-5), and in his arguments for the existence of Truth and of God in *De libero arbitrio*.

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Untangling Intelligent Design from Science and Creationism

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Some Christians object to the consequence, a claim that there is no proof, but it matches the scriptural view. “Without faith it is impossible to fully please God, for to approach him necessitates believing that he exists and that he becomes a rewarder to those who seek him out” (Hebrews 11:6). In the Bible there are four repetitions of “the just shall live by faith” (Habakkuk 2:4; Romans 1:17; Galatians 3:11; Hebrews 10:38). Faith is total commitment in the absence of the proof that would produce knowledge. It is not, as some foolishly hold, commitment in spite of contrary evidence.

What ID Holds

ID applies to a range of claims. Underlying all is the insistence that the design can be detected scientifically, that is, that it goes beyond faith to such proof as science can give. While science is subject to correction, it provides the highest level of assurance available to us.

Basic to this ID insistence is the assumption that some things we observe are irreducibly complex (IC), that is, that they will not function if any part is removed and that they are too complicated to have arisen by any natural process. This last tacitly requires that we have full knowledge of what is natural, that no future discovery will fill in the current gaps.

Is such a claim warranted? I first studied biology when the professor noted that in the embryo all kinds of things were happening at once, any one of which could malfunction to produce death or a monster. How did it all happen correctly, for almost all babies are normal? He gave a one-word explanation, “God.” Now scientists have teased out the effects of numerous genes, the way they control many aspects of development and life. We’ve moved from genetics to genomics and on to proteomics, ever more complex and precise. There are still gaps in our understanding, but it seems foolish to require that science can never fill the remaining gaps.

The claim that design can be detected involves the application of probability theory. If something is sufficiently unlikely and is IC, the claim is that it is designed. Low probability by itself is not enough. For example, a game like bridge requires dealing 52 cards to four people. The probability of the specific order in the hands for any deal is 1 in 52! (52 factorial, equal to about 795 followed by 64 zeroes), very small, but it means nothing. However, if someone predicts that the next deal will be special, and the first player gets the ace, deuce, trey, etc., through the face cards, all hearts, with the others getting the same sequence in the other suits, you know something funny is going on. It is not so much the rarity of an event as the prediction of the outcome that counts. The claim of design in ID is after the fact, like saying that the deal produced one of the 52 distributions, lacking the necessary condition for specifying intervention.

The Function of Science

If science cannot detect ID, it certainly cannot detect intelligent design. What can it detect? Physical effects of physical causes, primarily, along with the consequences of some things that

may be nonphysical but have physical effects. Whether thoughts are strictly the result of the activity of neurons or go beyond the brain has not been demonstrated. Neurologists are found arguing both sides. But normally science works with what can be detected or measured by some physical means.

Can scientists detect the Creator? The question is equivalent to asking if they can control God as they control a chemical in a test tube. The obvious answer is, “No.” The notion of deity is the province of theology and philosophy, which are not restricted to the physical. Science detects natural laws, which Luther one time described as the masks of God, what we see when we behold his handiwork, but which hide his hand from us. This is the application of methodological naturalism.

Can scientists rule out the Creator? There are those who claim that science proves atheism. This is, whether they realize it or not, the realm of metaphysical naturalism, a philosophical dogma. Tragically, Philip Johnson, a primary spokesman for ID, does not know the difference between methodological naturalism, a technique, and metaphysical naturalism, the outlook of materialism. Some think he knows the difference, but that it does not fit the requirements of the case for a defense lawyer. One only gets reasonable doubt if science is atheistic. Pat Robertson’s statement, that Dover had excluded God in voting out the school board which had tried to put ID into the curriculum, buys into this falsehood.

Evolution

Many proponents of ID oppose organic evolution, usually in a truncated version. They specifically attack Darwin’s survival of the fittest. While this is an important element of evolutionary theory, it is not the whole for, minimally, changes which may be tested are required. Though Gregor Mendel had already worked out the simple genetics of peas, no one in England at the time knew the rudiments of genetics. Darwin and others believed the now disproved Lamarckian theory that desire and activity produce hereditary changes. Mutations were discovered later. We now know many factors beyond gene mutations that produce heritable changes in organisms—crossing over, gene duplication, polyploidy, jumping genes, and gene insertion among others.

Survival can only be tested after development, except primarily for lethal or semi-lethal genes that interfere with embryonic growth. Additionally, fitness is a matter of trade-offs. For example, a recent study showed that the elaborate plumage of male birds involves both metabolic cost and a greater danger of predation. However, it indicates fitness, which the females choose to produce fitter offspring, and is expected given ZW sex determination. Male birds are ZZ, in contrast to the XY of male mammals. Females are ZW or XX respectively.

With ever more evidence supporting the modern theory of organic evolution, the prediction of its demise is wishful thinking. The assumption that a problem with some evolutionary claim produces evidence for ID or Creationism is as irrelevant as it is popular.

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Creationism and ID

What has been noted about intelligent design and ID parallels the confusion between creationism and Creationism. All Christians are creationists, though some put the origin 13.7 billion years ago and some insist it all began less than 10,000 years ago. Some Christians believe that God used natural development to produce the universe as we know it. This includes all theistic evolutionists (TE) and old earth creationists (OEC). The difference between these groups is that TE believe that God used natural means, either wholly or almost entirely, to produce the variety of living creatures, all developing under his providential care.

OEC believe in more divine intervention. Some hold that he introduced a few new forms, or new genes into old forms, which then developed naturally. Others hold that almost every distinctive plant and animal was individually created at the appropriate time. This latter claim has more of a problem explaining why there are so many extinct entities, why an omniscient and omnipotent Creator didn't get it right the first time.

The most popular form of Creationism is young earth (YEC). Indeed, whenever creation is mentioned, almost always YEC is in mind. YEC insists that the earth is no more than 20,000, 10,000 or 6000 years old—some believers dogmatically insisting on the last. At that time, in six 24-hour days, the universe was created as described in Genesis 1. The problem with this view is that honest scholars find the earth much older. They have found fossils intermediate between hoofed animals and whales at appropriate levels. They have found numerous humanoid fossils of many levels of development, again at appropriately dated levels. The radio-dating is rigorous, with speeded up changes, as from neutron bombardment, readily detectible through the specific fission products.

Associated with YEC is the claim that Noah's Flood produced most geological strata. However, there is no natural process that will produce the sorting observed: simpler plants and animals in lower strata and more advanced ones in higher. Also, lower strata give older radio-dates than higher ones. Indeed, every claim made by YEC to support their position is countered by more and more objective evidence.

In order to gain as much traction as possible with YEC and OEC, ID avoids commitment on the age of the earth or the method of introducing novel design. They have specified trying to drive a wedge into science so that they can "teach the controversy" that they have produced. This is to bypass the Supreme Court decision forbidding teaching Creationism in public school science classes. Whether they have succeeded lies in the decision by Judge Jones and the appeals process.

Summary

To summarize, intelligent design of the universe and its creatures is a central theological understanding held by all Christians. In contrast, ID makes narrower claims, denies its theological character, and enlists science for the purpose of proving the existence of an unidentified designer, unsuccessfully. ID is neither science nor good philosophy.

Similarly, all Christians are creationists, believing that God is the ultimate source of all that is. This is not identical with being a Creationist or YEC, which reject science in order to hold to their interpretation of scripture. It is also not ID, which reduces the Creator to something so indefinite as to be acceptable in the public schools.

For further reading, I recommend accessing "A Catechism of Creation: An Episcopal Understanding," which was prepared by the Committee on Science, Technology and Faith of the Episcopal Church in the United States of America. This document and a list of other recommended readings can be accessed at <http://www.episcopalchurch.org/science/>. Additionally, I highly recommend Dr. John Walton's upcoming lecture on the creation account in Genesis 1 (see following article).

Upcoming Public Lecture by Dr. John Walton, Professor Wheaton Graduate School January 19, 2006:

Reading Genesis 1 with Ancient Eyes: What Does it Mean to Create?

The time concept in the creation account of Genesis 1 can be better understood by shifting the focus from the "day" word, *yom*, to the "create" word, *bara*'.

Understanding an ancient text such as Genesis 1 requires us to somehow think about the subject and context in the way the writers would have. That said, this challenges our Western minds, particularly in the case of Genesis 1, resulting in passionate but perhaps unnecessary conflict over the specifics of this opening message of the Bible.

The ancients understood something to exist when it has a role and a function in an ordered system. In stark contrast, our way of thinking is that something comes into being when it assumes material properties. For the ancients, creation involved a new separateness of identity with a function and role to perform.

The Genesis creation word, *bara*', expresses this very idea. From this nuance flows a more foundational understanding of a dynamic creation, moving and functioning to accomplish the will of the founder and CEO of the cosmos. The insistence of His purposes and His engagement are the opposite of a naturalistic view of creation, which has no room for purpose or divine engagement.

Dr. Walton is Professor of Old Testament in Biblical and Theological Studies at Wheaton Graduate School in Wheaton, Illinois. He received his Ph.D. in Hebrew and Cognate Studies from Hebrew Union College—Jewish Institute of Religion in 1981.

Conflicts and Confederacies Between Mathematics and Christianity

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Mathematics served for him as an emblem and guarantee of the existence of the transcultural truth of God's cosmic ordering in a pedagogical struggle against Roman tyranny supported by the sophistic rhetorical schools (see Olson, Henry). Through the liberal arts pedagogy of Augustine, Boethius, etc., the Euclidean perspective on classical mathematics (that mathematics presents a unified and absolute source of truth) and classical Christian doctrine came to support each other throughout the Middle Ages and Renaissance in an ancient confederacy.

Galileo and Kepler displayed a deep consonance with this ancient confederacy in rhapsodic visions of God's work in nature through mathematics (see Olson, Hummel's *The Galileo Connection* and Kozhamthadam's *The Discovery of Kepler's Laws*). Yet Galileo's statement "Mathematics is the alphabet through which God created the world" and Kepler's claim to be thinking God's thoughts made mantic metaphors that were in conflict with the Jewish scriptures, which declared God's warning "My thoughts are not your thoughts," and with John's gospel which announced God's Word as a person enfleshed.

Pascal's phrase "the Geometric Spirit," (see the second opening quote of this article) named his effort "to protect philosophy from the influence of Descartes, who ... had set up the precise and infallible deductions of mathematics as a universal method" (See Knight, *The Geometric Spirit*, p. 1). Yet this phrase soon named a very different spirit in the French Enlightenment: a "new way of thinking preached by the philosophes" that would "liberate men from the tyranny of superstition, prejudice, ignorance, theology, and metaphysics ... and teach them to think clearly, rationally and scientifically" (Knight, pp. 1, 18, 173).

In light of the founding of "Rational Mechanics" in this period, an intellectual achievement of splendor and power on par with Euclid, it is easy for me to sympathize with the mania of this age and with the following depression. As many French mathematicians increasingly emphasized rigor over personal intuition, the breath of mathematical life seemed to many to be expiring as the 19th century dawned (see J. Richards, "God, Truth and Mathematics in 19th Century England").

Richards showed that this rigor does not reflect a necessary diminution of Christian faith with progress in modern science and mathematics. In England, after Newton, the ancient confederacy remained strong. She quoted Locke and several of the greatest English mathematicians of the period to show that both Christian faith and mathematics were seen, in a decidedly evangelical spirit, as personally apprehended forms of truth which required regular involvement in a personal project of understanding and good judgment.

But the ancient unified view of mathematics as exemplar of truth collapsed in response to the discovery of various non-Euclidean geometries in the mid 19th century. A more rigorist and impersonal confederacy between mathematics and religious truth had by then taken hold in England too, making this col-

lapse the "rock against which English natural theology foundered in the late 19th century" (Richards).

There were Romantic and Nietzschean reactions against the ancient confederacy as well as heroic defenses of its mathematical foundations led by David Hilbert "for the...sciences [and] for the honor of the human understanding itself." Consider next certain recent and related impulses.

Will Wright (*Wild Knowledge*) and David Noble (*The Religion of Technology*) would probably validate physicist John Polkinghorne's statement: "In these different ways I find a satisfying degree of consonance between my scientific knowledge and the insights of my religious belief..." ("Cosmos and Creation," *CIAS Newsletter*, Vol. III, Issue 1, Fall 2003). Yet both implicate the ancient confederacy in the disruption of social and natural life. In Wright's view: "Mathematics made rational, objective knowledge possible...that had scholastic necessity without Christian commitments." "Thus one of the last achievements of the Christian God, as the author of a moral, human universe, was to sanctify the reality of an indifferent, natural universe, a universe where mathematical truths were available to rational minds" (pp. 83, 94). After a modern loss of certainty in Christianity and in mathematics as the foundations of science came new proofs and legitimations of a mathematical worldview, which were based on its power to reorder physical and social configurations in ever more grandiose projects, resulting in ecological and social disruption (p. 34). Noble's related critique sees the Christian project as a disembodied divinization of man's mathematical mind in computers, space colonization, and genetic engineering.

Wright and Noble are just two among many whose pens poked at the ancient confederacy. Christians can cringe at such critiques, yet still read red clouds at sunset in hope of a new day. In his essay "Christ and Nothing," theologian David Hart did just this, concurring in part with arguments like Wright's and Noble's, which say that Christianity has been instrumental in the coming to dominance of science and mathematics and can be blamed for resulting ecological, moral and spiritual crises. Pressing further, Hart viewed a "nihilistic core" in the western philosophical tradition and argued that

Christianity is the midwife of nihilism... because ... It is too powerful in its embrace of all the world's mystery and beauty, and so, to reject Christianity now is, of necessity, to reject everything except the barren anonymity of spontaneous subjectivity ... and every stirring toward transcendence is soon recognized by the modern mind-weary of God as leading back toward faith.

In light of all the above, I now ask: Do we, as God-weary moderns, seek safety in an impersonal necessity projected onto mathematics and embodied in technology? Does a need to gin

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up such unsupportable trust spur us on to more technical action in self-justifying “proof by artifact”? Can the eyes of faith see, in the collapse of the Euclidean perspective in the 19th century and in the failure of the quest for certain mathematical foundations in the 20th century, the crushing of an idolatrous and magical view of mathematics under the heel of Christ?

For firm footing consider Chernobyl and my own field of computational control. As Gunther Stein argued (“Respect for the Unstable,” *IEEE Control Systems Magazine*), Chernobyl is a devastating example of the effects of an idolatrous and magical view of mathematics in which “Increasing worship of abstract mathematical results in control [theory are] at the expense of more specific examination of their practical, physical conse-

quences.” This is a case study in “practical judgment and the lure of technique” (J. Dunne), and shows the urgent need to imbue our teaching of science and mathematics with living virtues (A. MacIntyre’s *Dependent Rational Animals*). Mathematics *are* human goods unable to serve in divinized roles.

But of what good are the beautiful rational mechanics of the Enlightenment and the rest of our mathematical inheritance, sans apotheosis? In Christ, with our great cloud of wise teachers, work and pray for their rehumbléd roles in education for loving truth and serving real human thriving. Armed with the ancient warnings, learn discernment and practical judgment in the face of dehumanizing divinizations. Mathematics can yet serve among the “Gaps of God,” salting tongues with the taste for truth, widening eyes with wonder for the real.



Public Lecture Series Audio and Video Recordings

Recordings from CIAS Public Lecture Series are available for purchase. Regular prices for CDs and DVDs are \$10.00 (USD). Because we no longer receive requests for VHS and audio cassettes, we have discontinued production of these formats. Some of the lectures are still available in these formats (noted below with an asterisk *) at the special price of \$3.00 each for VHS and \$1.50 each for audio cassette recordings. All prices include shipping and handling within the USA; outside of the United States, please add \$3.00 (USD). Please phone (602) 589-2508 or e-mail cias@gcu.edu to inquire about availability of specific recording formats or to place your order.

Presenter(s)

* Rabbi Albert Plotkin
 * Dr. David F. Siemens, Jr.
 * Dr. Norbert Samuelson
 * Dr. Jeffrie Murphy
 * Dr. Fred Hickernell
 * Dr. Mary Puglia/Rev. Carl Alzen
 * Mr. Charles Roberts
 * Dr. Bill Williams/Mr. Mark Dickerson
 * Dr. Gil Stafford
 * Dr. Howard Van Till
 * Rev. Dr. George Murphy
 * Dr. Jeff Moore
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 * Dr. Douglas Kelley
 Dr. Peter Flint
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 Dr. Margaret Towne
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 Dr. Peter Flint
 Dr. Eric Kendle

Topic

Ethics in a Pluralist Society
Ultimate Foundations of Ethics: Beyond Values, Rules and Denial
Implications of Evolutionary Psychology for Jewish Ethics
Vengeance, Justice and Forgiveness
Treasures of the Sand: God’s Gift in Scripture & Modern Technology
Revelations of the Human Genome Project
Isaac Newton: Dissenter and Hermetic Philosopher
A Mathematical Analogue for a Model of the Trinity
Christian Higher Education Praxis in a Trinitarian Presence
Do We Live in a Right Stuff Universe: The Roots of the Design vs. Naturalism Debate
The Cross and Creation
The Icy Galilean Satellites
Life and Meaning in the Cosmos
Origin of the Moral Law
Cosmology and Creation
Gaps Matter
Historical Christianity and 21st Century Science: The Theology of SS. Augustine and Vincent of Lerins as a Fruitful Way of Reconciling Science and Religion
New Scientific Technologies Reveal the Secrets of the Dead Sea Scrolls
Genes, Genesis and God
Finding a Footing on a Slippery Slope: The Ethics of Embryo Cell Research
Biocultural Evolution in the 21st Century: The Evolutionary Role of Religion
Conflicts and Confederacies between Mathematics and Christianity: Parables for our Road Ahead in Science and Technology
Interpersonal Forgiveness: Forgiving for Life
The Dead Sea Scrolls and the Bible: New Evidence from Ancient Texts
What Philosophers Don’t Seem to Know about Knowledge
Genesis and Evolution: Integration
Genesis and the Big Bang
Jesus in the Dead Sea Scrolls and The Da Vinci Code
“EMEDS” in Iraq: A Flight Surgeon’s View of American Redemption in the War on Terror

Canyon Institute for Advanced Studies is

A Christian interdisciplinary research center, bringing together minds and resources to:

- Investigate and research issues emerging from new discoveries and advances—particularly those that redefine the boundaries of our knowledge and of its limits—to better understand their implications for us in the common ground of faith and discipline;
- Develop insights that lead to a more integrated view and understanding of the world around us, and of our stewardship of its emergent challenges;
- Disseminate information and perspectives to assist people of faith in the global community in developing sound, coherent, and informed foundations for engaging the exciting opportunities that lie before us.

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