



NEWSLETTER

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ANNUAL MEETING SPECIAL EDITION

“Exploring God’s World of Endless Wonder”

Some titles promise more than their contents can deliver. But this year’s Annual Meeting at Baylor delivered more than the title implied.

Going beyond merely exploring Earth, the sessions began with a man who had walked (and stumbled) on the moon. From there, the topics expanded into exploring the possibility of multiple universes and shrank into the confines of a neuron and even an atom-by-atom construction technique known as nanotechnology. The agenda ranged from innovative ways to alleviate poverty, to discussing diverse theories of origins—with many presenters correlating their scientific expertise with well-thought-out theological or moral implications.

In the words of a Philippine researcher, it was a time of “using your coconut” and exposing our minds to a wide-ranging menu of ideas.

Walking on the Moon

Only twelve men have ever walked on the lunar surface. One of them, lunar astronaut Charlie Duke, was the opening plenary speaker.

Shortly after Russian cosmonaut Yuri Gagarin flew in space in 1961, President John F. Kennedy announced that U.S. astronauts were going to the moon and “returning safely” within that 60s decade. As a young Air Force lieutenant, Charlie Duke laughed at the idea. Many of the early rockets exploded, and he reasoned that being an astronaut was

not conducive to a long career. But eight years and two months later, Duke sat in Mission Control talking to Neil Armstrong on the moon.

Duke graduated from MIT in 1964 with a degree in astronautics and aeronautics. The *Los Angeles Times* featured a front-page article saying NASA was recruiting astronauts. Duke applied and was one of 19 selected in 1966. It was a bumpy road at first. Four astronauts were killed in airplane accidents, another four in a fire in Apollo 1. Probably the most dangerous flight involved flying the command module to the moon on Apollo 8 with no backup, because we were afraid the Russians would beat us to the moon.

Of the nine flights to the moon, Duke was involved in five in various capacities. Measles kept him from flying on Apollo 13, but he was involved at Capsule Command. He encourages people to see the Apollo 13 film, adding, “I knew how it was going to come out, and I was sitting on the edge of my seat.” In 1972, after returning from the moon’s surface as Apollo 16 lunar module pilot, he jokingly asked to be paid for mileage, but got a *per diem*.

The View from Space

Watching Earth’s circular profile shrink as he approached the moon, he recalled Isaiah’s statement that God sits enthroned above the circle of the earth. He recalled other scriptural references such as God “suspending” the Earth in space and the heavens declaring the glory of God.

Asked how it felt to be on the moon, he replied that the thick boots prevent feeling the lunar surface, but “emotions are sky high.” He left a picture of his family on the moon. He added that the space program has developed



Astronaut Charlie Duke

technology in ways that benefit civilian consumers; for example, the iPhone has 100,000 times the memory that he had on the moon.

Problems on Earth

“But things weren’t going so hot with my family,” he admits. His wife expected him to give her a Cinderella life. The god of his life really was his career. He was a military instructor dad with an explosive temper.

He consented to attend to an all-weekend Bible study at a tennis club. After hearing familiar Scriptures like John 3:16, he sat in his car and decided it was true.

He hasn’t met anyone who didn’t want to meet someone who walked on the moon. His experience has opened doors to witness, even to presidents and kings. One European leader began to cry when Duke prayed for him.

In summary, Duke referred to his DVD “Walk on the Moon, Walk with the Son” and said, “My walk on the moon lasted just three days, but my walk with God lasts a lifetime.”

Continued on p. 3, Walking on the Moon

The Executive Director's Corner

Randall D. Isaac

This issue of the newsletter summarizes the ASA 2009 annual meeting at Baylor. For those of you who attended, it will be a reminder of the time of fellowship and interaction that we had. Total registration this year was 223, one of the top meetings we've ever had in terms of attendance. The weather cooperated as well, cooling slightly for the days of the conference.

For those of you who weren't able to attend, we hope this issue will give you a flavor of the ideas and topics that were discussed in formal sessions and in informal interactions. It's hard to recreate on paper the atmosphere of fellowship that permeated the group, but we trust you'll catch a glimpse of it.

Feedback from the meeting has been very positive. **Scott Robinson**, who edits the Texas/Oklahoma ASA chapter newsletter, set the tone with his comments: "I thought the conference was simply the best one I've ever been to or heard of. I've been to the conferences in 2002, 2003 and 2009, and have read the programs for every single one of them. This was to me by far the best, for several reasons:

- It had relevant tracks in things I cared about—origins, cosmology/fine-tuning, caring for the poor, neuroscience, history of science, earth stewardship.

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• It had cutting-edge talks that were relevant in each of those areas.

• The plenary speakers were absolutely top-notch Christians and scientists, and each had worthwhile things to say about his or her field and its Christian application to it."

Scott continued to list many reasons, ending with "The rest of the ASA should be kicking themselves for not coming." You can all save yourselves a lot of kicking by making your plans now to attend next year's meeting in Washington DC.

The annual meeting highlights one of the unique aspects of the ASA. Effective fellowship of Christians in science thrives best in an environment of personal interaction and joint worship of God. Our journal, newsletter, website, and blogs are very important means of communication, but they emphasize the intellectual and cognitive aspects of our fellowship. When we meet together as we did at Baylor, we add that component of social interaction and a spirit of unity as we worship together despite differences of opinion on technical matters. The harmony of singing and praying together has a way of transcending those differences in our technical world.

Since only about 10% of our members attend any given annual meeting, it is all the more important for us to establish and invigorate our local sections and chapters. It is inspiring to see Scott energize the Houston chapter, **Walter Bradley** grow the Baylor chapter, and **Dominic Halsmer** start the process of initiating the Oral Roberts chapter. Many of the rest of you have also expressed an interest in organizing or revitalizing a chapter in your area. We can help you with many aspects while you take the lead in the local logistics. Call or write us any time.

Another vital part of the ASA ministry is networking. Recently we were able to help a seeking student get in touch with ASA members at the University of Minnesota for discussions on understanding the Bible. We helped a layperson in Alberta connect with

the ASA members in Calgary to gain resources and support for his ministry. Throughout the community of Christians in science, we aim to grow our network to help others identify those with a vocation in science who profess the Christian faith. To do this more effectively, we need those Christians to be on our list. If you know colleagues who have not yet joined us, please urge them to sign up now. You can provide a gift membership for them as long as they personally sign the statement of faith first.

To help you leverage this network yourself, we have established our online membership directory. Half of you have already received your password. Come to our website and go to the members-only section to log in and try the directory. You can find other Christians in science by discipline or geographical area or any other criterion. Please log in to update your own profile. It will help others find you and continue the fellowship.



Welcome, New Members! June–July 2009

Bashir, Lamuail –Rolla, MO
Brown, Paul –Langley, BC, Canada
Carlson, Philip J. –Ames, IA
Choice, Eloise T. –Yucaipa, CA
Conroy, Sean T. –Waco, TX
Ferko, Thomas E. –Riverside, CA
Heinze, W. Daniel –Houston, TX
Hoffmann, Kirstin –Beaverton, OR
Hoyle, Charles E. –Hattiesburg, MS
Jackson, Scott H. –Wake Forest, NC
Keith, Wayne R. –Abilene, TX
Koo, Bonjun –Riverside, CA
Maturana, Francisco J. –Perth, Western Australia
McVay, Duane A. –College Station, TX
Melland, Katelyn A. –Newberg, OR
Miller Latimer, Nancy E. –San Diego, CA
Musumba, Anthony –Bismarck, ND
Nelson, Elliot –West Chester, PA
Ong, Sean F. –Lakewood, CO
Pardoe, Austin N. –Baltimore, MD
Perkins, Thomas O. –Corpus Christi, TX
Saxon, George P. –Clifton, TX
Schroeder, James –Madison, WI
Seydel, Ken –Redwood City, CA
Shin, Hyunshun –Abilene, TX
Smith, Joshua –Central Point, OR
Stallings, William J. –Wilson, NC
Stegink, Ryan –Chicago, IL
Tremaine, Andrea R. –Dundee, OR
Yong, Flora –Salem, OR

Walking on the Moon, from p. 1.

Fast-Forward 40 Years

Following Duke's presentation, David Leckrone, NASA's Senior Project Scientist for the Hubble Space Telescope, showed a video of what's involved in a Hubble Servicing Mission. Each mission updates the Hubble with technology that didn't exist when the previous service occurred, so "it becomes a new instrument every time astronauts service it."

Stressing the hazards of making a service call in space, he recounted the difficulty encountered while installing the new Wide Field Camera 3 during the recent Servicing Mission 4. It required removing a bolt that the orbital environment had corroded. If the bolt broke in the removal attempt, "the old camera stays in place, and we bring the new \$140 million camera, the size of a baby grand piano, back to Earth." After the automatic torque control repeatedly failed to remove the bolt, an auto mechanic took the wrench to manual mode, and the bolt came loose and turned normally.

Although this is expected to be the last servicing mission, Leckrone hopes to have the Hubble operational for another 5 to 10 years.

The Neuroscience of Spirituality

The belief that the mind does not exist apart from the brain dominated much research during the twentieth century. Some scholars have dismissed religious experience as hallucinations, "theotoxins," or viruses of the mind. One book reviewer asked, "Did God create the brain, or did the brain create God?"

Mario Beauregard of the *Université de Montréal* has conducted pioneering research in the neuroscience of spirituality, which he describes as "a new field of research, at the junction of psychology, religion and neuroscience." The goal is to explore the neural correlates of religious, spiritual and mystical experiences (RSME). These experiences are reported across all cultures and often lead to what he

terms "marked psychospiritual transformation."

One basic assumption is that these experiences are mediated by the brain. He stressed the distinction between being mediated by, and being produced or originated by, the brain.

The God Helmet

Beauregard discussed the work of cognitive neuroscientist Michael Persinger, who has experimented with a device sometimes called "the God Helmet." When stimulating parts of a subject's brain, Persinger claims that 80% of his participants experienced a presence beside them in the room, which they variously say felt like God or someone they knew who had died.



Mario Beauregard

However, Beauregard sees multiple problems with Persinger's approach. First, those recruited as experimental subjects were his own students. Secondly, there was no double-blind protocol.

Mystical Experiences

In Christian tradition, the Absolute is typically experienced as a Transcendent Personality, full of love and compassion. A 1960 study by Stace listed characteristics as a sense of union with God, a sense of having touched the ultimate ground of reality, and a sense of incommunicability (not being able to describe the experience to someone who had not also had the experience).

Experiments with electroencephalograms (EEGs) demonstrated an experience in which something greater than oneself seemed to absorb the individual, the subject experienced profound joy, and he found it impossible to communicate his experience.

Conclusions

Beauregard is convinced there is no single God spot in the brain, mystical states are complex and multidimen-

sional, and the brain does not originate spiritual experiences, but acts as a reducing valve. He elaborates in the book *The Spiritual Brain: A Neuroscientist's Case for the Existence of the Soul* (co-authored with journalist Denyse O'Leary, published by Harper-Collins in 2007).

Many statements in the scientific literature state or imply materialistic conclusions. In response to one question, Beauregard said that in private conversation, many neuroscientists see things less materialistically than they can say publicly.

Multiple Views of the Multiverse

Two presenters shared the Saturday afternoon plenary session. In a paper entitled "The Multiverse—Next Step in Our Growing Perception of Reality," Baylor physicist **Gerald Cleaver** reviewed the 20-year history of mod-



Gerald Cleaver

ern string/M theory, which has developed into models of a multiverse of at least 10^{500} causally independent universes. He called the multiverse concept "the next step in humankind's understanding of reality," reaching this stage after passing sequentially through "the three-tiered model, the geocentric, heliocentric, and galacticentric paradigms, and the current univertentric era."

Summarizing the obvious fine-tuning of multiple parameters in the universe in the words "... out of all possible universes we might conceive, ours has specialized features that make it suitable for life," University of Waterloo physicist **Robert Mann** followed with a presentation entitled "Believing in Everything?" He agrees with much string theory, but not with the multiverse concept. He warned that if it is widely accepted, it will cause a profound theological paradigm shift, so we need to

think seriously about what we are expected to accept.

How did we get to the top?

By analogy, Mann said we are at the top of a hill. He asked, "Are we there because every position on that curve exists, so naturally we are in the best one?" If you throw enough paint against the wall, do you wind up with the Lord's Supper? The theology of the multiverse



Robert Mann

changes the question from "Why is there something instead of nothing" to "Why is there something instead of everything?"

He closed by referring to Emile Cammaert's statement that the first effect of not believing in God is to believe indiscriminately in anything. He concluded, "Is science now compelling us to believe in everything?"

Nanotechnology and Standing as a Christian in the Academy

James Tour of Rice University began by briefly summarizing his research on nanotech devices, including nanoelectronics, carbon nanotubes, and nanocars. Nature builds from the bottom up, and we want to also, including taking an atom and dropping it off at a specified place. Someone told him to abandon the project because he would "be violating at least one law of thermodynamics." He counters the inevitable nay-saying of innovative ideas by pointing out that it's easy to give reasons why something won't work.

Whatever Tour did for his professor was never good enough. He would say things like, "Pretty good," then pause dramatically and deflate the compliment by adding, "for your level." That kind of non-affirmation made him fearful as he prepared an oral presentation. As he read Matthew 21:21, he asked God to help

him do his best. Following the presentation, a Nobel laureate in the audience said it was the best seminar he had ever attended. More recently Tour was instrumental in the salvation of another Nobel laureate, who described Jim as "someone with a brain who I can talk with."

He was saved at age 18 in a Jewish home. From the day his children were born, he had them present in 5:30 a.m. devotions and memorization. He observed that everyone who fell away from the Lord failed to read the Bible daily and resolves this will not happen to him or his family. He has read the Bible repeatedly from beginning to end for 30 years. He always carries a pocketful of Scripture verses.

Hazards of Hospitality

Tour has been on the Rice faculty for twenty-one years. He sees his faculty position as an opportunity to influence students spiritually. When they started inviting students to their home for meals, many came with snowy boots and some allowed food to roll off their plates onto the couch. Their daughter found a chicken bone behind the couch. As he pondered the hazards of hospitality, he read Prov. 14:4, "Where no oxen are, the stable is clean, but much increase comes by the strength of the ox." God said, "If you want to keep your apartment clean, don't invite them in. But ..." They decided the ability to mingle with students was worth the price of a disorderly "stable."

Rice University invites lesbians and communists, but a colleague was upset when Tour invited Hugh Ross. Someone called Intelligent Design one of the three axes of evil—along with child porn and Holocaust deniers. One faculty member advised the rest of the department to cut him off from e-mail. That day part of Tour's reading was Matt. 27:19, recounting Pilate's wife's dream. God assured Tour his accuser would suffer in a dream, like Pilate's wife. The next day the man apologized, saying he had written a long e-mail and

erased and replaced it. They became close friends.

Back to the Drawing Board

He submitted 37 proposals in his first 36 months as a faculty member, without a secretary and before word processing (literally "cut and paste"). Some foundations required twelve copies, and he would carry all twelve to the chapel and pray over them. When refused, he "endeavored to dwell only momentarily on the harsh, sometimes even unnecessarily personal, comments of reviewers ..."

In response to an audience question, he said God redirects his projects through funding. He was there before "nanotech" was even a word, and his research was written up in *Scientific American*—all because God shut down the NIH grants for which he had applied, and opened the door to pioneer something else. He lives in the confidence that God knows what's coming.



James Tour

shut down the NIH grants for which he had applied, and opened the door to pioneer something else. He lives in the confidence that God knows what's coming.

The Take-Home Message

In Deut. 32:45-47, Moses told the Israelites, "Take to heart all the words I have solemnly declared to you this day, so that you may command your children to obey carefully all the words of this law. They are not just idle words for you—they are your life. By them you will live long in the land you are crossing the Jordan to possess."

Every blessing comes with a command. "The generation of the upright will be blessed." As a result of faithfully involving his family in 5:30 a.m. devotions and *Hurlbut's Story of the Bible*, his daughter is now in Jerusalem, "exactly where God wants her to be." He adds that the biggest hindrance to children going into missions isn't Satan, but Christian parents.

Appropriate Technology for the Poor: Why the “South to South” Approach Works Best

In introducing Perla Manapol, **Walter Bradley** said, “My biggest opportunity was not to write a bigger check, but to do things that will pay off 100-fold in the lives of the poor ... A lot of appropriate tech is not high-tech.”

As director of Sustainable Rural Enterprise at Aklan State University in the Philippines, Manapol describes her position as “CBO—Chief Begging Officer,” explaining, “Even with a Harvard degree, you work pro bono and pro bonehead.” She stresses efficiency, saying it pains her when someone throws food away—a contrast to the person who picks up an empty candy wrapper and licks it for the last gram of sweetness.

One quarter of the Philippine population rely on the coconut as the tree of life. They produce 152 commercial products from it, including oil, soap, vinegar, peat, milk, and animal feed.

When someone mentioned that Liberia has coconuts, Manapol became interested. As a result, two women now sell coconut burgers in school, an important advance in a country where 25% of the population has only one meal per day. Others make oil lamps from coconuts and old jars with old socks as wicks. Liberia imports sugar, so she is teaching them to make coco sugar.

“Use Your Coconut”

Good intentions are not always good intentions. Westerners often think they know better than the indigenous people they try to help. USAID wanted to focus on making coco shell jewelry and doormats, a set-up expenditure of nearly \$10,000. Liberians use coconut oil in a \$15 stove, but someone imported an oil expeller for \$1,000, overlooking the fact that this can be done manually at home.

Her biggest success factor is the faith community, including many missionaries. They achieve the goal

of helping local people to utilize abundant, untapped natural resources. For someone from the northern hemisphere wanting to help on the southern scene, she advises a little less hubris, and a lot more wisdom: “Always use your coconut!”



Perla Manapol

Summaries of Parallel Sessions

Social Science

This track opened Saturday morning with “Perceptions and Knowledge of Mental Illness in the Local Church: A Survey of Texas Baptist Pastors.” **Matthew Stanford** and David Philpott said clergy often function as “gatekeepers,” determining when to refer a person to a mental health professional. One major weakness of this approach is a tendency by some pastors to classify an unrealistic number of psychological problems as spiritual.

Next came “Religiosity and Delinquency: a Meta-Analysis” presented by Byron Johnson. Social scientists have tended to overlook religious factors in their research. But religious measures are inversely related to deviance; therefore, “future research on delinquency and crime may gain explanatory power as scholars consider incorporating religious variables into relevant theoretical models.”

Ethnic Issues

Asking “Why Do Black Youth Use Drugs Less Than White Youth?” Sung Joon Jang and Byron Johnson concluded that the difference was largely due to parental and peer influence, plus religious upbringing.

Wade Rowatt concluded the morning session with “Associations among Religiousness, Social Attitudes, and Prejudice in a National Random Sample of American Adults.” Using the term “selective intolerance,” the study said general religiousness was negligibly associated with racial prejudice,

but strongly related to less-accepting attitudes toward homosexuals—i.e., less tolerant toward “persons perceived to behave in a manner inconsistent with some traditional religious teachings.”

When one drinks coffee to wake up, one is altering mental function by chemical intervention. **James Peterson** pointed out that the Christian tradition welcomes intervention in the physical world for godly purposes. Referring to Ritalin, Prozac, and other substances, he explored questions and insights to help guide what pharmaceutical alterations of brain functions may or may not be appropriate.

God, Greed & Genesis

In “God or Greed? The ‘American Dream,’ Religion, and White-Collar Crime,” Andrew Whitehead concluded that religion, defined generically, does not have any effect on white-collar crime rates.

Michael Tenneson and **Steve Badger** concluded with “Measuring Pentecostal Attitudes and Beliefs about Origins.” Pointing out that Pentecostal educators hold diverse opinions on the age of the universe and macroevolution, they emphasized that “a Christian’s position on creation-evolution should not serve as the litmus test for orthodoxy.” They provided guidance on how teachers can present various theistic perspectives in a way that reinforces faith in the Creator and the trustworthiness of the Bible, while instilling confidence in the methods of the natural sciences.

Science and Theology

Asking “Does the Bible Use Phenomenal Language?” **Paul Seely** argued that such things in the Bible as the solid sky (firmament) and the moving sun have been explained as merely phenomenal language rather than as descriptions of literal reality. If interpreted within their cultural, historical, and biblical context, however, they describe literal reality as the author and people of that time understood it.

Baylor University Welcomes ASA for its 64th Annual Meeting July 31–August 3, 2009



Walter Bradley
Program Chair



George W. Truett Theological Seminary



William Jordan
Local Arrangements Chair

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WORSHIP



Carol A. Hill presented the Worldview Approach as a new way of interpreting Scripture in the Science/Origins debate. This approach agrees with “Accommodation” in that it incorporates the pre-ingrained scientific worldview of the biblical authors, but maintains it is theologically important that Adam be a historical person through whom sin was conferred on humanity. The Worldview Approach ascribes a “dual” nature to the Genesis text: a historical base told figuratively from the worldview of the biblical author(s).

Denis Lamoureux proposed that the ancient understanding of origins (ancient science) in Scripture must be respected. In this way, there is no conflict between the Bible and evolutionary science, and problems like the sin-death problem merely evaporate because Scripture is not revealing how death entered the world, but that humans are sinners in need of Jesus Christ. ✉ *Carol A. Hill and Denis Lamoureux*

Creation Days and Adam

Rodney Whitefield began the Saturday afternoon session with “The Fourth Creative ‘Day’ of Genesis: Answering the Questions about the Sun and the Moon.” Comparing the Hebrew words *asah* and *bara*, he countered those who claim a conflict between the natural history of the universe and the “making” of the sun, moon and stars on the fourth creation “day.”

Ray Williams discussed interpretations of the length of the Genesis days. Reviewing the common interpretations and finding each of them defective, he proposed a new viewpoint, the Divine-Pattern view.

Dick Fischer presented an interpretation of “Historical Adam,” placing him in the fifth millennium BC, “in the flow of humanity rather than at its apex.” Summarizing his book *Historical Genesis from Adam to Abraham* (www.historicalgenesis.com), he sees parallels between the biblical and Akkadian texts that help to clarify the issue.

Where Is God during Tsunamis?

Many pastors used Hurricane Katrina and the Asian tsunami to illustrate theological points. **Janel Curry** analyzed a wide range of sermons to discover the worldviews represented, and to discern the theological, ethnic, and class factors that might explain the range of responses.

Retroactive Effects of the Fall

Many theologians assume human sin must precede any appearance of evil in the world for which it is responsible. **William Dembski** asked, “Why, in the economy of a world whose Creator is omnipotent, omniscient and transtemporal, should causes always precede effects?” Since Christ’s death produced salvation retroactively for Old Testament saints, “Likewise, an omnipotent God unbound by time can make natural evil predate the Fall and yet make the Fall the reason for natural evil.”

History of Science

In “The Darwin-Gray Exchange,” **Bethany Sollereder** examined the correspondence between Charles Darwin and Harvard botanist Asa Gray to investigate Darwin’s views on design in nature. Ultimately, Darwin failed to see design in nature because of the deeply embedded remnants of William Paley’s categories of how divine thought is communicated through the natural world. This led to Darwin’s ultimate rejection of design and eventually of theism.

Michael Keas presented “Darwinism, Fundamentalism, and R. A. Torrey ...” As the leading evangelist at the turn of the 20th century, Torrey offered insightful approaches to dealing with Darwinism and naturalism. Although offering an occasional critique of Darwinism, he urged evangelicals and fundamentalists to focus more on biblical inerrancy and a critique of naturalism in all academic fields rather than on God’s precise method of creation.

Steve Badger and **Michael Tenneson** provided “Pentecostal Responses to Evolution: A Historical Review.”

Analyzing 90 years of Pentecostal literature, they examined the official positions of four Pentecostal groups and compared the positions and changes of interpretation during that period.

Christianity and the Possibility of a Multiverse

Gerald Cleaver began the session with “The String Multiverse, the Cosmological Anthropic Principle, and Anselm’s Ontological Argument.” He said the string landscape/multiverse picture is “not just consistent with Christian theology, but that a creation of (at least) the magnitude and vastness implied by the string landscape/multiverse picture is what should, in fact, be expected in Christian theology.”

Robert Bishop said Christian students tend to arrive on campus assuming that creation means *ex nihilo* and in six days. In “The Doctrine of Creation and Cosmology,” he stressed that creation has functional integrity. God may intervene, but not necessarily often. The doctrine of the integrity of creation implies there are more possibilities on the table.

Bruce Gordon had “Multiversal Misgivings.” The multiverse concept is motivated by naturalistic philosophy. It is epistemically unwarranted and irremediably deficient; “the universal possibilism it entails is completely destructive of scientific rationality.” Intelligent design is “the most parsimonious and only causally sufficient explanation of cosmological origins and fine tuning ...”

Dave Rogstad concluded the session, asking “Does the Multiverse Eliminate the Need for God?” Many nontheists believe that positing an infinite number of universes in which every conceivable set of laws of physics is manifested and every value of each physical constant exists, eliminates the need for a supernatural creator. He provided seven rebuttals to this argument and recommended the Reasons to Believe book *Who’s Afraid of the Multiverse?*

Philosophy, Religion and Science

Biostatistician **John Hall** spoke about ways to think about chance and purpose in the context of evolutionary theory. He questioned the non-theistic interpretations given by some authors, which put chance and purpose in opposition. He suggested a “stochastic” description of biological (and other) processes that does not exclude purpose but, on the contrary, displays the glory of God despite being locally stochastic.

Physics professor **Don Petcher** presented “Methodological Naturalism: Necessary for Science or Superfluous?” After reviewing the history of science on the question of demarcation between “natural” and “supernatural,” he concluded that MN is superfluous, as are other pronouncements by philosophers and educators about what science is.

Paul Arveson’s talk was entitled “Zero, One, Two, Three: The Dimensions of Religious Thought.” He searched for the simplest possible way to classify world religions, i.e., in terms of their logical “dimensions.” In this scheme, Buddhism is zero-dimensional because it recognizes no distinctions. One-dimensional logic applies in Judaism and Islam. Early Christianity exhibits 2-dimensional logic, e.g., in the notion that we are to be “in the world but not of the world.” Medieval Christian theology developed a 3-dimensional theology for doctrines such as the two natures of Christ. Details are at www.christianmind.org/illus/ht/

✉ *Paul Arveson*

Science and the Church

Fred and Thresa Hickernell taught an 8-week course on “Faith and the Physical World” at the First Baptist Church in Phoenix. In a presentation entitled “A Church Course for Adults on Science and Faith,” they attempted to provide a perspective of what science does, find a balanced view of what science and Scripture say, and help those who fear and distrust modern science. Example topics were the Christian influence on science, and the origin of the universe and humans.

In “Elements of the Scientific Method in Scripture,” **John Munday** reviewed Scripture to find if scientific components are there, because many non-Christians have decided the Bible is anti-science. He noted 19 items in Scripture, including testing—2 Cor. 13:5—which are normal processes in science. He concluded that Scripture endorses methods of natural science.

Ken Wolgemuth and **Gregory Bennett** shared examples of pseudoscience being spread in the church—processes that use scientific terminology but include misinformation or concepts that are illogical scientifically. Examples included Mt. St. Helens age data, tree rings, ice cores, and varves. Saying “Pastors need to hear from Christian geologists,” they challenged the church to honor God in the way believers describe the creation. They are developing 11" x 17" posters for sharing information with pastors, and planning a 1-day Creation Workshop on “Geology for Pastors.”

✉ *Ken Wolgemuth*

Environment

Secular jargon dominates much discussion of the environment—rhetoric like saving Mother Earth, the Gaia Hypothesis, and the idea that the entire earth and everything on it is a single organism. **Leslie Wickman** presented “Cultivating a Personal Christian Environmental Ethic.” Commenting on Gen. 1:31, she asked, “If God reviewed all that he had created and thought it was a good, how much more should we respect and care for it?”

Craig Rusbult introduced a framework that promotes creative and critical improvisational thinking, which is useful in a thinking skills curriculum. It connects design (in engineering and other fields) with science, which is the designing of theories about nature. It can be used repeatedly in the same course, with different problems, to help students learn a disciplined approach to problem solving.

Keith B. Miller stressed that we cannot be proper stewards of creation without knowing that creation, including its history. He stated, “Understanding the dynamic processes of the natural world, and the time scales at which they occur, better enables us to anticipate and recognize the consequences of human activity. Such knowledge informs our decision-making, and helps us to minimize negative consequences, and promote the flourishing of both the creation and humanity.”

The active sonar that detects submerged submarines causes substantial and irreparable harm to marine animals. One Supreme Court deci-



William Collier



William Dembski



Kimberly Dawes



Donald Petcher



Bruce Gordon

sion cites mass strandings, hemorrhaging around the brains and ears, acute spongiotic changes in the central nervous system, and lesions in vital organs. **Lin Allen** explored the balance between military preparedness and environmental concerns.

Science is strong on descriptive power, but it cannot be prescriptive. **Johnny Wei-Bing Lin** emphasized that debates over what constitutes an environmental problem and what practices are needed to fix the problem, need ethics to define policy.

Extremes exist on both sides of the debate over meat consumption. **Jay Hollman** navigated between the position that equates animal rights with human rights and the overconsumption of meat that is typical in Western cultures. Among the many points he made, global animal production contributes more to global warming than transportation.

Can one solution solve several problems? **Stephen G. Hall** explained why he thinks bioengineered artificial reefs may be a promising solution for several ecological problems, including coastal erosion and preventing further increase in the carbon burden in the atmosphere.

“Quiver-full theology” lauds the virtues of large families. **Sean M. Cordry** critiqued this movement and several related issues, including the population level that Earth is capable of supporting. He provided suggestions on how to create greater awareness of population issues among Protestant Christians.

Education

Much education had formerly emphasized studying nature directly, using hands-on contact with animals, plants, nests, tracks, and similar objects. **Kimberly Dawes** advocated greater use of this educational style, saying it promotes inquisitiveness, relates science to life, develops aesthetic emotion, and fosters a personal abiding relationship with God and his creation.

Dissatisfied with simplistic explanations of science and the scientific method that are frequently presented in

introductory science classes, **William Collier** discussed methods he has used in his major-level chemistry classes to remedy this deficiency.

Jerry Bergman surveyed 100 high school and college biology faculty to determine how they handled the subject of origins. He discussed the four categories of responses, including the legal implications of each approach.

Ide Trotter analyzed this year’s hearings before the Texas State Board of Education regarding how evolution should be taught. He advocated teaching more than one interpretation, stating “shielding students from the excitement of the quest is counterproductive. Biology should be taught in the same way as any other field of science.”

Origins

The ASA membership has a range of interpretations of how God brought the various species of animals and humans into existence. A set of presentations that balanced Theistic Evolution and Intelligent Design occupied several sessions on Sunday and Monday.

Loren Haarsma and **Bruce Gordon** have differing interpretations, along with a deep respect for each other and their views. They jointly presented “Four Myths about Intelligent Design and Four Myths about Theistic Evolution,” with the stated goal of “a more accurate understanding of each position, and a more gracious attitude toward advocates of each position.”

Complete genomic sequences are now available for humans and several other mammalian species. **Dennis Venema** discussed their implications for common ancestry, and evaluated how they impinge on various concordist interpretations of Genesis.

C. John Collins and Daniel Harlow presented papers about the identity of Adam and Eve. Collins interprets them as historical figures, while Harlow believes they are symbolic. John Schneider followed, using the Book of Job to deepen the understanding of Genesis 1 through 3.

Robert Kaita sees certain personal computer application programs “adapt” to the way they are used. He used this phenomenon to illustrate one way to understand the “stasis” and “adaptive” phases of evolutionary change.

Many RNA transcripts in eukaryotic cells lack matching DNA templates. Richard Sternberg explored this phenomenon in “The Generation of Essential RNA Messages from Pseudogene Transcripts by Exemplar Causation.”

Douglas Axe analyzed the relationship between genotypes and phenotypes and presented his conclusions in a paper entitled “The Information Required for Metabolic Innovation, and Why the Darwinian Mechanism Is Not Apt to Be Its Source.”

Robert Marks and **William Dembski** discussed “Evolutionary Informatics.” They enumerated the information that any search algorithm must have in order to search successfully. They concluded that “without active information, even the multiverse cannot support search for even moderately sized problems.”

Exploring “The Origin of Higher Taxa,” **David Campbell** provided an alternative explanation of why events such as the Cambrian Explosion seem to indicate rapid speciation. He stated that apologetics arguments will not be sound unless they accurately represent the implications of alternative views.

David Snoke concluded the session by asking “Is It Wrong to Quantify Wonder?” Expressing discomfort with some Christians’ attempts to determine how improbable some aspects of nature are, he presented results of a numerical model of evolution designed to predict degrees of vestigiality in evolving organisms.

Audio files of most presentations are available on the ASA website, www.asa3.org. DVDs and CDs of plenary sessions are available for purchase, as are CDs of most parallel sessions.

Science and Technology in Service of the Poor

Stephen Bradley led off by considering the difficulties that a developing nation faces if it does not have valuable but depletable natural resources and/or a large, educated, low-cost labor force. He presented ways to help a nation develop economically in spite of these lacks.

Other presenters shared specific details of ways in which they have been involved. One person in four globally (1.6 billion people) have no access to electricity. Brian Thomas detailed the technology and the business plan that overcame this barrier in rural Honduras. Three billion people cook using biomass (primarily wood) and stoves that pollute and endanger health. **Walter Bradley** surveyed recent developments to provide affordable solutions. Eleven million coconut farmers subsist on an average of \$500 annually. Stanton Greer reported innovative new uses for coconuts, including automotive composites.

Dominic Halsmer addressed worldview from the standpoint of reverse engineering of complex natural systems.

William Jordan discussed the effects of international development. A business that has long-term sustainability, provides a profit, and treats its workers and community well is what they call a Triple Bottom Line business.

Christian Perspectives on the Soul

Edward (Ted) Davis began this session with a survey of 150 years of the

conversation about evolution, morality, and human nature. He analyzed the issues that have led some Christians to accept evolution as God's method of creating various organisms, while others reject it.

Sara Joan Miles explored biological and theological theories of how and when the soul originates and how and when it is joined to the flesh of a developing child. **Rodney Scott** continued the theme, developing implications of the various interpretations relating to the sanctity of human life, questions of spiritual well-being and the influence of the body, and matters of social justice.

Miscellaneous

Ken Touryan presented "Science and Faith Issues in Islam: Is There an Avenue of Rapprochement between ASAers and Practicing Muslim Scientists?" Some leading Muslim scientists say their "arrested scientific development" marginalizes the billion Muslims and contributes to a sense of injustice and victimhood, which in turn provides fodder for the jihadist movement. Touryan provided many implementable suggestions.

Edgar Allan Poe is primarily known as a fiction author, but his writings display a deep understanding of philosophy and science. He wrote a 150-page essay in 1848, arguing that the universe expanded from a single primordial atom, that time and space are one, that electromagnetism and light are related, and that deity must be responsible for such a universe. He insisted upon the curvature of space and that if electricity moved in

a straight line through space it would eventually return to where it began. More than half a century later, Belgian priest Georges Lemaitre read Poe's ideas and developed them into what's now known as the Big Bang theory. **Harry Lee Poe**, a descendant of Edgar's cousin William, elaborated in a lecture titled "Edgar Allan Poe's Big Bang Theory and the Power of Imagination."

Astronomy

Our moon is optimal in its origin, size, and location to enable life to exist on Earth. **Joseph Spradley** detailed the many ways that it prepared our planet for life and continues to protect it from hazards such as comets and chaotic temperature fluctuations.

In *New Theories of Everything*, John Barrow stresses the "need to know all those constants of Nature whose values provide necessary conditions for the existence of observers."

Rollin King reported the extension of fine-tuning investigations into the domain of chemistry. Calling his presentation "Chemistry in Counterfactual Universes," he discussed how the results relate to the anthropic principle and the possibility of life.

Richard McClure analyzed the Star of Bethlehem, interpreting it as a near-Earth asteroid (NEA). Using PowerPoint diagrams, he illustrated a potential NEA orbit that would be compatible with the biblical accounts of the Magi, the time of Herod's death, the date of the temple's destruction, and other considerations.



Paul Arveson



Ken Touryan



Bethany Sollereeder



Stanton Greer



David Campbell

Moberg Receives Kaplan Award

On June 3 at the annual meeting of The Society for Spirituality, Theology and Health in Durham, NC, it was announced that the Berton H. Kaplan Award for lifetime achievement in the field of spirituality, theology and health was awarded to **David O. Moberg**, Professor Emeritus at Marquette University, Milwaukee, WI. Born in Minnesota, Moberg attended Bethel Junior College (A.A., 1942) and the University of Minnesota. He served in the army during World War II and graduated in 1947 with a history degree from Seattle Pacific College. He received a Master of Arts in sociology from the University of Washington in 1949. While teaching at Bethel College in St. Paul, MN, he completed his Ph.D. at the University of Minnesota. His dissertation was on religion and personal adjustment in old age, and this began his area of specialty: sociology of religion and social gerontology.

In 1968 David accepted the position of Professor of Sociology at Marquette University and held that position until 1991 when he was granted emeritus status. Bethel College established the Moberg Lectureship in Christianity and Sociology in 1991. He has written and edited many books and hundreds of articles in journals. His books, *The Church as a Social Institution: The Sociology of American Religion* (1962) and *The Great Reversal: Evangelism Versus Social Concern* (1972) have been very contributing to this field.

David helped found the Christian Sociological Society and has fostered the work of the Association of Christians Teaching Sociology. He founded the Association for the Development of Religious Information Systems (ADRS), an organization which promotes a global network of religious information exchange. Although retired from teaching, he continues to research, write, and serve as an editorial referee and is a Bible study teacher and a board member of several elder-living-related organizations.

The Society for Spirituality, Theology & Health (www.societysth.org) is supported in part by a grant from the John Templeton Foundation and is administered through the Center for Spirituality, Theology and Health at Duke University. For additional information, e-mail Catherine Craver at catherine.craver@duke.edu or call (919) 660-7556.

Coming Events

The Center for Spirituality, Theology and Health at Duke U., Durham, NC, is hosting the following events from 12–1:30 p.m. Lunch is provided if you register two weeks ahead by calling 919-660-7556 or by e-mailing dukespiritualityandhealth@gmail.com

- * **Sept. 10.** "Faith, Healing and the Placebo Effect," Anne Harrington, Prof. of the History of Science, Harvard U. Duke U. School of Nursing, Room 1014.
- * **Oct. 1.** "How God Changes Your Brain," Andrew Newberg, Asst. Prof., Dept. of Radiology, U. of Pennsylvania. Duke U. School of Nursing, Room 1014.
- * **Nov. 5.** Sarah Coakley, Prof. of Divinity, U. of Cambridge. Duke U. School of Nursing, Room 1014.
- * **Dec. 3.** "Religious Involvement and U.S. Adult Mortality: Evidence, Controversy and Next Steps," Robert Hummer, Prof. of Sociology, The U. of Texas at Austin. Duke Medical Center, Board Room 1170B.
- June 5–Sept. 27.** The Museum of Biblical Art in New York is home to the Scripture for the Eyes Exhibit. 1865 Broadway at 61st Street, (212) 408-1500. Visit MOBIA website.
- Sept. 10–12.** Conference: "My Ways Are Not Your Ways: The Character of the God of the Hebrew Bible." The Center for Philosophy of Religion, U. of Notre Dame. Information: www.nd.edu/~cprelig/conferences/HebrewBible.shtml or E-mail: mrea@nd.edu
- Sept. 18–23.** 4th Annual Creation Evidence Expo 2009. 3855 East 10th St., Indianapolis, IN, 46201. (317) 345-9072.
- Sept. 21–Oct. 3.** Biblical Archaeological Society will go on a tour "In the Footsteps of Paul in Turkey" with a scholar guide. After Israel, Turkey has more biblical sites than any other country. E-mail: travelstudy@bib-arch.org See www.biblicalarchaeology.org
- Sept. 26.** "Genetics and Religion: Prospects for Dialogue," a symposium at the U. of Minnesota, focusing science-religion discussions on recent developments in genetic research, including issues such as human diversity, responsibility, genetic determinism, and flourishing. Speakers will include Ron Cole-Turner, from Pittsburgh Theological Seminary, and others from Jewish and Catholic perspectives. The closing banquet will honor **V. Elving Anderson**, long-time ASA member, and his vision of Christian scholarship in the biological sciences. Costs are \$35 for the symposium and \$30 for the banquet. For

more information e-mail conference@wilberforceacademy.org or Bob Osburn at osbu0001@umn.edu or call 651-402-2600.

- Oct. 1–2.** "Evolution, God, and Becoming Human," Union Theological Seminary and Presbyterian School of Christian Education, 3401 Brook Rd., Richmond, VA 23227. Celebrating Calvin's 500th and Darwin's 200th birthdays. Co-sponsored by the Carl Howie Center for Science, Art, and Theology, and Institute for Reformed Theology, and the Presbyterian Association on Science, Technology and the Christian Faith. Includes the play "Re:Design" based on correspondence between Darwin and Presbyterian and fellow scientist Asa Gray. **Keith Miller** and **George Murphy** will be among the eight distinguished speakers.
- Oct. 3–4.** Singularity Summit. "When Machines Re-invent You," sponsored by Discover: Science, Technology, and the Future, New York City. This will feature discussions on the ethics of technologies which will re-make the world. www.singularitysummit.com/program/discover
- Oct. 18.** The Affiliation of Christian Geologists will have a meeting 8–10 pm at the annual meeting of the Geological Society of America in Portland, OR. It will be in the Hilton Grand Ballroom, Parlors A-B.
- Nov. 20–22.** 12th Annual Bible & Archaeology Fest, New Orleans, LA, featuring 20 renowned scholars. James Charlesworth, Professor of New Testament and Director of the Dead Sea Scrolls Project at Princeton Theological Seminary will speak at the Plenary Session. Marriott New Orleans Convention Center. Call (800) 221-4644, ext. 208. Visit www.biblicalarchaeology.org/fest
- Nov. 20–22.** "The 150 Years of Evolution: Darwin's Impact on the Humanities and Social Sciences," San Diego. Get info at www.BioLogos.org
- Dec. 3–9.** Parliament of the World's Religions. Melbourne, Australia. More information at www.parliamentofreligions.org
- Jan. 9–25.** Seminar at Sea Caribbean Cruise combining biblical scholarship with a vacation! Sponsored by the Biblical Archaeological Society. Call (800) 221-4644, ext. 208 www.biblicalarchaeology.org/travelstudy
- Jan. 24–31, 2010.** Caribbean Cruise and Lecture Series, "Exploring Babylon and the Bible: Connections and Contrasts." Biblical Archaeology Society. See above website and phone number.
- Feb. 1–16, 2010.** "Incomparable Israel; Explore the Past, Celebrate the Present" Biblical Archaeology Society tour. See www.biblicalarchaeology.org/israel Call (800) 221-4644, ext. 208

Recommended Resource

The Faraday Institute for Science and Religion recently uploaded 11 video clips (about a third of the entire documentary) from the "Test of Faith" documentary. They can be accessed from www.testoffaith.com and www.youtube.com/thetestoffaith.

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**Honoring
 V. Elving Anderson**

V. Elving Anderson was a leading geneticist researching and teaching at the University of Minnesota. Notable among his research activities were studies of the molecular mechanism of neonatal epilepsy and epidemiologic and genetic studies of breast cancer, the latter conducted in conjunction with the Mayo Clinic. He is now Professor Emeritus in the Department of Genetics, Cell Biology and Development at the University of Minnesota.

Following World War II, Anderson was one of the first scientists to apply biblical insights to research in the biological sciences. Along with Carl F. H. Henry and Robert Frykenberg, Elving founded the Institute for Advanced Christian Studies (IFACS) in 1971, aiming to introduce the fruits of Christian scholarship into the academic arena.

His example is a major stimulus for an interdisciplinary conference being held September 26 at the University of Minnesota.



V. Elving Anderson

Entitled “Genetics & Religion: Prospects for Dialogue,” it will explore possibilities for meaningful interaction on issues such as human diversity, responsibility and flourishing. Presentations will encompass Protestant, Catholic, and Jewish perspectives, including

- Theologian Ron Cole-Turner lecturing on “Sin, Science, and Salvation,”
- Sociologist Ruth Schwartz Cowan on “Religion and Genetics: Working Together to Climb Back Up the Slippery Slope,”

- Theologian M. Therese Lysaught discussing “The Last Shall Be First: Human Potential in Genetic and Theological Perspectives,”
- Psychologist Matt McCue asking, “What Have We Learned from Behavioral Genetics about Human Nature?” and
- Geneticist and cell biologist William Oetting presenting “DNA, Drugs, and Profit: A New Industry Is Born.”

The evening banquet will be a tribute to Elving. ASA President **Ted Davis** will attend to represent the ASA. For registration information, see the Sept. 26 Coming Event.

Future Annual Meetings

July 30–Aug. 2, 2010
 “Science and Public Policy”
 –Catholic University of America,
 Washington, DC

Date TBA, 2011
 –Wheaton College, Wheaton, IL